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ACTINOMYCES
See: MICROORGANISMS

ADENOSINE DIPHOSPHATE
Aggregin: a platelet ADP receptor that mediates activation
Colman R W (1990) FASEB J. 4, 1425
Regulation of nitorgenase activity by reversible ADP ribosylation
Ludden P W & Roberts D P (1989) Curr. Top Cell. Regul. 30, 23

ADENOSINE MONOPHOSPHATE
Alterations of the cAMP-adenylate cyclase system in the failing human heart. Consequences for therapy with positive inotropic agents
[In German; English abstract]
Böhm M, Schwinger P H G & Erdmann E (1990) Klin. Wochenschr. 68, 887
Cyclic AMP response element binding proteins: a cornucopia of transcription factors [Minireview]
Habener J F (1990) Mol. Endocrinol. 4, 1087
Characterization of a cyclic AMP regulatory element DNA-binding protein [Brief review]
Haefeli J P & Habener J F (1990) Trends Endocrinol. Metab. 1, 155
Regulation of pulmonary surfactant protein synthesis in fetal lung: a major role of glucocorticoids and cyclic AMP [Brief review]
Mendelson C R & Boggaram V (1990) Trends Endocrinol. Metab. 1, 20
Regulation of cAMP-inducible genes by CREB
Montminy M R, Gonzalez G A & Yamamoto K K (1990) Trends Neurosci. 13, 184
Ionized calcium and cyclic AMP in plasma and urine — biochemical evaluation in calcium metabolic disease
Thode J (1990) Scand. J. Clin. Lab Invest. 50, Suppl. 197, 13-45

ADENYLATE CYCLASE
See: ENZYMES AND ENZYME REGULATION

ADIPOSE TISSUE
Hemodynamic and metabolic correlates in adipose tissue: pathophysiologic considerations
Crandall D L & DiGirolamo M (1990) FASEB J. 4, 141
Brown adipose tissue thermogenesis: interdisciplinary studies
Himms-Hagen J (1990) FASEB J. 4, 2890
Mechanism and evolution of the uncoupling protein of brown adipose tissue
Klingenberg M (1990) Trends Biochem. Sci 15, 108
Symposium on Adipose Tissue Development
Lau D C W & others (1990) Int. J Obesity, 14, Suppl. 3, 153-193
Alpha-1-adrenergic and beta-adrenergic receptors in brown adipose tissue and the adrenergic regulation of thyroxine 5'-deiodinase
Raasmaja A (1990) Acta Physiol. Scand. 139, Suppl. 590, 7-61

AGEING
Bridging the aging-disease dichotomy. I. The amyloidosis model
Blumenthal H T & Premachandra B N (1990) Perspect. Biol. Med. 33, 402
Expression of human plasma protein genes in ageing transgenic mice
Bowman B H, Yang F & Adrian G S (1990) BioEssays, 12, 317
Cardiovascular responses in ageing — a review
Docherty J R (1990) Pharmacol. Rev. 42, 103
Hepatic drug metabolism and ageing
Durnas C, Loi C M & Cusack C J (1990) Clin. Pharmacokinet. 19, 359
Peptides in the neocortex in Alzheimer’s disease and ageing
Ferrier I N & Leake A (1990) Psychoneuroendocrinology, 15, 89
Colloquium on Molecular Biology of Aging, Santa Fe, NM, March 4-10, 1989
Finch C E & Johnson T E, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 123, 430 pp.
RNA and protein metabolism in the aging brain
Finch C E & Morgan D G (1990) Ann. Rev. Neurosci. 13, 75
The pharmacokinetics of tricyclic antidepressants in the elderly
Furlanet M & Benetello P (1990) Pharmacol. Res. 22, 15
Telomeres, telomerase and senescence
Greider C W (1990) BioEssays, 12, 363
Autoimmune sialoadenitis: possible models for Sjogren’s syndrome and a common aging phenomenon
Hayashi Y & others (1990) Autoimmunity, 5, 215
Aging and senescence of the budding yeast Saccharomyces cerevisiae
[Microreview]
Jazwinski S M (1990) Mol. Microbiol. 4, 337
Animal models of Parkinsonism [Minireview]
Kaakkoila S & Teravainen H (1990) Pharmacol. Toxicol. 67, 95
Alzheimer’s disease — proteins, genes and early diagnosis [In French; English abstract]
Laplanche J L, Chatelain J, Launay J M & Durex C (1990) Ann. Biol. Clin. Paris. 48, 281
Senescence in the Skin — an International Symposium organized by the Institute of Dermatology, London, 7-8 April 1989
Leyden J J & others (1990) Br. J. Dermatol. 122, Suppl. 35, 1
The neurotoxicity of MPTP and the relevance to Parkinson’s disease [Minireview]
McCrodden J M, Tipton K F & Sullivan J P (1990) Pharmacol. Toxicol. 67, 8
The MPTP story — MAO activates tetrahydropyridine derivatives to toxins causing Parkinsonism
Neafsey P J, Testa B, Jenner P, Elytayar N & Fournier D J (1989) Mol. Cell. Biol. 9, 351
An attempt at a rational classification of theories of ageing
Medvedev Z A (1990) Biol. Rev. 65, 375
Aging — hypothalamic catecholamines, neuroendocrine-immune interactions, and dietary restriction [Minireview]
Motesio J (1990) Proc. Soc. Exp. Biol. Med. 195, 304
Longevity hormesis. A review
Neafsey P J (1990) Mech. Ageing Dev. 51, 1
A Gompertz age-specific mortality rate model of aging — modification by dietary restriction in rats
Neafsey P J, Boxenbaum H, Ciraulo D A & Fournier J D (1989) Drug Metab. Rev. 21, 351
Molecular analysis of aging processes in fungi
Osiewacz H D (1990) Mutat. Res. 237, 1
Macroangiopathy, the vascular basement membrane and Alzheimer’s disease
Perlmuter L S & Chui H C (1990) Brain Res. Bull. 24, 677
Regulation of energy expenditure in aging humans
Poehlman E T & Horton E S (1990) Annu. Rev. Nutr. 10, 255

International Conference on Nutrition and Aging, Galveston, TX, October 5-7, 1988
Prinsley D M & Sandstead H H, eds (1990) Prog. Clin. Biol. Res. 326, 396 pp.

The role of the cytoskeleton in aging
Rao K M K & Cohen H J (1990) Exp. Gerontol. 25, 7

Pre-synaptic and post-synaptic cholinergic dysfunction in aged rodent brain regions: new findings and an interpretative review
Sherman K A & Friedman E (1990) Int. J. Dev. Neurosci. 8, 689

Oxidative stress as a causal factor in differentiation and aging — a unifying hypothesis
Sohal R S & Allen R G (1990) Exp. Gerontol. 25, 499

9th International Symposium on Parkinson’s Disease, Jerusalem, Israel, June 1988
Streifler M B, Kuzycz A D, Melamed E & Youdim M B H, eds (1990) Advan. Neurol. 53, 596 pp.

Pharmacodynamics: Changes in homeostatic mechanisms, receptor and target organ sensitivity in the elderly
Swift C G (1990) Br. Med. Bull. 46, 36–52

Do environmental toxins cause Parkinson’s disease? — A critical review
Tanner C M & Langston J W (1990) Neurology, 40, No 10, Suppl. 3, 17

Biphasic mortality response of chipmunks in the wild to single doses of ionizing radiation: toxicity and longevity hormesis
Thompson G A, Smithers J & Boxenbaum H (1990) Drug Metab. Rev. 22, 269

Pharmacokinetics in old age
Tregaskis B F & Stevenson I H (1990) Br. Med. Bull. 46, 9

Involvement of free radicals in dementia of the Alzheimer type: a hypothesis
Volcic L & Crino P B (1990) Neurobiol. Aging, 11, 567

Calcium and vascular reactivity in ageing and hypertension [Editorial review]
Warisworth R M (1990) J. Hypertension 8, 975

Hepatic drug metabolism and ageing
Woodhouse K W & James O F W (1990) Br. Med. Bull. 46, 22

Alzheimer’s disease
Wurtman R J, Corkin S, Growdon J H & Ritterwalker E, eds (1990) Advan. Neurol. 51, 282

ALCOHOLS

Stress—ethanol interaction — involvement of endogenous opioid mechanisms
Aragon C M G, Trudeau I F & Amt 7 (1990) Neurosci. Biobehav. Rev. 14, 535

Effects of alcohol on human aggression — an integrative research review
Bushman B J & Cooper H M (1990) Psychol. Bull. 107, 341

The genetics of human alcohol metabolism [Minireview]
Chambers G K (1990) Gen. Pharmacol. 21, 267

Mechanism of action of ethanol — initial central nervous system actions
Dettrich R A, Dunwiddie T V, Harris R A & Frum W G (1989) Pharmacol. Rev. 41, 489

Alcohol and cancer
Garro A J & Lieber C S (1990) Annu. Rev. Pharmacol. Toxcol. 30, 219–249

Overexcitement and disinhibition — dynamic neurotransmitter interactions in alcohol withdrawal
Glue P & Nuit D (1990) Br. J. Psychol. 157, 491

Ethanol and guanine nucleotide binding proteins: a selective interaction
Hoffman P L & Tabakoff B (1990) FASEB J 4, 2612

The toxicity of inhaled methanol vapors
Kavet R & Nauss K M (1990) Crit. Rev. Toxicol. 21, 21

Multiple mechanisms in the regulation of ethanol-inducible cytochrome-P450IE1
Koop D R & Tierney D J (1990) BioEssays, 12, 429

The Korsakoff syndrome: a neurochemical perspective
McEntee W J & Marr R G (1990) Trends Neurosci. 13, 340

The effect of ethanol on platelet function and vascular prostanooids
Mikhailidis D P, Barradas M A & Jeremy J Y (1990) Alcohol, 7, 171

Interaction of alcohol and stress at the cardiovascular level
Pohorecky L A (1990) Alcohol, 7, 537

The heredity of human alcohol abuse: myths and facts
Rothhammer F (1989) Arch. Biol. Med. Exp. 22, 355

Oxidation of alcohols by activated dimethyl sulfoxide and related reactions: an update
Tidwell T T (1990) Synthesis. Stuttgart. No. 10, 857

Regulation of sugar and ethanol metabolism in Saccharomyces cerevisiae
Wills C (1990) Crit. Rev. Biochem. Mol. Biol. 25, 245

Cellular intermediate filament networks and their derangement in alcoholic hepatis
Worman H J (1990) Alcoholism Clin. Exp. Res. 14, 789

ALGAE

Chlorophyll binding proteins with antenna function in higher plants and green algae
Bassi R, Rigoni F & Giacometti G M (1990) Photochem. Photobiol. 52, 1187

Codon usage in higher plants, green algae, and cyanobacteria
Campbell W H & Gowri G (1990) Plant Physiol. 92, 1

Cellular studies on marine algae
Gibor A (1989) Int. Rev. Cytol. 118, 93

Lipid metabolism in algae
Harwood J L & Jones A L (1989) Advan. Bot Res 16, 1

Safety tolerances of eukaryotic marine algae
Kirst G O (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 21–53

Chronic toxicities of surfactants and detergent builders to algae — a review and risk assessment
Lewis M A (1990) Ecotoxicol. Environ. Safety, 20, 123

Ribulose bisphosphate carboxylase in algae — synthesis, enzymology and evolution [Minireview]
Newman S M & Cattolico R A (1990) Photosynthesis Res. 26, 69

ALKALOIDS

Mechanisms responsible for the cardiotoxic effects of cocaine
Billman G E (1990) FASEB J 4, 2469
AMINES

See also: ALKALOIDS

CATECHOLAMINES AND RECEPTORS

Central receptors and recognition sites mediating the effects of monoamines and anorectic drugs on feeding behavior

Angel I (1990) Clin. Neuropharmacol. 13, 361

Histaminergic system: neuroendocrine function of brain histamine

Cacabelos R (1990) Methods Findings Exp. Clin. Pharmacol. 12, 341

Review - 5-hydroxytryptamine - new receptors and novel drugs for gastrointestinal motor disorders

Costall B & Naylor R J (1990) Scand. J. Gastroenterol. 25, 769

The interactions of the beta-haloethyl benzylamines, xylamine and dtp-4 with catecholaminergic neurons

Dudley M W, Howard B D & Cho A K (1990) Annu. Rev. Pharmacol. Toxicol. 30, 387-403

Aromatic amino acids and monoamine synthesis in the central nervous system - influence of the diet

Fernstrom J D (1990) J. Nutr. Biochem. 1, 508

Polyamines in plant physiology

Galston A W & Sawhney R K (1990) Plant Physiol. 94, 406

Behavioral effects of 5-HT receptor ligands in the aversive brain stimulation, elevated plus-maze and learned helplessness tests

Graeff F G, Audis E A, Almeida S S, Graeff E O & Huneke R M (1990) Neurosci. Biobehav. Rev. 14, 501

Molecular genetics of polyamine synthesis in eukaryotic cells

Heby O & Persson L (1990) Trends Biochem. Sci. 15, 153

Distribution, properties, and functional characteristics of three classes of histamine

Hill S J (1990) Pharmacol. Rev. 42, 45

Towards a functional significance of peptides and biogenic amines produced by the anterior pituitary

Houben H, Tilemans D & Denef C (1990) J. Endocrinol. Invest. 13, 833

Tryptamine may couple dopaminergic and serotonergic transmission in the brain [Mini-review]

Juorio A V & Paterson I A (1990) Gen. Pharmacol. 21, 613

Histamine and Disease: A Forum on Current and Future Management

Kaliner M A & others (1990) J. Allergy Clin. Immunol. 86, No 4, Pt 2, Suppl., 589-684

Allergy, Inflammation and Histamine-H1 blockade - Proceedings of the UCB Symposium, EAACI, Glasgow, 1990

Kay A B & others (1990) Clin. Exp. Allergy, 20, Suppl. 4, 1-31

Novel occurrence of uncommon polyamines in higher plants

Kuehn G D, Rodriguezgaray B, Bagga S & Phillips G C (1990) Plant Physiol. 94, 855

Clinical review of histamine receptor antagonists

Lipsy R J, Fennerty B & Fagan T C (1990) Arch. Intern. Med. 150, 745

Binding of some antidepressants to the 5-hydroxytryptamine transporter in brain and platelets

Marcasson J O & Ross S B (1990) Psychopharmacology; 102, 145

Polyethylene tetraamines: a novel class of cardioselective M2-antagonists

Mekhiorre C (1990) Med. Rev. Rev. 10, 377

Histidine, histamine, and the neuroregulation of food intake — a review and hypothesis

Mercer L P, Dods J S, Weber M D & Dunn J D (1990) Nutrition, 6, 273

Metabolic activation of carcinogenic N-nitrosodialkylamines [In Japanese: English abstract]

Mochizuki M (1990) Yakugaku Zasshi, 110, 359

2-Phenylethylamine — a modulator of catecholamine transmission in the mammalian central nervous system [Short review]

Paterson I A, Juorio A V & Boulton A A (1990) J. Neurochem. 55, 1827

5-Hydroxytryptamine receptor subtypes [Mini-review]

Peroutka S J (1990) Pharmacol. Toxico. 67, 373

Polyamine transport in mammalian cells [Mini-review]

Seiler N & Dezeure F (1990) Biochem. Biophys. Acta. 102, 145

Myoclonus: analysis of monoamine, GABA, and other systems

Snodgrass S R (1990) FASEB J. 4, 2775

Immunomodulation by histamine

Stanciu L (1990) Ann. Biol. Clin. Paris, 48, 623

A review of the physiological bases of the anorexic action of phenylpropanolamine (d,l-norephedrine)

Wellman P J (1990) Neurosci. Biobehav. Rev. 14, 339

Cytochrome-P450IIE1 — roles in nitrosamine metabolism and mechanisms of regulation

Yang C S, Yoo J S, Ishiaki H & Hong J Y (1990) Drug Metab. Rev. 22, 147

5-HT-related drugs and human experimental anxiety

Zuardi A W (1990) Neurosci. Biobehav. Rev. 14, 507

AMINO ACIDS

Potential therapeutic uses of N-methyl-D-aspartate antagonists in cerebral ischemia

Albers G W (1990) Clin. Neuropharmacol. 13, 177
Intestinal amino acid transport: an overview [Minireview]
Argües J M & López-Soriano F J (1990) Int. J. Biochem. 22, 931

The identification of neutral amino acid transport systems
Barker G A & Ellory J C (1990) Exp. Physiol. 75, 3

Biosynthesis of the tetrapyrrole pigment precursor, delta-
aminolevulinic acid, from glutamate
Beale S I (1990) Plant Physiol. 93, 1273

Disorders of the inhibitory glycine receptor: the spastic mouse
Becker C-M (1990) FASEB J. 4, 2767

Transplacental amino acid transfer and its study using positron emission tomography — a short review based on a doctoral thesis
Berglund L (1990) Upsala J. Med. Sci. 95, 95

GABA and Benzodiazepine Receptor Subtypes: Molecular Biology, Pharmacology, and Clinical Aspects. 6th Capo Boi Conference on Neuroscience, Villasimius, Italy, June 1989
Bingio G & Costa E, eds (1990) Advan. Biochem. Psychopharmacol. 46, 239 pp.

The role of charged amino acids in the localization of secreted and membrane proteins [Minireview]
Boyd D & Beckwith J (1990) Cell, 62, 1031–1033

Interactions between glutamatergic and monoaminergic systems within the basal ganglia — implications for schizophrenia and Parkinson's disease
Carrisson M & Carisson A (1990) Trends Neurosci. 13, 272

The role of glutamate neurotoxicity in hypoxic-ischemic neuronal death
Cho D W & Rothman S M (1990) Annu. Rev. Neurosci. 13, 171

Role of amino acid transport and countertransport in nutrition and metabolism
Christensen H N (1990) Physiol. Rev. 70, 43

EAA pharmacology: excitatory amino acid receptors and synaptic plasticity
Collingridge G L & Singer W (1990) Trends Pharmacol. Sci. 11, 290

Patterned activity, synaptic convergence, and the NMDA receptor in developing visual pathways
Constantine-Paton M, Cline H T & Debski E (1990) Annu. Rev. Neurosci. 13, 129

EAA pharmacology: excitatory amino acid receptors in epilepsy
Dingledine R, McBain C J & McNamara J O (1990) Trends Pharmacol. Sci. 11, 334

Molecular biology of mammalian amino acid receptors
Dingledine R, Myers S J & Nicholas R A (1990) FASEB J. 4, 2636

γ-Aminobutyric acid outside the mammalian brain [Short review]
Erdö S L & Wolff J R (1990) J. Neurochem. 54, 365

Aromatic amino acids and monoamine synthesis in the central nervous system — influence of the diet
Fernstrom J D (1990) J. Nutr. Biochem. 1, 508

Metathionine metabolism in mammals
Finkelstein J D (1990) J. Nutr. Biochem. 1, 228

Basolateral amino acid transport in the kidney [Minireview]
Foulkes E C (1990) Proc. Soc. Exp. Biol. Med. 195, 1

Kynurenic metabolites of tryptophan — implications for neurological disorders
Freeze A, Swartz K J, During M J & Martin J B (1990) Neurology. 40, 691

Heterogeneous intrahepatic distribution of glutamate synthetase
[Robert Feulgen Prize Laureate]
Gebhardt R (1990) Acta Histochem. Suppl. 40, 23
The release and uptake of excitatory amino acids
Nicholls D & Attwell D (1990) Trends Pharmacol. Sci. 11, 462

Recent advances in capillary electrophoresis of proteins, peptides and amino acids
Novotny M V, Cobb K A & Liu J P (1990) Electrophoresis, 11, 735

Excitotoxic amino acids and neuropsychiatric disorders
Olney J W (1990) Annu. Rev. Pharmacol. Toxicol. 30, 47-71

GABA-receptors in peripheral tissues [Minireview]
Ong J & Kerr D I B (1990) Life Sci. 46, 1489

Is the neuronal basis of Alzheimer's disease cholinergic or glutamatergic?
Palmer A M & Gershon S (1990) FASEB J. 4, 2745

Amino acid metabolism in human cancer cachexia
Peters P W T & Krenn M F (1990) Annu. Rev. Nutr. 10, 107

Clinical studies of 5-HT function using i.v. l-tryptophan
Proc. 111 & others (1990) Prog. Neuro-Psychopharmacol. Biol. Psychiatry. 14, 459

A molecular biological approach to reducing dietary amino acid needs
Rees W D, Flint H J & Fuller M F (1990) Bio/Technology. 8, 629

Clinical significance of pharmacological modulation of homocysteine metabolism
Refsum H & Ueland P M (1990) Trends Pharmacol. Sci. 11, 411

GABA as a presumptive paracrine signal in the pineal gland. Evidence on an intrapineal GABAergic system
Rosenstein K E, Chutuyan H E, Diaz M C & Cardinall D P (1990) Brain Res. Bull. 25, 339

Metabolism of L-canavanine and L-canavanine in leguminous plants
Rosenthal G A (1990) Plant Physiol. 94, 1

Evaluation of protein digestibility-corrected amino acid score methods for assessing protein quality of foods
Sarwar G & McDonough F E (1990) J Assoc. Offic. Anal. Chem. 73, 347

Aspartic and glutamic acid as ligands to alkali and alkaline-earth metals—structural chemistry as related to magnesium therapy
Schmidbaur H, Classen H G & Helbig J (1990) Angew. Chem. 29, 1090

Pharmacological and functional characteristics of metabotropic excitatory amino acid receptors
Schoepf D, Bockaert J & Sladecek F (1990) Trends Pharmacol. Sci. 11, 508

Physiological and pharmacological actions of a neuroactive dipeptide, kyotorphin, and its precursor, L-arginine, and clinical application [In Japanese; English abstract]
Takagi H (1990) Folia Pharmacol. Jap. 96, 85

Glycine is a coagonist at the NMDA receptor/channel complex
Thomson A M (1990) Progr. Neurobiol. 35, 53

Excitatory amino acid transmitters and their receptors in neural circuits of the cerebral neocortex
Tsumoto T (1990) Neurosci. Res. 9, 79

N-Methyl-D-aspartate receptor complex — different sites for regulation and clinical consequences [In German; English abstract]
Turski L (1990) Arzneimin. Forsch. 40, 511

Mutual inhibition of sugars and amino acid intestinal absorption [Minireview]
Vinardell M P (1990) Comp. Biochem. Physiol. Pt A, 93, 17

Pharmacology of α-fluoromethylhistidine, a specific inhibitor of histidine decarboxylase
Watanabe T, Yamatodani A, Maeyama K & Wada H (1990) Trends Pharmacol. Sci. 11, 363

EAA pharmacology: Structure-activity relationships in the development of excitatory amino acid receptor agonists and competitive antagonists
Watkins J C, Krogsgaard-Larsen P & Honore T (1990) Trends Pharmacol. Sci. 11, 25

Excitatory amino acid receptors in the brain — membrane binding and receptor autoradiographic approaches — EAA pharmacology
Young A B & Fagg G E (1990) Trends Pharmacol. Sci. 11, 176

AMINO SUGARS
See: CARBOHYDRATES

ANAEMIA
See: BLOOD AND BLOOD PROTEINS

ANAESTHESIA

Molecular mechanisms of local anaesthesia: a review
Butterworth J F IV & Strichartz G R (1990) Anesthesiology. 72, 711

Site of action of anaesthetics, the peripheral site of action of these drugs
Inoki R (1990) Folia Pharmacol. Jap. 93, 139

Interactions between anaesthetics and calcium channel blockers [Minireview]
Miranda H F & Paeile C (1990) Gen. Pharmacol. 21, 171

The effect of anaesthetic agents on the human immune response
Stevenson G W, Hall S C, Rudnick S, Seleny F L & Stevenson H C (1990) Anesthesiology. 72, 542

Midazolam and flumazenil: the agonist-antagonist concept for sedation and anaesthesia — International Symposium Proceedings — Sardinia. April 1989
Thomson D & others (1990) Acta Anaesthesiol. Scand. 34, Suppl 92, 5

ANALYSIS
See: TECHNIQUES

ANTIBIOTICS AND ANTIMICROBIAL SUBSTANCES

Mechanisms of Antibiotic Resistance and Implications for Therapy — International Symposium Proceedings held in Rio de Janeiro, 19 April, 1988

Acar J F & others (1990) J Int Med. Res. 18, Suppl 4, D1-D85

Trimethoprim resistance: epidemiology and molecular aspects
Amyes S G B & Towner K J (1990) J. Med. Microbial. 31, 1

Testing the susceptibility of bacteria in biofilms to antibacterial agents [Minireview]
Anwar H, Dasgupta M K & Costerton J W (1990) Antimicrob. Agents Chemother 34, 2043

Protease inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Microreview]
Björk L (1990) Mol. Microbiol. 4, 1439

Pharmacology of Cyclosporine (Sandimmune). Pharmacological properties in vivo
Borel J F (1989) Pharmacol. Rev. 41, 259

Ampthotericin B: current understanding of mechanisms of action [Minireview]
Broch J, Powderly W G, Kobayashi G S & Medoff G (1990) Antimicrob. Agents Chemother 34, 183-188
Amphotericin B: delivery systems [Minireview] 
Brajtburg J, Powderly W G, Kobayashi G S & Medoff G (1990) 
Antimicrob. Agents Chemother. 34, 381-384

Influence of growth rate on susceptibility to antimicrobial agents: 
modification of the cell envelope and batch and continuous culture 
[Minireview] 
Brown M R W, Collier P J & Gilbert P (1990) Antimicrob. Agents 
Chemother. 34, 1623–1628

The improving prospects for yield increase by genetic engineering in 
biofilms, cell cycle, dormancy, and stringent response [Minireview] 
Chater K F (1990) Bio/Technology. 8, 115

Antibiotics inhibiting protein synthesis 
Cocito C & D' Igliambattista M (1990) M/S Med. Sci. 9, 46

Molecular evolution of ubiquitous β-lactamases towards extended- 
spoonum enzymes active against newer β-lactam antibiotics 
[Minireview] 
Collatz E, Labia R & Gutmann L (1990) Mol. Microbiol. 4, 1615

Recent advances in the diagnosis, treatment, and prevention of 
Pneumocystis carinii pneumonia [Minireview] 
Daviey R T jr & Masur H (1990) Antimicrob. Agents Chemother. 34, 
499–504

What are antibiotics? Archaic functions for modern activities 
[Minireview] 
Davies J (1990) Mol Microbiol. 4, 1727

Pharmacology of Cyclosporine (Sandimmune). Pharmacological 
effects on immune function — in vitro studies 
Dipadova F E (1989) Pharmacol. Rev. 41, 373

Cefodizime: a Third-Generation Cephalosporin with 
Immunomodulating Properties, International Congress for Infectious 
Diseases, Montreal, July 15–19, 1990 
Finch R & others (1990) J Antimicrob Chemother. 26, Suppl. C, R3, 
1–127

Membrane topology, structure, and functions of the penicillin- 
interacting proteins 
Ghuyen J M (1990) Biotechnol. Appl. Biochem. 12, 468

Influence of growth rate on susceptibility to antimicrobial agents: 
biofilms, cell cycle, dormancy, and stringent response [Minireview] 
Gilbert P, Collier P J & Brown M R W (1990) Antimicrob. Agents 
Chemother. 34, 1865–1868

Discovery and development of new antimicrobial agents 
Gootz T D (1990) Clin. Microbiol. Rev. 3, 13–31

Inhibitory effects of quinolone antibacterial agents on eucaryotic 
topoisomerases and related test systems 
Gootz T D, Barrett J F & Sutcliffe J A (1990) Antimicrob. Agents 
Chemother. 34, 8–12

Aminoglycoside-induced ototoxicity [Minireview] 
Govaerts P J, Claess J, Heynegen P H van den, Jorens Ph G, 
Marquet J & De Broe M E (1990) Toxicol. Lett. 52, 227

Assay methods for cyclosporine monitoring following liver 
transplantation 
Haven M C, Sobeski L M, Earl R A & Markin R S (1990) J Clin. 
Lab. Anal. 4, 150

THP-adriamycin: updated clinical results. Development of a new 
antarhacycline in France [In French; English abstract] 
Herait P (1990) Path. Biol. 38, 64

Pharmacokinetics of antimicrobial agents in organ function 
impairment. A review 
Ianknet R (1990) Pharmaceut. Weekbl. Sci Ed 12, 121

Cyclosporine: an immunosuppressant affecting epithelial cell 
proliferation 
Kanitakis J & Thivolet J (1990) Arch. Dermatol. 126, 369

Nonribosomal biosynthesis of peptide antibiotics 
Kleinkauf H & Döhren H von (1990) Eur. J. Biochem. 192, 1–15

Antibiotics — cloning of biosynthetic pathways [Minireview] 
Kleinkauf H & Döhren H von (1990) FEBS Lett. 268, 405–407

Pneumococcal resistance to antibiotics 
Klugman K P (1990) Clin. Microbiol. Rev. 3, 171–196

Report of a Symposium on Use and Abuse of Antibiotics Worldwide 
Kunin C M, Johansen K S, Worning A M & Daschner F D (1990) 
Rev. Infect. Dis. 12, 12

Antimicrobial polypeptides of human neutrophils 
Lehrer R I & Ganz T (1990) Blood, 76, 2169

Potential mechanisms of resistance to the modern fluorinated 4- 
quinozolones 
Lewin C S, Allen R A & Amyes S G B (1990) J. Med. Microbiol. 
31, 153

The potential of cyclosporin A as an anti-tumour agent 
Mclachlan G, Smart L M, Wallace H M & Thomson A W (1990) 
Int. J. Immunopharmacol. 12, 469

Adverse antibiotic effects associated with renal insufficiency 
Manian F A, Stone W J & Alford R H (1990) Rev. Infect. Dis. 12, 
236

Pathophysiology and toxicology of cyclosporine in humans and 
animals 
Mason J (1989) Pharmacol. Rev. 41, 423

New Perspectives on Ofloxacin — Proceedings of a Symposium held 
in West Berlin, 16 October 1989
Midveldt T & others (1990) Scand. J Infect. Dis. Suppl. 68, 1–64

Natural C-glycoside antibiotics and approaches to determining 
structure of their carbohydrate moiety [In Russian; English abstract] 
Murawets N V (1960) Antibiot. Khimioterap. 25, No. 6, 47

Perflaxin in Clinical Practice — Based on a Symposium, Lisbon, 
March 22-23, 1990 
Neu H C & others (1990) J. Antimicrob. Chemother. 26, Suppl. B, 
1–227

Methodological approaches to study of effects produced by antibiotics 
on the immune system [Lecture] [In Russian; English abstract] 
Nikitin A V (1990) Antibiot. Khimioterap. 35, No. 8, 45

Synthesis and antitumour activity of new derivatives of anthracycline 
antibiotics modified in the aglycon moiety [In Russian; English abstract] 
Olufseyva E N (1990) Bioorg. Khim. 16, 1445

High-level gentamicin resistance in Enterococcus: microbiology, 
genetic basis, and epidemiology 
Patterson J E & Zervos M J (1990) Rev. Infect. Dis. 12, 644

The role of redox-active metals in the mechanism of action of 
biofilm 
Petering D H, Byrnes R W & Antholine W E (1990) Chem-Biol 
Inter 73, 133

Techniques used for the determination of antimicrobial resistance and 
sensitivity in bacteria 
Piddock L J V (1990) J. Appl. Bact. 68, 307

Molecular biology of penicillin and cephalosporin biosynthesis 
[Minireview] 
Queener S W (1990) Antimicrob. Agents Chemother. 34, 943–948

Pharmacology of Cyclosporine (Sandimmune). Immunochemistry 
and monitoring 
Queissiaux V F J (1989) Pharmacol. Rev. 41, 249

Annonaceous acetogenins — a review 
Rupprecht J K, Hui Y H & McLaughlin J L (1990) J. Nat. Prod. 
Lloydia, 53, 237
Bacterial spores and chemical sporicidal agents  
Russell A D (1990) Clin. Microbiol. Rev. 3, 99–119

Cellular activation — regulation of intracellular events by cyclosporine  
Ryffel B (1989) Pharmacol. Rev. 41, 407

New perspectives in tetracycline resistance [Microreview]  
Salyers A A, Speer B S & Shoemaker N B (1990) Mol. Microbial 4, 151

The pharmacology of microbial modulation in the induction and expression of immune reactivities — the pharmacologically active effector molecules of immunologic inflammation, immunity, and hypersensitivity  
Szentivanyi A, Krzanowski J J, Polson J B & Abarca C M (1990) Immuno pharmacol. Rev. 1, 159

Enzymes inactivating antimycins — current status [In Russian, English abstract]  
Taisova A S (1990) Antibiot. Khimioterap. 35, No.6, 51

Pharmacokinetics of antibiotics in the lungs  
Valek Y, Pauwels R & Van Der Straeten M (1990) Eur. Resp. J. 3, 715

Clinical pharmacokinetics of ciprofloxacin  
Vancebryan K, Guay D R P & Rotschale J C (1990) Clin. Pharmacokinet. 19, 434

Gramicidin channels and pores  
Wallace B A (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 127

Anti-idiotypic used in immunohistocchemistry  
Wang M W (1990) Histochem. J. 22, 519

Antibody markers in predicting type 1 diabetes: a review  
Wilkin T J (1990) J. Roy. Soc Med. 83, 632

Pharmacokinetic drug interactions with cyclosporin. 2.  
Yee G C & McGuire T R (1990) Clin. Pharmacol. Rev. 41, 835 pp.

Potential of monoclonal antibodies as pharmacological agents  
Larrick J W (1989) Pharmacol. Rev. 41, 539

Antibody engineering and perspectives in therapy  
LeFranc G & LeFranc M P (1990) Biochimie, 72, 639

Antiphospholipid antibodies — anticoagulant in systemic lupus erythematosus (SLE) and non-SLE disorders — prevalence and clinical significance  
Love P E & Santoro S A (1990) Ann. Int Med. 112, 682

Colloquium on Defense Molecules, Lake Tahoe, CA, February 20–27, 1989  
Marchalons J J & Reinisch C L, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 121, 316 pp.

Evolution of antibody and T-cell receptor V genes — the antibody repertoire might have evolved abruptly  
Matsunaga T & Tornaman V (1990) Dev. Comp. Immunol. 14, 1

Advances in the Applications of Monoclonal Antibodies in Clinical Oncology — meeting held at the Wolfson Institute, London, 21–23 June 1989  
Matzku S & others (1990) Br. J. Cancer, 62, Suppl.10, 1

The Croonian Lecture 1989. Antibodies: a paradigm for the biology of molecular recognition  
Milstein C (1990) Proc. Roy. Soc. Lond. Ser. B, 239, 1–16

The role of anti-idiotype antibodies in systemic lupus erythematosus  
Mozes E & Mendlovic S (1990) Crit. Rev. Immunol. 10, 329

Bifunctional antibodies: concept, production and applications  
Nolan O & O’Kennedy R (1990) Biochim Biophys. Acta, 1040, 1

Recent advances in solid-phase peptide synthesis and preparation of antibodies to synthetic peptides  
Phale S, Muller S, Briand J P & Van Regenmortel M H V (1990) Biologicals, 18, 147
The significance of phenotyping leukemias using monoclonal antibodies

Pombo-de-Oliveira M S & Tabak D G (1990) Braz. J Med Biol Res. 23, 763

Monoclonal antibodies to Candida albicans — from cell biology to diagnostic probes [In French; English abstract]
Poulsen D, Faïle C, Michalski J C & Camus D (1990) M/S Méd. Sci 6, 526

The body against itself

Rennie J (1990) Sc. Am. 263, No 6, 76-85

Role of CR3 in induced myelomonocytic recruitment — insights from in vivo monoclonal antibody studies in the mouse [Minireview]
Kosen H (1990) J. Leukocyte Biol. 48, 465

Antibody interference in immunoassays [In French; English abstract]
Sapien R (1990) Ann. Biol. Clin. Paris, 48, 361

Activation of prodrugs by antibody-enzyme conjugates: a new approach to cancer therapy
Senter P D (1990) FASEB J 4, 188

Pathogenrelated idiotypes of autoimmunebodies: lessons from new experimental models of SLE
Shoenfeld Y & Mozes E (1990) FASEB J 4, 2646

Catalytic antibodies
Shokat K M & Schultz P G (1990) Annu. Rev Immunol. 8, 335

Catalytic antibodies — a new class of transition-state analogues used to elicit hydrolytic antibodies
Shokat K M & others (1990) Angew. Chem. 29, 1296

Bispecific antibody — a tool for diagnosis and treatment of disease
Songsvilai S & Lechmann P J (1990) Clin. Exp. Immunol. 79, 315

Editorial review — Lessons about autoantibody specificity in systemic lupus erythematosus from animal models
Stott D I (1990) Clin Exp Immunol 81, 1

Use of monoclonal antibodies specific for distinct variable or constant regions of the y/6 T cell receptor in normal and pathological conditions
Trenzler F (1990) Disease Markers, 8, 47

The costimulatory function of antigen-presenting cells
Weaver C T & Unanue E R (1990) Immunol Today. 11, 49

Antibody markers for type 1 diabetes. the issues [Brief review]
Wilkin T J (1990) Trends Endocrinol Metab 1, 204

Insulin autoantibodies as markers for type 1 diabetes
Wilkin T J (1990) Endo Rev. 11, 92

Antiphospholipid antibodies — more than just a disease marker?
Young C M (1990) Immunol Today. 11, 60

ANTIGENS AND ANTIGEN RECEPTORS

Antigen presentation and self-nonself discrimination [Short analytical review]
Adorini L (1990) Clin Immunol Immunopath 55, 327

Peptide competition for antigen presentation
Adorini L & Nazy Z A (1990) Immunol Today. 11, 21

Antigens and immune responses in Candida albicans infection
Ashman R B, Papadimitriou J M, Ott A K & Warwington J R (1989) ImmunoL Cell Biol 68, 1

Genetic and mutational analysis of the T cell antigen receptor
Ashwell J D & Klausner RD (1990) Annu Rev. Immunol 8, 139

Inactivation of viral antigens for vaccine preparation with particular reference to the application of binary ethyleneimine
Bahnemann H G (1990) Vaccine. 8, 299

Antigenic variation of a relapsing fever Borrelia species
Barbour A G (1990) Annu. Rev Microbiol. 44, 155

Guilt by association — HLA-B27 and anklylosing spondylitis
Benjamin R & Parham P (1990) Immunol Today. 11, 137

Binding and unwinding — how T antigen engages the SV40 origin of DNA replication [Minireview]
Borrow J A, Dean F B, Bullock P A & Hurwitz J (1990) Cell. 60, 181 184

Molecular and genetic approaches to the study of regulation of the function of suppressor T cells specific for epitopes of the histocompatibility molecule
Brondz B D, Chervonski A V & Zaitseva M B (1990) Mol. Biol. Eng. 14, 24, No 2, Pt 1, 244

Detection of peptide-MHC class-II complexes on the surface of intact cells
Busch R & Rothbard J B (1990) J. Immunol. Methods, 134, 1

Human monomyeloid cell membrane antigens [Minireview]
Civin C I (1990) Exp. Hematol. 18, 461

Conserved and variable structures in HLA class-I molecules; a review
Colombani J (1990) Tissue Antigens, 35, 103

Cellular and genetic aspects of antigenic variation in trypanosomes
Cross G A M (1990) Annu. Rev. Immunol. 8, 83

The regulation and expression of MHC class-I genes
Davidwatine B, Israel A & Kourilsky P (1990) Immunol Today. 11, 286

Allotreactivity? Allogeneic presentation of endogenous peptide or direct recognition of MHC polymorphism? A review
Eckels D D (1990) Tissue Antigens, 35, 49

Do carbohydrate antigens stimulate human T cells?
Emmerich F (1990) APMIS, 98, 1

Human leucocyte differentiation antigens: review of the CD nomenclature
Erber W N (1990) Pathology. 22, 61

Class II Mhc genes in rodent evolution
Figueroa F, Gutknecht J, Tichy H & Klein J (1990) Immunol Rev 113, 27

The major histocompatibility complex of frogs
Flavour M F & Pasquier L du (1990) Immunol Rev, 113, 47

The rational design and synthesis of haptens having specific activity as full agonists or full antagonists at the benzodiazepine receptor [Minireview]
Fryer R I & Gu Z-Q (1990) Life Sci 47, 833

The structure of thyroid autoantigens
Furmaniak J & Rees Smith B (1990) Autoimmunity. 7, 63

How does HLA-B27 confer susceptibility to inflammatory arthritis? [Editorial review]
Gaston J S H (1990) Clin. Exp. Immunol. 82, 1

Type-specific carbohydrate antigens of pathogenic bacteria. 1. Enterobacteriaceae
Griffiths A J & Davies D B (1990) Carbohydrate Polymers, 14, 241

Nonimmunological aspects of MHC function in the regulation of cell proliferation and the malignant phenotype
Haliotis T, Carlow D A & Elliott B E (1990) Cancer Cells. 2, 86-90

Regulation of MHC transcription [Overview]
Halloran P F & Madrenas J (1990) Transplantation, 50, 725

Autoimmune diseases and HLA
Hansen J A & Nelson J L (1990) Crit Rev Immunol 10, 307
Cellular mechanisms of antigen processing and the function of class I and II major histocompatibility complex molecules
Harding C V & Unanue E R (1990) Cell Regul. 1, 499–509
Human lymphocyte-B and lymphocyte-T responses to vaccination with pneumococcal polysaccharides
Heilmann C (1990) APMS, 98, Suppl.15, 4–23
Evasive strategies of trophoblast cells: selective expression of membrane antigens
Hunt J S & Hsi B-L (1990) Am. J. Reprod. Immunol. 23, 57
Self superantigens [Minireview]
Janeway C A (1990) Cell, 63, 659–661
Symposium on Immunogeni~ity, Steamboat, CO, January 21–28, 1989
Janeway C A, Sprent J & Sercaze E, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 113, 341 pp.
Evolution of the class II major histocompatibility complex alleles in higher primates
Kasahara M, Klein D, Fan W & Gutknecht J (1990) Immunol. Rev. 113, 65
The MHC molecules of nonmammalian vertebrates
Kaufman J, Skjoedt K & Salomonsen J (1990) Immunol. Rev. 113, 83
The T-cell antigen receptor - insights into organelle biology
Kraemer G & others (1990) Rev. Cell Biol. NS, 113, 341 pp.
The major histocompatibility complex and the quest for origins
Klein J & Takahata N (1990) Immunol. Rev. 113, 5
Poly saccharide antigens of Pseudomonas aeruginosa
Kniel Y A (1990) Crit. Rev. Microbiol. 17, 273
Repertoire of cyto toxic lymphocyte-T antigen specificity in viral infections [In Russian; English abstract]
Kontorov A A & Makarov V V (1990) Vopr. Virusol. 35, 97
Molecular genetics of the chicken MHC: current status and evolutionary aspects
Kroemer G & others (1990) Immunol. Rev. 113, 119
Antibodies, antigens, and molecular mimicry
Langone J I ed. (1989) Methods Enzymol. 178, 835 pp
Receptor-mediated antigen uptake and its effect on antigen presentation to class-II-restricted T lymphocytes
Lanzavecchia A (1990) Annu. Rev. Immunol. 8, 773
Epitopes on protein antigens: misconceptions and realities
 [Minireview]
Laver W G, Air G M, Webster R G & Smith-Gill S J (1990) Cell, 61, 553–556
Comparison of class I MHC alleles in humans and apes
Lawlor D A, Warren E, Ward F E & Parham P (1990) Immunol. Rev. 113, 147
Evolution of class-I MHC genes and proteins: from natural selection to thymic selection
Lawlor D A, Zemmour J, Ennis P D & Parham P (1990) Annu. Rev. Immunol. 8, 23
In search of the missing self — MHC molecules and NK cell recognition
Ljungren H G & Karre K (1990) Immunol. Today, 11, 237
Antigen presentation in MHC class-II transgenic mice — stimulation versus tolerization
Lo D, Burkly L C, Flavell R A, Palmeter R D & Brimster R L (1990) Immunol Rev 117, 121
Anti infectious immunity, vaccination and histocompatibility antigens
[In Russian; English abstract]
Meduntsyn N V (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No.8, 107
Microbial “superantigens” [Minireview]
Mifeldt M L (1990) Infection Immunol. 58, 2409–2413
The tonsillar immune system — its response to exogenous antigens
Mitani I, Toomoda K, Maeda N, Yamashita T & Kumazawa T (1990) Acta Oto-Laryngol. Suppl. 475, 1–14
Research for development of immunoassay kits for hapten [In Japanese; English abstract]
Mochida E, Ozawa N, Shinkai H & Kudo T (1990) Yakugaku Zasshi, 110, 639
Intrasplenic immunization with minute amounts of antigen
Nilsson B O & Larsson A (1990) Immunol. Rev. 113, 10
Expression and biosynthesis of ABH-related carbohydrate antigens in normal and pathologic human urothelium
Orntoft T F (1990) APMS, 98, Suppl. 17, 5–34
Role of histocompatibility antigens in nonimmune intercellular interactions [Brief review]
Pankratova E V (1990) Mol. Biol. Engl. Tr 24, No 2, Pr 1, 231
Modification of Class I major histocompatibility complex expression and tumor progression [In French; English abstract]
Paul P (1990) M/S Med. Sci. 6, 449
Expression of variable antigen genes in African trypanosomes [In French; English abstract]
Pay E (1990) M/S Med. Sci. 6, 510
Graft versus host disease and minor histocompatibility antigens
Perreault C, Belanger R, Gyger M & Brochu S (1990) M/S Med. Sci. 6, 30
Minor histocompatibility antigens
Perreault C & others (1990) Blood, 76, 1269
The replication functions of SV40 T antigen are regulated by phosphorylation [Minireview]
Prives C (1990) Cell, 61, 735–738
Parsimony analysis of mammalian class II histocompatibility genes
Rask L, Andersson L, Gustafsson K & Jonsson A-K (1990) Immunol. Rev. 113, 187
Possible immunoregulatory role for CD5 + B cells [Short analytical review]
Raveche E S (1990) Clin. Immunol. Immunopath. 56, 133
Regulation of the expressions of class I MHC genes
Singer D S & Maguire J E (1990) Crit. Rev. Immunol. 10, 225
Molecular changes in carbohydrate antigens associated with cancer
Singhal A & Hokomari S (1990) BioEssays, 12, 223
Decreased activity of the platelet Na⁺,K⁺-adenosine triphosphatase enzyme in allergic subjects
Skoner D P, Gentile D & Evans R (1990) J. Lab. Clin. Med. 115, 535
Antigen recognition and peptide-mediated immunotherapy in autoimmune disease
Smolék D E, Lock C B & McDevitt H O (1990) Immunol. Rev. 118, 37
Antigen-presenting cells for CD8⁺ T-cells
Sprent J & Schaefer M (1990) Immunol. Rev. 117, 213
Adhesion receptors of the immune system
Springer T A (1990) Nature, 346, 425
Mechanisms of bacterial degradation and transformation of chlorinated monoaromatic compounds
Håggblom M (1990) J. Basic Microbiol. 30, 115
Carcinogenicity of polychlorinated biphenyls, PCBs and PBBs
Silberhorn E M, Giauert H P & Robertson L W (1990) Crit Rev Toxicol. 20, 439
Resiniferatoxin and its analogs provide novel insights into the pharmacology of the vanilloid (capsaicin) receptor [Mini-review]
Szallas A & Blumberg P M (1990) Life Sci. 47, 1399
The phylogeny and chemical diversity of quinone-tanned glues and varnishes
Waste J H (1990) Comp. Biochem. Physiol. Pt B, 97, 19
The formation of phenolic compounds in plant cell and tissue cultures and the possibility of its regulation
Zaporozhets M N (1989) Advan. Cell Culture, 7, 201

AUTACOIDS
See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

BACTERIA
See also MICROORGANISMS
Modification of low molecular weight GTP-binding proteins and of actin by clostridial toxins [Mini-review]
Aktores K (1990) Med Microbiol Immunol. 179, 173
Energy coupling in bacterial periplasmic permeases [Mini-reviews]
Ames G F-L & Joshi A K (1990) J Bact. 172, 4133-4137
Bacterial periplasmic permeases belong to a family of transport proteins operating from Escherichia coli to human: traffic ATPases
Ames G F-L, Mimura C S & Shyamala V (1990) FEMS Microbiol Rev. 75, 429
Occurrence, metabolism, metabolic role, and industrial uses of bacterial polyhydroxalkanoates
Anderson A J & Dawes E A (1990) Microbiol Rev. 54, 450
Test the susceptibility of bacteria in biofilms to antibacterial agents [Mini-review]
Anwar H. Dasgupta M K & Costerton J W (1990) Antimicrob. Agents Chemother. 34, 2043
Logic of the Escherichia coli cell cycle
Ari R D' & Bouloc P (1990) Trends Biochem. Sci. 15, 191
Partition-mediated incompatibility of bacterial plasmids
Austin S & Nordström K (1990) Cell. 60, 351-354
Linkage map of Escherichia coli K-12, edition 8
Bachmann B J (1990) Microbiol. Rev. 54, 130-197
Regulation of magnitude of antibody response to bacterial polysaccharide antigens by thymus-derived lymphocytes [Mini-review]
Baker P J (1990) Immunol. Rev. 113, 227
The binary logic of antigen processing and presentation to T cells [Mini-review]
Yewdell J W & Bennink J R (1990) Cell. 62, 203-206

ANTIMICROBIAL SUBSTANCES
See: ANTIBIOTICS AND ANTIMICROBIAL SUBSTANCES

ANTIOXIDANTS
See: OXIDATION AND ANTIOXIDANTS

AROMATIC COMPOUNDS
The cofactor pyrroloquinoline quinone
Duino J A, Van Der Meer R A & Groen B W (1990) Annu. Rev. Nutr. 10, 297
The pharmacology, metabolism, analysis, and applications of coumarin and coumarin-related compounds
Egan D & others (1990) Drug Metab. Rev. 22, 503

10
Genetic regulation of *Salmonella* virulence [In Russian; English abstract]
Boichenko M N & Vorobyev A A (1990) *Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR*, No.2, 68

Immunomodulation by bacterial endotoxin
Burrell R (1990) *Crit. Rev. Microbiol.* 17, 189

The neutrophil, a professional killer of bacteria, may be controlled by T-cells
Campbell P A (1990) *Clin. Exp. Immunol.* 79, 141

Codon usage in higher plants, green algae, and cyanobacteria
Campbell W H & Goun G (1990) *Plant Physiol.* 92, 1

Differentiation of the bacterial cell division site
Cook W R, Deboer P A J & Rothfield L I (1989) *Int. Rev. Cytol.* 118, 1

Plasmid-mediated 4-quinolone resistance: a real or apparent absence? [Mini-review]
Courvalin P (1990) *Antimicrob. Agents Chemother.* 24, 681–684

Resistance of enterococci to glycopeptides [Mini-review]
Courvalin P (1990) *Antimicrob. Agents Chemother.* 34, 2291

A review of protease secretion instability in Proteus mirabilis
Dacosta S O P (1990) *Rev. Brasil. Genet.* 11, 165

Recent advances in the diagnosis, treatment, and prevention of *Pneumocystis carinii* pneumonia [Mini-review]
Davey R T jr & Masur H (1990) *Antimicrob. Agents Chemother.* 34, 499–504

Insect cell cultures as tools in the study of bacterial protein toxins
Davidson E W (1989) *Advan. Cell Culture*, 7, 125

Bacterial cell division
Deboer P A J, Cook W R & Rothfield L I (1990) *Annu. Rev Genet.* 24, 249

Properties of the cell surfaces of pathogenic bacteria
Doyle R J & Sonnenfeld E M (1989) *Int. Rev. Cytol.* 118, 17

Bacterial topoisomerases and the control of DNA supercoiling
Drlica k (1990) *Trends Genet.* 6, 433

Genetic functions and cell-cell interactions in the pheromone-inducible plasmid transfer system of *Enterococcus faecalis* [Microreview]
Dunny G M (1990) *Mol. Microbiol.* 4, 689

Functions of the flagellar modes of rotation in bacterial motility and chemotaxis [Microreview]
Eisenbach M (1986) *Mol Microbiol.* 4, 161

Physical and chemical effects damaging Listeriae [Short review]
Farber J M (1989) *Acta Microbiol. Hung.* 36, 245

Neisseria meningitidis outer membrane proteins — prospects of their use in the development of preparations for immunoprophylaxis [In Russian; English abstract]
Filatova T N (1990) *Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR*, No.2, 86

Pulling the trigger: the mechanism of bacterial spore germination [Microreview]
Foster S J & Johnstone K (1990) *Mol. Microbiol.* 4, 137

Hepatic mechanisms for clearance and detoxification of bacterial endotoxins
Fox E S, Thomas P & Broitman S A (1990) *J. Nutr. Biochem.* 1, 620

Determination of bacterial growth and activity at solid-liquid interfaces
Geese G G & White D C (1990) *Annu. Rev. Microbiol.* 44, 579

Study of mutational specificity in the lacI gene of *Escherichia coli* as a window on the mechanisms of mutation
Glickman B W (1990) *Environ. Mol. Mutagen.* 16, 48

Uncharged transfer RNA, protein synthesis, and the bacterial stringent response [Microreview]
Goldman E & Jakubowski H I (1990) *Mol. Microbiol.* 4, 2035

Type-specific carbohydrate antigens of pathogenic bacteria 1. Enterobacteriaeae
Griffiths A J & Davies D B (1990) *Carbohydrate Polymers*, 14, 241

Campylobacters associated with human diarrhoeal disease
Griffiths P L & Park R W A (1990) *J. Appl. Bact.* 69, 281

The Tn21 subgroup of bacterial transposable elements
Grimsted J, Delacruz F & Schmitt R (1990) *Plasmid*, 24, 163

*Salmonella* virulence — new clues to intramacrophage survival
Groisman E A & Saier M H (1990) *Trends Biochem. Sci.* 15, 30

Virulence plasmids of *Salmonella typhimurium* and other *Salmonellae* [Mini-review]
Gulg P A (1990) *Microb. Pathogen.* 8, 3

Mechanisms of bacterial degradation and transformation of chlorinated monoaromatic compounds
Häggblom M (1990) *J. Basic Microbiol.* 30, 115

Outer membrane proteins of *Pseudomonas* [MicroReview]
Hancock R E W, Siehnel R & Martin N (1990) *Mol. Microbiol.* 4, 1069

Toxigenic clostridia
Hatheway C L (1990) *Clin Microbiol. Rev.* 3, 66-98

Proton-linked sugar transport systems in bacteria [Mini-review]
Henderson P J F (1990) *J. Bacteriol.* 168, 225

Regulation of bacterial gene expression by metal–protein complexes [Microreview]
Hennecke H (1990) *Mol. Microbiol.* 4, 162

Nitrogen fixation genes involved in the *Bradyrhizobium japonicum*-soybean symbiosis [Mini-review]
Hennecke H (1990) *FEBS Lett.* 268, 422-426

Protein-H1 — a role for chromatin structure in the regulation of bacterial gene expression and virulence [Microreview]
Higgins C F & others (1990) *Mol. Microbiol.* 4, 2007

Nucleotide excision repair in *Escherichia coli*
Houten B van (1990) *Microbial. Rev.* 54, 18–51

Structure-function analyses of Shiga toxin and the Shiga-like toxins [Mini-review]
Jackson M P (1990) *Microb. Pathogen.* 8, 235

Translational initiation in *Escherichia coli*: old and new questions [MicroReview]
Jacques N & Dreyfus M (1990) *Mol. Microbiol.* 4, 1063

Metabolic growth rate control in *Escherichia coli* may be a consequence of subsaturation of the macromolecular biosynthetic apparatus with substrates and catalytic components
Jensen K F & Pedersen S (1990) *Microbial. Rev.* 54, 89–100

β-Galactoside transport in *E. coli*: a functional dissection of lac permease
Kaback H R, Bibi E & Roepe P D (1990) *Trends Biochem. Sci.* 15, 399

Vitamin-B12 transport in *Escherichia coli*: energy coupling between membranes [Mini-review]
Kadner R J (1990) *Mol. Microbiol.* 4, 2027
Escherichia coli aspartate transcarbamoylase — the molecular basis for a concerted allosteric transition
Kantrowitz E R & Lipscomb W N (1990) Trends Biochem. Sci 15, 53

Towards an understanding of the structural basis of 'forbidden' transport pathways in Escherichia coli lactose carriers: mutations probing the energy barriers to uncoupled transport [Microreview]
King S C & Wilson T H (1990) Mol. Microbiol. 4, 1433

Regulation of transposition in bacteria
Kleckner N (1990) Annu. Rev. Cell Biol. 6, 297

Pneumococcal resistance to antibiotics
Klugman K P (1990) Clin Microbiol. Rev 3, 171-196

A radical-chemical route to acetyl-CoA: a anaerobically induced pyruvate formate-lyase system of Escherichia coli
Knapp E J & Sawers G (1990) FEMS Microbiol. Rev. 75, 383

Polysaccharide antigens of Pseudomonas aeruginosa
Knud J A (1990) Crit Rev Microbiol. 17, 273

Transcriptional regulatory cascade of nitrogen-fixation genes in anoxygenic photosynthetic bacteria — oxygen-responsive and nitrogen-responsive factors [Microreview]
Kranz R G & Fosterhartnett D (1990) Mol Microbiol. 4, 1793

Organization of the bacterial chromosome
Krawiec S & Riley M (1990) Microbiol Rev 54, 502

Uncoupler-resistant mutants of bacteria
Kruuvich T A, Quirk P G & Guffanti A A (1990) Microbiol. Rev. 54, 52-65

Cell growth and abrupt doubling of membrane proteins in Escherichia coli during the division cycle
Kubitschek H E (1990) J Gen. Microbiol 136, 599

Genetic instability and hypervariability in Streptomyces ambofaciens: towards an understanding of a mechanism of genome plasticity
Leblond P, Demuyter P, Simonet J M & Decaris B (1990) Mol Microbiol. 4, 707

Thiosulfate, polythionates and elemental sulfur assimilation and reduction in the bacterial world
Le Faou A, Rajagopu B S, Daniels L & Fauque G (1990) FEMS Microbiol. Rev. 75, 351

Septic shock and metabolism disturbances [In French: English abstract]
Lefèvre G, Dhainaut J F, Tallet F & Raichvarg D (1990) Path. Biol. 38, 650

Is macrophage death on the field of battle essential to victory, or a tactical weakness in immunity against tuberculosis [Editorial review]
Lowe D B (1990) Clin. Exp Immunol. 80, 301

Regulation of cell division in E. coli
Lutkenhaus J (1980) Trends Genet. 6, 22

Post-transcriptional control in the polycistronic operon environment: studies of the atp operon of Escherichia coli [MicroReview]
McCarthy J E G (1990) Mol Microbiol. 4, 1233

Role of immunity to mycobacterial stress proteins in rheumatoid arthritis [Current status review]
McLean L, Winrow V & Blake D (1990) J Exp Path 71, 295

Anion-exchange reactions in bacteria [Mini-review]
Maloney P B (1990) J. Bioenerget Biomembr. 22, 509

Anion-exchange mechanisms in bacteria
Maloney P C, Ambudkar S V, Anantharam V, Sonna L A & Varadshahary A (1990) Microbiol. Rev. 54, 1-17

Mechanisms of iron acquisition and bacterial virulence
Martinez J L, Delgado-Fribrarre A & Baquero F (1990) FEMS Microbiol. Rev. 75, 45

Methionyl-transfer RNA synthetase from E. coli — a review
Meinmel T & others (1990) Biochimie, 72, 625

The single-stranded DNA-binding protein of Escherichia coli
Meyer T R & Laine P S (1990) Microbiol. Rev. 54, 342

Special issue: Sixth European Bioenergetics Conference (EBEC). The photosynthetic reaction centre from the purple bacterium Rhodopseudomonas viridis — an overview and recent advances
Michel H, Sinning I, Koepcke J, Ewald G & Fritzche G (1990) Biochim Biophys. Acta, 1018, 115

The genetics of bacterial spore germination
Muir A & Smith D A (1990) Annu. Rev Microbiol 44, 531

Immunity to mycobacteria — possible role of alpha-beta and gamma-delta lymphocytes-T
Munk M E & others (1990) APMIS, 98, 669

The life and times of the enterococcus
Murray B E (1990) Clin. Microbiol. Rev. 3, 46-65

Global genetic structure and molecular epidemiology of encapsulated Haemophilus influenzae
Museau J M & others (1990) Rev Infect. Dis. 12, 75

Regulation of the cell division cycle and differentiation in bacteria
Newton A & Ohta N (1990) Annu. Rev. Microbiol. 44, 689

The role of type-I pli in the pathogenesis of Escherichia coli infections — a short review and some new ideas [MiniReview]
Orndorff P E & Bloch C A (1990) Microb Pathogen. 9, 75

High-level gentamicin resistance in Enterococcus, microbiology, genetic basis, and epidemiology
Patterson J E & Zervos M J (1990) Rev Infect Dis 12, 644

Adhesins of enterotoxigenic E. coli — their role in the pathogenesis of diarrheaa and genetic control [In Russian, English abstract]
Petrovskaya V G & Bondarenko B M (1990) Zh Microbiol Epidemiol Immunobiol SSSR, No 5, 110

Enterotoxins of enterotoxigenic Escherichia coli — characterization, mechanism of effect and genetic control [In Russian; English abstract]
Petrovskaya V G & Bondarenko V M (1990) Zh Microbiol Epidemiol Immunobiol No 7, 92

Techniques used for the determination of antimicrobial resistance and sensitivity in bacteria
Piddock L J V (1990) J Appl Bact 68, 307

Precursor/product antiport in bacteria [Microreview]
Poolman B (1990) Mol Microbiol. 4, 1629

TonB and the Gram-negative dilemma [Microreview]
Postle K (1990) Mol Microbiol. 4, 2019

Genetics of extracellular protein secretion by Gram-negative bacteria
Pugsley A P, Denfert C, Reyss I & Kornacker M G (1990) Mol Microbiol. 4, 1233

The carbohydrate- and lipid-containing cell wall of mycobacteria, phenolic glycolipids, structure and immunological properties
Pau G (1990) Crit. Rev. Microbiol. 17, 305

Biosynthesis and function of phospholipids in Escherichia coli [MiniReview]
Raatzi C R H & Dowhan W (1990) J. Biol. Chem. 265, 1235

Family Spirochaceae — Gram-negative ring-forming aerobic bacteria
Raj H D & Maloy S R (1990) Crit. Rev. Microbiol. 17, 329

Molecular aspects of phosphate transport in Escherichia coli [MicroReview]
Rao N N & Tortari A (1990) Mol Microbiol. 4, 1003
Emerging role of lactobacilli in the control and maintenance of the vaginal bacterial microflora
Redondo-Lopez V, Cook R L & Sobel J D (1990) *Rev. Infect. Dis.* 12, 856

Resonance Raman studies of bacterial reaction centers [Review]
Robert B (1990) *Biochim. Biophys. Acta.* 1017, 99

Signal transduction by the bacterial phosphotransferase system: Diauxie and the crp gene (M. Motrod reviewed) [Mini-review]
Roseman S & Meadow N D (1990) *J. Biol. Chem.* 265, 2993–2996

Bacterial spores and chemical sporicidal agents
Russell A D (1990) *Clin. Microbiol. Rev.* 3, 99–119

Regulation of bacterial physiological processes by three types of protein phosphorylating systems
Saier M H Jr, Wu L-F & Reizer J (1990) *Trends Biochem. Sci.* 15, 391

Expression of animal and human retroviral gene products in *Escherichia coli* with the xpl promoter pDL6 vector system
Samuel K P & others (1990) *Genet. Anal.* 7, 178

Genetic analysis of protein export in *Escherichia coli*
Schatz P J & Beckwith J (1990) *Annu. Rev. Genet.* 24, 215

More than just histone-like proteins [Mini-review]
Schmid M B (1990) *Cell.* 63, 451

The role of transformation in the variability of the Neisseria gonorrhoeae cell surface [Microreview]
Scocca J J (1990) *Mol. Microbiol.* 4, 321

The proton-translocating ATPase in *Escherichia coli*
Senior A E (1990) *Annu. Rev. Biophys. Biophys. Chem.* 19, 7

Persistence of group A streptococci and biodegradation of their cell walls from the viewpoint of the immunopathogenesis of nonpurulent post-streptococcal diseases [In Russian; English abstract]
Shikham A R, Chernyakova A M & Briko N I (1990) *Zh. Mikrobiol. Epidemiol. Immunobiol.* SSSR, No 2, 74

Social and developmental biology of the myxobacteria
Shimkets L J (1990) *Microbiol. Rev.* 54, 471

Pathogenesis of Brucella
Smith L D & Ficht T A (1990) *Crit. Rev. Microbiol.* 17, 209

Sequences supplement — RNA, cloned human DNA and *E. coli* sequences, codon usage and restriction enzyme recognition sequences
Speer T & others (1990) *Nucleic Acids Res.* 18, Suppl. 2215

FNRI and its role in oxygen-regulated gene expression in *Escherichia coli*
Sprio S & Guest J R (1990) *FEBS Microbiol. Rev.* 75, 399

Mechanism and regulation of bacterial ribosomal RNA processing
Srivastava A K & Schlessinger D (1990) *Annu. Rev. Microbiol.* 44, 105

Mycobacterium vaccae in immunophrophylaxis and immunotherapy of leprosy and tuberculosis
Stanford J L & others (1990) *Vaccine.* 8, 525

Signal transduction in bacteria
Stock J B, Stock A M & Mottonen J M (1990) *Nature.* 344, 395

Bacterial defenses against oxidative stress
Storz G, Tartaglia L A, Farr S B & Ames B N (1990) *Trends Genet.* 6, 363

Molecular and antigenic analysis of treponemes
Strugnell R, Cockayne A & Penn C W (1990) *Crit. Rev. Microbiol.* 17, 231

TraT lipoprotein, a plasmid-specified mediator of interactions between Gram-negative bacteria and their environment
Sukupolvi S & O’Connor C D (1990) *Microbiol. Rev.* 54, 331

Mini-review series: Protein export in bacteria: structure, function, and molecular genetics
Tai P C, ed. (1990) *J. Bioenerget. Biomembr.* 22, 209

The identification, typing and fingerprinting of *Salmonella*: laboratory aspects and epidemiological applications
Threlfall E J & Frost J A (1990) *J. Appl. BAct.* 68, 5

Transport systems encoded by bacterial plasmids [Mini-review]
Tisa L S & Rosen B P (1990) *J. Bioenerget. Biomembr.* 22, 493

From cell membrane to nucleotides: the phosphate regulon in *Escherichia coli*
Torriani A (1990) *BioEssays.* 12, 371

Iron acquisition and the pathogenesis of meningococcal and gonococcal disease [Mini-review]
Vanputten P J M (1990) *Med Microbiol. Immunol.* 179, 289

1st Symposium on Lactic Acid Bacteria - Genetics, Metabolism and Applications. Wageningen, The Netherlands, 17–21 September 1990
Venema G, Poolman B & Wouters J T M, eds (1990) *FEBS Microbiol. Rev.* 87, 1

Physiology and genetics of methylotrophic bacteria
Vries G E de, Kues U & Stahl U (1990) *FEBS Microbiol. Rev.* 75, 57

Lipid involvement in protein translocation in *Escherichia coli* [Microreview]
Vrije G J de, Batenburg A M, Killian J A & Kruijff B de (1990) *Mol. Microbiol.* 4, 143

Intestinal barriers to bacteria and their toxins
Walker R I & Owen R L (1990) *Annu. Rev. Med.* 41, 393

Lancefield group-F and related streptococci
Whitworth J M (1990) *J. Med Microbiol.* 33, 135

Structure, function, and regulation of *Pseudomonas aeruginosa* exotoxin A
Wick M J, Frank D W, Storey D G & Iglewski B H (1990) *Annu. Rev. Microbiol.* 44, 335

**BACTERIOPHAGES**

Bacteriophage A DNA: the beginning of the end [Mini-review]
Becker A & Murialdo H (1990) *J. Bacter.* 172, 2819–2824

Phage-T4 introns — self-splicing and mobility
Belfort M (1990) *Annu. Rev. Genet.* 24, 363

Interactions between satellite bacteriophage P4 and its helpers
Christie G E & Calendar R (1990) *J. Virolog.* 65, 225

Form determination of the heads of bacteriophages
Horiiuchi K (1990) *Jap. J Genet.* 65, 225

Origin of DNA replication of filamentous coliphages
Kellenberger E (1990) *Eur. J. Biochem.* 190, 233–248

Introm-associated splicing reactions in bacteriophage T4 [Microreview]
Maley F, Chu F K & Maley G F (1990) *Mol. Microbiol.* 4, 867

Bending and supercoiling of DNA at the attachment site of bacteriophage A
Nash H A (1990) *Trends Biochem. Sci.* 15, 222
**BEHAVIOUR**

* See also: BRAIN AND NERVOUS SYSTEM

Stress-ethanol interaction — involvement of endogenous opioid mechanisms
- Aragon C M G, Trudeau L F & Amit Z (1990) *Neurosci. Biobehav. Rev.* 14, 335

Steroidal control of behavioural, neuroendocrine and brain sexual differentiation: studies in a carnivore, the ferret
- Baum M J, Carroll R S, Cherry J A & Tobet S A (1990) *J. Neuroendocrinol.* 2, 401

Effects of alcohol on human aggression — an integrative research review
- Bushman B J & Cooper H M (1990) *Psychol. Bull.* 107, 341

Serotonin-specific drugs for anxiety and depressive disorders
- Charney D S, Krystal J H, Delgado P L & Heninger G R (1990) *Annu. Rev. Med.* 41, 437

Multiple roles of a histaminergic afferent neuron in the feeding behavior of *Aplysia*
- Chiel H J, Weiss K R & Kupfermann I (1990) *Trends Neurosci.* 13, 222

Physiological and behavioral responses to corticotropin-releasing factor administration — is CRF a mediator of anxiety or stress responses
- Dunn A J & Berridge C W (1990) *Brain Res. Rev.* 15, 71

Neurochemical and psychopharmacological aspects of aggressive behavior
- Eichelman B S (1990) *Annu. Rev. Med.* 41, 149

Animal models of drug withdrawal symptoms
- Emmett-Oglesby M W, Mathis D A, Moon R T Y & Lal H (1990) *Psychopharmacology.* 101, 292

The pharmacokinetics of tricyclic antidepressant drugs in the elderly
- Furlanut M & Benetello P (1990) *Pharmacol. Res.* 22, 15

The physiology and mechanisms of the stress-induced changes in prolactin secretion in the rat [Minireview]
- Gala R R (1990) *Life Sci.* 46, 1407

Behavioral toxicity of solvents [Current trends review]
- Glowa J R (1990) *Drug Dev. Rev.* 10, 411

Behavioral effects of 5-HT receptor ligands in the aversive brain stimulation, elevated plus-maze and learned helplessness tests
- Graeff F G, Audi E A, Almeda S S, Graeff E O & Hunziker M H L (1990) *Neurosci. Biobehav. Rev.* 14, 501

Novel anxiotolitics that act as partial agonists at benzodiazepine receptors
- Haefely W, Martin J R & Sehoeh P (1990) *Trends Pharmacol. Sci.* 11, 452

Genetics of circadian rhythms
- Hall J C (1990) *Annu. Rev. Genet.* 24, 659

The cannabionoid receptor: biochemical, anatomical and behavioral characterization
- Howlett A C & others (1990) *Trends Neurosci.* 13, 420

Eating disorders and depression: is there a serotonin connection?
- Jimerson D C, Lesem M D, Kaye W H, Hegg A P & Brewerton T D (1990) *Biol. Psychiat.* 28, 445

The effect of neuroleptics on cognitive and psychomotor function
- King D J (1990) *Br. J. Psychia* 137, 700

Salivary cortisol in psychobiological research — an overview
- Kirschbaum C & Hellhammer D H (1990) *Neuropsychobiology.* 22, 150

The discovery and development of buspirone: a new approach to the treatment of anxiety
- New J S (1990) *Med. Res. Rev.* 10, 283

Stress, emotion, and human immune function
- Oelert A (1990) *Psychol. Bull.* 108, 363

Molecular genetic studies of manic-depression and schizophrenia
- Owen M J & Mullan M J (1990) *Trends Neurosci.* 13, 29

Lithium and serotonin function: implications for the serotonin hypothesis of depression
- Price L H, Charney D S, Delgado P L & Heninger G R (1990) *Psychopharmacology.* 100, 3

Role of genotype in the adaptation of the brain dopamine system to stress
- Puglisiallegra S, Kempf E & Cabib S (1990) *Neurosci. Biobehav. Rev.* 14, 525

Aggressive behavior in birds — an experimental model for studies of brain-steroid interactions [Minireview]
- Schlinger B A & Callard G V (1990) *Comp. Biochem. Physiol. Pt. A, 97, 307

Arylsulfatase A (ASA) defect and psychiatric illness — a review
- Shah S N (1990) *Mol. Chem. Neuropath.* 12, 121

Social and developmental biology of the myxobacteria
- Shimkets L J (1990) *Microbiol. Rev.* 54, 473

The third-dopamine receptor — a new target for neuroleptics [In French; English abstract] [Minireview]
- Sokoloff P, Giros B, Martres M P & Schwartz J C (1990) *M/S Med. Sci.* 6, 800

Modulation of behavioral effects of drugs after repeated administration; in particular, the reverse tolerance to amphetamines
- Tadokoro S & Kuribara H (1990) *Folia Pharmacol. Jap.* 95, 229

Hormonal regulation of sociosexual behavior in female mammals
- Takahashi L K (1990) *Neurosci. Biobehav. Rev.* 14, 403

Sigma-receptors — biology and function
- Walker J M & others (1990) *Pharmacol. Rev.* 42, 355

Neural substrates of latent inhibition — the switching model
- Weiner I (1990) *Psychol. Bull.* 108, 442

Neurobehavioral effects of toxicity due to metals, solvents and insecticides
- White R F, Feldman R G & Travers P H (1990) *Clin. Pharmacol. Rev.* 15, 392

The behavioral pharmacology of NMDA receptor antagonists
- Willetts J, Balster R L & Leander J D (1990) *Trends Pharmacol. Sci.* 11, 423

5-HT-related drugs and human experimental anxiety
- Zuardi A W (1990) *Neurosci. Biobehav. Rev.* 14, 507

**BILE**

See: LIVER

**BILE ACIDS**

See: BILE SALTS

**BILE PIGMENTS**

Deposition of bilirubin acid in the central nervous system — a hypothesis for the development of kernicterus
- Brodersen R & Stern L (1990) *Acta Paediat. Scand.* 79, 12
BILE SALTS

Ultrastructural changes in gastric epithelium caused by bile salt [Current research review]
Bushnell L, Bjorkman D & McGreevey J (1990) J. Surg. Res. 49, 280

Lipid metabolism in bile and malabsorption
Färkkilä M & Miettinen T A (1990) Ann. Med. 22, 5

Chromatographic determination of bile acids in biological fluids with sensitive and selective detection [In Japanese; English abstract]
Goto I (1980) Yakugaku Zasshi. 110, 807

Hep G2 cells as a resource for metabolic studies: lipoprotein, cholesterol, and bile acids
Javitt N B (1990) FASEB J. 4, 161

BIOCHEMISTRY, GENERAL

Positive control [Minireview]
Adhya S & Garges S (1990) J. Biol. Chem. 265, 10797–10800

In defense of nonmolecular cell biology
Albrecht-Buehler G (1990) Int. Rev. Cytol. 120, 191

Ion distributions around DNA and other cylindrical polymers — theoretical descriptions and physical implications
Anderson C F & Record M T (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 423

Ryozoyan secondary metabolites: a chemotaxonomical challenge [Mini-review]
Anthoni U, Nielsen P H, Pereira M & Christophersen C (1990) Comp. Biochem. Physiol. Pt B, 96, 431

Zinc finger domains — hypotheses and current knowledge
Berg J M (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 403

Iridoids — an updated review. 1
Doros C A & Stermitz F R (1990) J. Nat. Prod. Llyodia, 53, 1055

Biochemistry of fish antifreeze proteins
Davies P L & Hew C L (1990) FASEB J. 4, 2460

Thermal biology of the laboratory rat
Gordon C J (1990) Physiol. Behav. 47, 963

Nutrition science from vitamins to molecular biology
Jukes T H (1990)

Biochemistry of tear and its change in pathology — a review [In Japanese; English abstract]
Shomii M & others (1990) J. Appl. Physiol. 68, 833

Subunit δ of H+ -ATPase: at the interface between proton flow and ATP synthesis
Engelbrecht S & Junge W (1990) Biochim. Biophys. Acta. 1015, 379

The mechanisms contributing to photosynthetic control of electron transport by carbon assimilation in leaves [Mini-review]
Foyer C, Furbank R, Harbinson J & Horton P (1990) Photosynthesis Res. 25, 83

The dynamic aspects of proton transfer processes
Gutman M & Nachlid E (1990) Biochim. Biophys. Acta. 1015, 391

Regulatory proteins of F1F0-ATPase: role of ATPase inhibitor [Mini-review]
Hashimoto T, Yoshida Y & Tagawa K (1990) J. Bioenerget. Biomembr. 22, 27

Brown adipose tissue thermogenesis: interdisciplerary studies
Himms-Hagen J (1990) FASEB J. 4, 2890

Vitamin B12 transport in Escherichia coli — energy coupling between membranes [Microreview]
Kadner R J (1990) Mol. Microbiol. 4, 2027

Regulation of mitochondrial ATP synthesis in mammalian cells by transcriptional control [Mini-review]
Kagawa Y & Ohta S (1989) Int. J. Biochem. 22, 219

Mechanism and evolution of the uncoupling protein of brown adipose tissue
Klingenberg M (1990) Trends Biochem. Sci. 15, 108

Halorhodosp. a light-driven electrogenic chloride-transport system
Lanyi J K (1990) Physiol. Rev. 70, 319

Omeprazole: the first proton pump inhibitor
Lindberg P & others (1990) Med. Res. Rev. 10, 1

Sequencial transmission of light into redox and acid base energy in photosynthesis
Losada M, Guerrero M G, Rosa M A de la, Serrano A, Hervás & Ortega J M (1990) Bioelectrochem. Bioenerget. 22, 105

What is the clock? Translational regulation of circadian bioluminescence
Morse D S, Fritz L & Hastings J W (1990) Trends Biochem. Sci. 15, 262

The alpha phosphat hypothesis in respiratory control and acid-base balance [Brief review]
Nattie E E (1990) J. Appl. Physiol. 69, 1201

Decoupling of oxidative phosphorylation and photophosphorylation
Rottenberg H (1990) Biochim. Biophys. Acta. 1018, 1

Fourth Datta Lecture: The energy coupled exchange of Na+ for K+ across the cell membrane — the Na+/K+ -pump
Skou J C (1990) FEBS Lett. 268, 314–324

BIOENERGETICS

See also: PHOTOSYNTHESIS

Energy coupling in bacterial periplasmic permeases [Minireview]
Ames G F-L & Joshi A K (1990) J. Bact. 172, 4133–4137

Regulation of oxidative phosphorylation in the mammalian cell
Balaban R S (1990) Am. J. Physiol. 258, No 3, Pt 1, C377

Mecanisms of long-distance electron transfer in proteins — lessons from photosynthetic reaction centers
Boxer S G (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 267

The plasma membrane H+ -ATPase of higher plant cells: biochemistry and transport function
Brisken D P Y (1990) Biochim. Biophys. Acta. 1019, 95

Hebbian synapses: biophysical mechanisms and algorithms
Brown T H, Kairiss E W & Keenan C L (1990) Annu. Rev. Neurosci. 13, 475

New trends in photobiology. Photomotile responses in ciliated protozoa
Colombetti G (1990) J. Photochem. Photobiol. B-Biol. 4, 243

Defining hypoxia: a systems view of VO2, glycolysis, energetics, and intracellular pO2 [Brief review]
Connott R J, Honig C R, Gayeski T E J & Brooks G A (1990) J. Appl. Physiol. 68, 833

The theoretical descriptions and physical implications
Rubin H (1990) Annu. Rev. Physiol. 25, 83

Mechanisms of long-distance electron transfer in proteins — lessons from photosynthetic reaction centers
Boxer S G (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 267

The plasma membrane H+ -ATPase of higher plant cells: biochemistry and transport function
Brisken D P Y (1990) Biochim. Biophys. Acta. 1019, 95

Hebbian synapses: biophysical mechanisms and algorithms
Brown T H, Kairiss E W & Keenan C L (1990) Annu. Rev. Neurosci. 13, 475

New trends in photobiology. Photomotile responses in ciliated protozoa
Colombetti G (1990) J. Photochem. Photobiol. B-Biol. 4, 243

Defining hypoxia: a systems view of VO2, glycolysis, energetics, and intracellular pO2 [Brief review]
Connott R J, Honig C R, Gayeski T E J & Brooks G A (1990) J. Appl. Physiol. 68, 833

Subunit δ of H+ -ATPase: at the interface between proton flow and ATP synthesis
Engelbrecht S & Junge W (1990) Biochim. Biophys. Acta. 1015, 379

The mechanisms contributing to photosynthetic control of electron transport by carbon assimilation in leaves [Mini-review]
Foyer C, Furbank R, Harbinson J & Horton P (1990) Photosynthesis Res. 25, 83

The dynamic aspects of proton transfer processes
Gutman M & Nachlid E (1990) Biochim. Biophys. Acta. 1015, 391

Regulatory proteins of F1F0-ATPase: role of ATPase inhibitor [Mini-review]
Hashimoto T, Yoshida Y & Tagawa K (1990) J. Bioenerget. Biomembr. 22, 27

Brown adipose tissue thermogenesis: interdisciplerary studies
Himms-Hagen J (1990) FASEB J. 4, 2890

Vitamin B12 transport in Escherichia coli — energy coupling between membranes [Microreview]
Kadner R J (1990) Mol. Microbiol. 4, 2027

Regulation of mitochondrial ATP synthesis in mammalian cells by transcriptional control [Mini-review]
Kagawa Y & Ohta S (1989) Int. J. Biochem. 22, 219

Mechanism and evolution of the uncoupling protein of brown adipose tissue
Klingenberg M (1990) Trends Biochem. Sci. 15, 108

Halorhodosp. a light-driven electrogenic chloride-transport system
Lanyi J K (1990) Physiol. Rev. 70, 319

Omeprazole: the first proton pump inhibitor
Lindberg P & others (1990) Med. Res. Rev. 10, 1

Sequencial transmission of light into redox and acid base energy in photosynthesis
Losada M, Guerrero M G, Rosa M A de la, Serrano A, Hervás & Ortega J M (1990) Bioelectrochem. Bioenerget. 22, 105

What is the clock? Translational regulation of circadian bioluminescence
Morse D S, Fritz L & Hastings J W (1990) Trends Biochem. Sci. 15, 262

The alphastat hypothesis in respiratory control and acid-base balance [Brief review]
Nattie E E (1990) J. Appl. Physiol. 69, 1201

Decoupling of oxidative phosphorylation and photophosphorylation
Rottenberg H (1990) Biochim. Biophys. Acta. 1018, 1
BIOTECHNOLOGY

Bioconversions in aqueous two-phase systems
Andersson E & Hahn-Hägerdal B (1990) Enzyme Microb. Technol. 12, 242

Multi-author review: Microorganisms in nuclear waste disposal — Part I
Bachofen R & others (1990) Experientia, 46, 777-876

The use of gene technology in the clinical laboratory [Plenary lecture]
Borresen A (1990) Scand J Clin Lab Invest 50, Suppl. 202, 9

Microbial processes for ascorbic acid biosynthesis: a review
Boudrant J (1990) Enzyme Microb. Technol. 12, 522

Symposium on Biotechnology and Human Genetic Predisposition to Disease, Steamboat Springs, CO, March 27-April 3, 1989
Cantor C R, Ommen G S, Caskey C T, Hood L E & Kamely D, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 126, 241 pp.

The improving prospects for yield increase by genetic engineering in antibiotic producing streptomycetes
Chater K F (1990) Biotechnology, 8, 115

Medicinal plant biotechnology
Constabel F (1990) Planta Med. 56 421

Symposium on Protein and Pharmaceutical Engineering, Park City, UT, 11-12 January, 1989
Craik C S, Fletterick R, Matthews C R & Wells J, eds. (1990) UCLA Symp. Mol. Cell. Biol. NS, 110, 184 pp.

How an insect sickness turns out to be useful in protein engineering
Filhol O, Cochet C & Chambaz E M (1990) M/S Med. Sci 16, 297

Genetic engineering of plants for virus resistance [Brief review]
Gadani F, Marjonsky L M, Medici R, Miller W A & Hill J H (1990) Arch. Virol. 115, 1

Proceedings of Biomat 89 — Calcofied Tissues and Biomaterials, Bordeaux, France, 15-19 December 1989
Glimcher M J & others (1990) Biomaterials, 11, Suppl. 7-92

Environmental effects on protein glycosylation
Goochke F C & Monica T (1990) Bio/Technology, 8, 421

Membranes and bioreactors [Minireview]
Heath C & Belfort G (1990) Int. J. Biochem. 22, 823

Vaccinia virus vectors: new strategies for producing recombinant vaccines
Hruby D E (1990) Clin. Microbiol. Rev. 3, 153–170

Ionic nutrition of yeast — physiological mechanisms involved and implications for biotechnology
Jones K P & Gadd G M (1990) Enzyme Microb Technol. 12, 402

Antibody engineering and perspectives in therapy
Lefranc G & Lefranc M P (1990) Biochimie, 72, 639

Biosensors (Review)
Law C R & others (1990) J. Chromatogr. 510, 347

Vision assisted robotics and tape technology in the life-science laboratory — applications to genome analysis
Martin W J & Walmsley R M (1990) Bio/Technology, 8, 1258

3rd International Meeting on Membrane Biotechnology, Texas A&M University, College Station, TX, September 17-20, 1989
Nicola C & Chapman D, eds(1990) Progr Clin. Biol Res. 343, 312 pp.

Special issue — Polymers as Biomaterials
Peppas N A & others (1990) Biomaterials, 11, 611–738

Manipulating the mouse genome: implications for neurobiology
Rossant J (1990) Neuron, 4, 323–334

Solubility as a function of protein structure and solvent components
Schein C H (1990) Bio/Technology, 8, 308

DNA technology
Wong R S & Passaro E (1990) Am. J. Surg. 159, 510

BLOODBLOOD PROTEINS

See also: HAEMOGLOBIN
IMMUNOGLOBULINS AND IMMUNOGLOBULIN RECEPTORS

Growth regulation of the vascular system: evidence for a metabolic hypothesis [Editorial review]
Adair T H, Gay W J & Montani J-P (1990) Am J Physiol. 259, No. 3, Pt 2, R393

Treatment of the anemia of chronic renal failure with recombinant human erythropoietin
Adamson J W & Eschbach J W (1990) Annu. Rev. Med. 41, 349

The potential relevance of cytokines to ovarian physiology — the emerging role of resident ovarian cells of the white blood cell series
Adashi E Y (1990) Endocr Rev 11, 454

Biochemistry of the erythrocyte Rh polypeptides — a review
Agre P, Smith B L & Hartelschenk S (1990) Yale J Biol. Med. 63, 461
Induced differentiation of K562 leukemia cells: a model for studies of gene expression in early megakaryoblasts
Aliatalo R (1990) Leukemia Res. 14, 501

Plasminogen activator inhibitors: hormonally regulated serpins
Andreasen P A, Georg B, Lund L R, Riccio A & Stacey S N (1990) Mol. Cell. Endocrinol. 68, 19

Blood group-active surface molecules of the human red blood cell
Ansee D J (1990) Vox Sang. 58, 1

Interferon in Hematologic Malignancies and Related Disorders
Appelbaum F R & others (1990) Seminars Hematol. 27, No. 3, Suppl. 4, 1–31

Pathophysiology of hemolysis in glucose-6-phosphate-dehydrogenase deficiency
Arese P & Flora A de (1990) Seminars Hematol. 27, 1

Animal models of atherosclerosis
Armstrong M L & Hestad D D (1990) Atherosclerosis. 85, 15

Leukocyte adhesion molecules deficiency: Its structural basis, pathophysiology and implications for modulating the inflammatory response
Arnaout M A (1990) Immunol. Rev. 114, 145

Diabetes and hemorheology
Attali J R & Valensi P (1990) Diabetes Metab. 16, 1

What is the role of recombinant colony stimulating factors in bone marrow transplantation
Auer I, Ribas A & Gale R P (1990) Bone Marrow Transplant. 6, 79

Some hematopoietic negative regulators [Minireview]
Axelrad A A (1990) Exp. Hematol. 18, 143

The pellicle and the membrane of the flagellum, flagellar adhesion zone, and flagellar pocket: functionally discrete surface domains of the bloodstream form of African trypanosomes
Balber A E (1990) Curr. Rev. Immunol. 10, 177

Peptide transport systems for opiates across the blood-brain barrier [Editorial review]
Banks W A & Kastin A J (1990) Am. J. Physiol. 259, No 2, Pt 1, H269

The ultrastructure of red cell invasion in malaria infections — a review
Bannister L H & Dluzewski A R (1990) Blood Cells. 16, 257

Functional significance of white blood cells in the male and female reproductive tract [Minireview]
Barratt C L R, Bolton A E & Cooke I D (1990) Hum. Reprod. 5, 639

Abnormalities of the erythrocyte membrane in chronic myelogenous leukemia
Basu J, Kundu M, Rakshit M M & Chakrabarti P (1990) Biotechnol. Appl. Biochem. 12, 501

The short and happy life of neutrophil activation
Becker E L (1990) J. Leukocyte Biol. 47, 378

Microvascular endothelial cell heterogeneity: interactions with leukocytes and tumor cells
Belloni P N & Tressler R J (1990) Cancer Metast. Rev. 8, 353

Central role for vasopressin in cardiovascular regulation and the pathogenesis of hypertension [Brief review]
Berezin K H & Swords B H (1990) Hypertension. 16, 213

Plasmodium and the infected erythrocyte: sequestration in Plasmodium falciparum malaria: sticky cells and sticky problems
Berendt A R, Ferguson D J P & Newbold C I (1990) Parasitol. Today. 6, 247

Antithrombin III [Minireview]
Berestford C H & Owen M C (1990) Int. J. Biochem. 22, 121

The interaction of prostaglandin-E1 with serum lipoproteins — possible role in cholesterol homeostasis
Bergelson L D (1990) Lipids. 25, 767

Structure and function of haemolysin B, P-glycoprotein and other members of a novel family of membrane translocators
Blight M A & Holland I B (1990) Mol. Microbiol. 4, 873

Tumor interactions with the vasculature: angiogenesis and tumor metastasis
Blood C H & Zetter B R (1990) Biochim. Biophys. Acta. 1032, 89

Symposium on Molecular Control of Haemopoiesis. Ciba Fdn, London, England, May 2-4, 1989
Bock G & Marsh J, eds (1990) Ciba Fdn Symp. 148, 232 pp.

P2 purinoceptors on vascular endothelial cells: physiological significance and transduction mechanisms
Boyns Heath J-M & Peshkoff J D (1990) Trends Pharmacol. Sci. 11, 34

Viruses and malignant blood diseases [In French; English abstract]
Boiron M (1990) Path. Biol. 38, 57

Assessment of hypercoagulable states by measurement of activation fragments and peptides
Boutilier M D, Ireland H & Lane D A (1990) Blood Rev. 4, 25

Biochemical mechanisms and pathobiology of α2u-globulin nephropathy
Borghoff S J, Short B G & Swenberg J A (1990) Annu. Rev. Pharmacol. Toxicol. 30, 349-367

The molecular biology of acute lymphoblastic leukemia
Botti A C & Verma R S (1990) Anticancer Res. 10, No.2B, 519

Expression of human plasma protein genes in ageing transgenic mice
Bowman B H, Yang F & Adrian G S (1990) BioEssays. 12, 317

Haematologic abnormalities in the acquired immunodeficiency syndrome
Brizzi M F, Porcu P, Porteri A & Pegoraro L (1990) Haematologica. /3, 454

The effects of plasma lipoproteins on platelet responsiveness and on platelet and vascular prostanooid synthesis
Bruckdorfer K R (1989) Prostagland. Leuk. Essent. Fatty Acids. 38, 247

Mechanisms of tranfusion-induced immunosuppression
Brunson M E & Alexander J W (1990) Transfusion. 30, 651

Cerebral blood flow and energy metabolism during stress
Bryan R M jr (1990) Am. J. Physiol. 259, No 2, Pt 2, H269

A new dimension in hypertension: Role of insulin resistance — Proceedings of an International Symposium
Buhtz F R & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 5, S1

Vitamin-C and blood pressure [Editorial review]
Bulpitt C J (1990) J. Hypertension. 8, 1071

Warner-Lambert/Park-Davis Award Lecture. Cellular and molecular mechanisms that direct leukocyte traffic
Butcher E C (1990) Am. J. Path. 136, 3

First Sicilian International Symposium on Thalassemia, Hemoglobinopathies and Hemophilia Catania — Taormina, 1–3 June 1989
Caccioletti E & others (1990) Haematologica. 75, Suppl. 5, 1-207

The role of platelet-activating factor in inflammation [Short analytical review]
Camussi G, Tetta C & Baglioni C (1990) Clin. Immunol. Immunopath. 57, 331
Idarubicin in the treatment of acute leukemias. An overview of preclinical and clinical studies
Carella A M, Berman E, Marone M P & Ganzina F (1990) Haematologica, 73, 159

Control of the renal microvasculature by vasoactive peptides
Carmesin P K & Flening J T (1990) FASEB J, 4, 3300

Biochemical and Pharmaceutical Aspects of Thrombotic Processes
Carruba M O & others (1990) Thrombosis Res Suppl, 11, 1-69

Multidrug resistance: focus in hematology
Carulli G & Petrim M (1990) Haematologica, 75, 363

The role of glutamate neurotoxicity in hypoxic-ischemic neuronal death
Choi D W & Rothman S M (1990) Annu. Rev. Neurosci. 13, 171

Renal medullary circulation: hormonal control [Editorial review]
Chou S Y, Forush J G & Faubert P F (1990) Kidney Int. 37, 1

Symposium on Hematopoiesis, Tamarron, CO, February 20-26, 1989
Clark S C & Golde D W, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 120, 281 pp.

Colloquium on Cellular and Molecular Biology of Normal and Abnormal Erythroid Membranes, Taos, NM, February 3-10, 1989
Cohen C M & Palek J, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 118, 339 pp.

Coronary thrombolysis — streptokinase or recombinant tissue-type plasminogen activator?
Collen D (1990) Ann. Int. Med. 112, 529

Fibrinogen as a major risk factor in cardiovascular disease
Cook N S & Ubben D (1990) Trends Pharmacol Sci. 11, 444

Circulating and tissue renin-angiotensin system and its inhibition: present and future
Corvol P & others (1989) J. Cardiovasc. Pharmacol 14, Suppl 4, S1

Haemochromatosis
Cox T M (1990) Blood Rev 4, 75

Homodynamic and metabolic correlates in adipose tissue: pathophysiological considerations
Crandall D L & DiGiroldo M (1990) FASEB J 4, 141

Blood collection and samples preparation for free amino acids determinations [In French; English abstract]
Cynober L & Giboudeau J (1990) Ann. Biol. Clin Paris, 48, 713

Cerebrovascular Diseases: The 17th Princeton Conference, Durham, NC, March 16-18, 1990
Davis J N & others (1990) Stroke, 21, Suppl. 1, 200

LDL heterogeneity and atherosclerosis [In French; English abstract]
Degger S, Cohen R & Bruckert F (1990) Ann Biol Clin Paris, 48, 154

Leukotriene-B4 hydroxylase characterization — comparison between hepatic cytochrome-P-450 and polymorphonuclear leukocytes
Delafaille M, Bouchere L J & Leclaire J (1990) Acta Pharmacol. Jugoslav 40, 461

Erythrocyte skeleton and the genetic diseases of the red cell shape [In French; English abstract]
Delaunay J & Dherny D (1990) M/S Méd. Sci, 6, 562

Regional distribution of body fat, plasma lipoproteins, and cardiovascular disease
Despres J P & others (1990) Arteriosclerosis, 10, 491

Haemopoietic growth factors
Devereux S & Lindsay D (1990) Q. J. Med. 75, 537

The primary role of the kidney and salt intake in the etiology of essential hypertension: part II [Editorial review]
De Wardener H E (1990) Clin. Sci. 79, 289-297

Endothelial, platelet and leukocyte interactions in ischemic heart disease — insights into potential mechanisms and their clinical relevance
Dinerman J L & Mehta J L (1990) J. Am Coll. Cardiol 16, 207

Structure and function of thrombomodulin — a natural anticoagulant
Dittman W A & Majerus P W (1990) Blood, 75, 329

Cardiovascular response in ageing — a review
Dockerty J R (1990) Pharmacol Rev 42, 103

Cell membrane abnormalities and the regulation of intracellular calcium concentration in hypertension [Editorial review]
Dominiczak A F & Bohr D F (1990) Clin. Sci. 79, 415

Regulation of hematopoiesis by bone marrow stromal cells and their products
Dorsenhkild K (1990) Annu. Rev. Immunol 8, 111

Free radicals and their involvement during long-term myocardial ischemia and reperfusion
Downey J M (1990) Annu. Rev. Physiol. 52, 487

Early events of the immune response mediated by leukocyte integrins
Dransfield I, Buckle A-M & Hogg N (1990) Immunol Rev 114, 29

Hyperlipidemia in diabetes mellitus
Dunn F L (1990) Diabetes/Metab. Rev 6, 47

Overview of eicosanoid metabolism and relationship to platelet-activating factor
Dusting G J & Stewart A G (1990) Reprod. Fertil. Dev 2, 417

src-Related tyrosine protein kinases as signaling components in hematopoietic cells
Eisenman E & Bolen J B (1990) Cancer Cells, 2, 303

Measurement of free hormones in blood
Ekons R (1990) Endo Rev 11, 5

Biochemical pharmacology and therapeutic aspects of thrombolytic agents
Fears R (1990) Pharmacol Rev 42, 201

Insulin, insulin sensitivity and hypertension [Editorial review]
Ferrari P & Weidmann P (1990) J. Hypertension, 8, 491

The mechanism of pressure natriuresis [Editorial review]
Firth J D, Raine A E G & Ledingham J G G (1990) J. Hypertension, 8, 97

Chronic lymphocytic leukemia — new insights into biology and therapy
Fonk K A, Rai K R & Gale R P (1990) Ann. Int. Med 113, 525

Stress and hypertension — a critical review
Freeman Z S (1990) Med. J. Aust. 153, 621

F-XII
Fuhrer G, Gallimore M J, Heller W & Hoffmeister H E (1990) Blu, 61, 258

Recent progress in the molecular genetic analysis of erythroblastopathy
Fujii H & Miwa S (1990) Am. J. Hematol. 34, 301

Molecular basis of vitamin-K-dependent gamma-carboxylation
Furié B & Furié B C (1990) Blood, 73, 1753

Workshop on Acute Lymphoblastic Leukemia, Tapatio, TX, November 29-December 2, 1988
Gale R P & Hoelzer D, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 108, 339 pp.

The current status of interferon-α in haemic malignancy
Galvani D W & Cavley J C (1990) Blood Rev 4, 175
Platelet immunoglobulin-G — its significance for the evaluation of thrombocytopenia and for understanding the origin of alpha-granule proteins
George J N (1990) Blood, 70, 859

Modulation of endothelial hemostatic properties: an active role in the host response
Gerlach H, Esposito C & Stern D M (1990) Annu. Rev. Med. 41, 15

Kinetics of ligand binding to haemoproteins [12th Keilin Memorial Lecture]
Gibson Q H (1990) Biochem. Soc. Trans. 18, 1

Vitamin E and platelet eicosanoids in diabetes mellitus
Gisinger C, Watanabe J & Cotwell J A (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 169

The phylogenetic odyssey of the erythrocyte. 2. The early invertebrate prototypes
Glomski C A & Tamburlin J (1990) Histol. Histopath. 5, 513

Proceedings of the Second International Conference on Blood Cell Growth Factors: their Biology and Clinical Applications
Goldé D W & others (1990) Int. J Cell Cloning. 8, Suppl. 1, 4

5-HT1A Receptors in the Brain: a Subtype of Serotonin Receptors Involved in Blood Pressure Reduction — International Symposium, Bonn, 18 November 1989
Gothert M & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 7, S1-S86

Hormonal regulation of haemostasis and the molecular biology of the fibrinolytic system [Editorial review]
Grant P J & Medcalf R L (1990) Clin. Sci. 78, 3-11

Hemat: effects on hemostasis
Green D & Ts’ao C-H (1990) J. Lab. Clin. Med. 115, 144

Regulation of human i-cell leukemia virus expression
Green P L & Chen I S Y (1990) FASEB J. 4, 169

Ionic mechanisms of cell volume regulation in leucocytes
Grinstein S & Foskett J K (1990) Annu. Rev. Physiol. 52, 399

Dietary influences on serum lipids and lipoproteins
Grundy S M & Getz G (1990) J. Lipid Res. 31, 1149

Is there any role of membrane bilayer skeleton interaction in maintaining the transmembrane phospholipid asymmetry in erythrocytes
Gupta C M (1990) Biotechnol. Appl. Biochem. 12, 506

Platelet-derived growth factor — a growth factor with an expanding role in health and disease
Habenicht A J R, Salbach P & Schettler G (1990) Klin. Wochenschr. 68, 53

Prefracture and clinical pharmacology of platelet-activating factor receptor antagonists
Handley D A (1990) Med. Res. Rev. 10, 351

Isolation of eosinophils from human blood
Hansel T T, Pound J D & Thompson R A (1990) J. Immunol. Methods, 127, 153

Calcium antagonists: Hypertension, atherosclerosis, and stroke — Proceedings of an International Symposium to the Fourth European Meeting on Hypertension — Milan, Italy, June 18, 1989
Hansson L & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 1, S1

Hepatitis B virus DNA in peripheral blood leukocytes: a brief review
Harrison T J (1990) J. Med. Virol. 31, 33

Influenza A virus and the neutrophil: a model of natural immunity
Hartshorn K L, Karnad A B & Tauber A I (1990) J. Leukocyte Biol. 47, 176

Biochemical investigation of hypertension
Harvey J M & Bovet D G (1990) Ann. Clin. Biochem. 27, 287

The sickle erythrocyte in double jeopardy: autoxidation and iron decompartmentalization
Hebbel R P (1990) Seminars Hematol. 27, 51

Platelet-derived growth factor: mechanism of action and possible in vivo function
Heldin C-H & Westmark B (1989) Cell Regul. 1, 555 566

Red blood cells as carrier systems for drugs [In German; English abstract]
Hellwig U (1990) Pharmazie, 45, 824

VLA proteins in the integrin family: structures, functions, and their role on leukocytes
Hemler M E (1990) Annu. Rev. Immunol. 8, 365

KT-362 related effects on intracellular calcium release and associated clinical potential — arrhythmias, myocardial ischemia, and hypertension
Hester R K & Shibata S (1990) Cardiovasc. Drugs Ther. 4, 1345

Tissue plasminogen activator: the biochemistry and pharmacology of variants produced by mutagenesis
Higgins D L & Bennett W F (1990) Annu. Rev. Pharmacol. Toxicol. 30, 91-121

The molecular genetics of the a globin gene family
Higgs D R (1990) Eur. J. Clin. Invest. 20, 340

Conformational changes in human serum albumin induced by ligand binding
Honore B (1990) Pharmacol Toxicol. 66, Suppl. 2, 5-26

Platelet-activating factor (PAF) and PAF antagonists in asthma
Hosford D, Menciahuerta J M & Braquet P (1990) Crit. Rev. Ther. Drug Carr. Syst. 7, 261

Protein kinases in neutrophils: a review
Huang C-K (1989) Membr. Biochem. 8, 61

Biological importance of residual leukemic cells after BMT for CML — does the polymerase chain reaction help?
Hughes T P & Goldman J M (1990) Bone Marrow Transplant. 5, 3

Neutrophil Fc-gamma receptors — a two-way bridge in the immune system
Huizinga T W J, Roos D & Vondemborne A E G K (1990) Blood, 75, 1211

Complex translocations, simple variant translocations and pH-negative cases in chronic myelogenous leukaemia
Huret J L (1990) Hum. Genet. 85, 565

Specific receptors of platelet-activating factor, receptor heterogeneity, and signal transduction mechanisms
Hwang S-B (1990) J Lipid Mediators. 2, 123

Human a1-microglobulin: its measurement and clinical significance
Itoh Y & Kawai T (1990) J Clin. Lab. Anal. 4, 376

The polymerase chain reaction in transfusion medicine
Jackson J B (1990) Transfusion, 30, 51

Special issue: The Possible Involvement of Somatic Mutations in the Development of Atherosclerotic Plaques — Report of the ICPEMC Subcommittee 7/1
Jansen J D & others (1990) Mutat. Res. 239, 143-181

Current issues in laboratory diagnosis of bleeding disorders and hypercoagulable states
Joint J H & Bajaj S P, eds (1990) Seminars Thrombosis Hemostasis. 16, 151
A review of calcium antagonists and atherosclerosis
Keogh A M & Schroeder J S (1990) J Cardiovasc. Pharmacol. 16, Suppl. 6, S28
Platelet membrane glycoproteins — functions in cellular interactions
Kieffer N & Phillips D R (1990) Annu. Rev. Cell Biol. 6, 329
Effects of snake venom proteins in blood platelets
Kini R M & Evans H J (1990) Toxicon, 28, 1387
Proteoglycans in haemopoietic cells
Kolset S O & Gallagher J T (1990) Biochim. Biophys. Acta, 1032, 191
Genetic variability of hepatitis-B virus and the serological expression of the viral infection
Kremsdorf D & others (1990) M/S Med. Sci. 6, 108
Drug interactions in hypertensive patients: pharmacokinetic, pharmacodynamic and genetic considerations
Lam Y W F & Shepherd A M M (1990) Clin. Pharmacokinet. 18, 295–317
The signal transduction induced by thrombin in human platelets
[Latin review]
Lapetina E G (1990) FEBS Lett. 268, 400–404
Structure and function of leukocyte integrins
Larson R S & Springer T A (1990) Immunol. Rev. 114, 181
Novel perspectives for structuring synthetic inhibitors of human blood platelet aggregation and potential antithrombotic agents
Lasslo A (1990) Res. Commun. Chem. Pathol. Pharmacol. 69, 133
α2-Adrenergic receptors and calcium: α2-receptor blockade in vascular smooth muscle as an approach to the treatment of hypertension
Lee J Y & DeBernardis J F (1990) Methods Findings Exp. Clin Pharmacol. 12, 213
Retroviral-mediated gene transfer into the hematopoietic tissue in vivo
[In French; English abstract] Lehn P (1990) M/S Med. Sci. 6, 791
Antimicrobial polypeptides of human neutrophils
Lehrer R I & Ganz T (1990) Nature, 343, 389
Erythropoietin: biological aspects and clinical usefulness
Libersato N L, Costa A & Barosi G (1990) Haematologica, 75, 346
α-Thalassemia
Liebhaber S A (1989) Hemoglobin, 13, 685
Calcium Antagonists in Hypertension — Proceedings of a Satellite Symposium, Bangkok, Thailand, February 9, 1990
Lochaya S & others (1990) Drugs, 40, Suppl. 2, 1–71
11th International Congress of Pharmacology, 8–10 July 1990, Essen, Germany — Significance of Peripheral Dopaminergic System in Cardiovascular and Renal Function
Lokhandwala M F & others (1990) J. Autonom. Pharmacol 10, Suppl. 1, S3–S125
Lipoprotein(a), a unique risk factor for atherothrombotic disease
Loscalzo J (1990) Arterioscler. Thromb. 10, 672
Nerve blood flow and oxygen delivery in normal, diabetic, and ischemic neuropathy
Low P A, Lagerlund T D & McManis P G (1989) Int. Rev. Neurobiol. 31, 355
Stereoselectivity of drug binding to plasma proteins — a review [In Russian]
Lutsevich A N (1990) Khim. Farm. Zh. SSSR, 24, 4
Angiotensin-converting enzyme inhibitors and moderate hypertension
McAreevey D & Robertson J I S (1990) Drugs, 40, 326–345
Metastasis and angiogenesis
Mahadevan V & Hart I R (1990) Acta Oncol 29, 97
Desmopressin: a nontransfusional hemostatic agent
Manucci P M (1990) Annu. Rev. Med. 41, 55
Stratton Lecture 1989 — Thrombosis and inflammation as multisexual processes: pathophysiological significance of transcellular metabolism
Marcus A J (1990) Blood, 76, 1903
Binding of some anidepressants to the 5-hydroxytryptamine transporter in brain and platelets
Marcussen J O & Ross S B (1990) Psychopharmacology, 102, 145
Role of endothelium-formed nitric oxide on vascular responses
Marin J & Sánchez-Ferrer C F (1990) Gen. Pharmacol. 21, 575
The anticoagulant and antithrombotic properties of hirudins
Marki W E & Wallis R B (1990) Thromb. Haemost. 64, 344
Minimal residual disease in leukemia: Studies in an animal model for acute myelocytic leukemia (BNML) [Concise review]
Martens A C M, Bekkum D W van & Hagenbeek A (1990) Int. J Cell Cloning, 8, 27
The in vivo micronuclear assay in mammalian bone marrow and peripheral blood. A report of the US Environmental Protection Agency Gene-Tox Program
Mavournin K H, Blakey D H, Cimmo M C, Salamone M F & Hedde J A (1990) Mutat. Res. 259, 29
Biochemical and biological aspects of the plasminogen activation system
Mayer M (1990) Clin. Biochem. 23, 197
Lipoprotein(a) — structure, properties and possible involvement in thrombogenesis and atherogenesis
Mbewu A D & Durrington P N (1990) Atherosclerosis, 85, 1
Hematopoietic growth factors in bone marrow transplantation
Mertelsmann R, Herrmann F, Hecht T & Schulz G (1990) Bone Marrow Transplant. 6, 13
Lipoprotein(a) — an additional marker of atherosclerosis [In French, English abstract]
Mezdoz H, Parra H J, Agnieaguie G & Fruchart J C (1990) Ann. Biol. Clin. Paris, 48, 139
Peripheral adrenergic receptors in hypertension [Brief review]
Michel M C, Brodde O-E, Insel P A (1990) Hypertension, 16, 107
Synaptic mechanisms regulating cardiovascular afferent inputs to solitary tract nucleus [Brief review]
Millfin S W & Felder R B (1990) Am. J. Physiol. 259, No 3. Pt 2, H653
The biology of hematopoietic growth factors — studies in vitro under sprrn-deprived conditions [Minireview]
Migliaccio G, Migliaccio A R & Adamson J W (1990) Exp. Hematol. 18, 1049
The effect of ethanol on platelet function and vascular prostanoids
Mikhailidis D P, Barradas M A & Jeremy J Y (1990) Alcohol, 7, 171
Lp(a): an interloper into the fibrinolytic system?
Miles L A & Ploew E F (1990) Thromb. Hemaost. 63, 331
Measuring plasma fibrinogen to predict stroke and myocardial infarction
Minuo G di & Mancini M (1990) Arteriosclerosis, 10, 1
The First Robert Furchgott Lecture — From endothelium-dependent relaxation to the L-arginine-N0 pathway
Moncada S (1990) Blood Vessels, 27, 208
Granulocyte-macrophage colony-stimulating factor: more than a hemopoietin [Short analytical review]

Monroy R L, Davis T A & MacVitie T J (1990) Clin. Immunol. Immunopath. 54, 333

The role of calcium in the control of vascular tone as assessed by the Ca2+ indicator aequorin

Morgan K G (1990) Cardiovasc. Drugs Ther. 4, 1355

Fibrinolytic properties of single-chain urokinase-type plasminogen activator (Pro-urokinase)

Munk G A W de & Rijken D C (1990) Fibrinolysis, 4, 1

Platelet transfusions: the problem of refractoriness

Murphy M F & Waters A H (1990) Blood Rev. 4, 16

HPLC with electrochemical detection of catecholamines in human plasma. A mini-review

Monro N R, Vergassola C, Pende A & Lotti G (1990) J. Liq. Chromatogr 13, 1075

Hemostasis in malignancy

Nand S & Messmore H (1990) Am. J. Hematol 35, 45

Stimulus-secretion coupling in vascular endothelial cells

Newby A C & Henderson A H (1990) Annu. Rev. Physiol. 52, 661

Immunosuppressive mechanisms in pure red cell aplasia: a review

Nidorf D & Saleem A (1990) Am. Clin. Lab. Sci. 20, 214

Dietary lipids and thrombosis. Relationships to atherosclerosis

Nordby A & Goodnught S H (1990) Arteriosclerosis. 10, 149

Plasma protein binding of drugs in pregnancy and in neonates

Nutarianni L J (1990) Clin Pharmacokinet 18, 20-36

Shear-induced platelet aggregation

O’Brien J R (1990) Lancet. 335, 711

The mammalian rete mirabile and oxygen availability [Minireview]

O’Dea J-D (1990) Comp. Biochem Physiol. Pt A. 93, 23

Cardiovascular purinoceptors

Olsson R A & Pearson J D (1990) Physiol. Rev. 70, 761

Cellular mechanism for ischemic ventricular arrhythmias

Opié L H & Clusin W T (1990) Annu. Rev. Med. Sci. 21, 231

Leukocyte adhesion to endothelium in inflammation [Minireview]

Osborn I. (1990). Cell 72, 3-6.

Platelet-activating factor — a biologically active phospholipid

Ostermann G, Kertscher H-P & Hoffmann B (1990) Pharmacie. 45, 465

Factor-dependent human leukemia cell lines — new models for regulation of acute non-lymphocytic leukemia cell growth and differentiation

Oval J & Taitte R (1990) Blood Rev. 4, 270

The role of the blood–brain barrier in movement disorders

Paleologos N A & Groothuis D R (1990) Clin. Neuropharmacol. 13, 129

Renal medullary microcirculation

Pollone T L, Robertson C R & Jamson R L (1990) Physiol Rev. 70, 885

Platelet-derived growth factor and its receptor in blood cell differentiation and neoplasia

Pantazi P, Gouassin A S & Nixon J (1990) Eur. J. Haematol. 45, 127

Lipid Disorders in Diabetes — Satellite to the Congress: Triglycerides: The Role in Diabetes and Atherosclerosis — Vienna, May 23, 1990

Paoletti R & others (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 9 R5, S1–S35

RNase-H of human leukemic cells — a new biological parameter in the study of human leukemias

Papaphilis A D & others (1990) Anticancer Res. 10, No 5A, 1201

Leukocyte–cell adhesion: A molecular process fundamental in leukocyte physiology

Patarroyo M & others (1990) Immunol. Rev. 114, 67

Platelet-activating factor (PAF) and its relation to prostaglandins, leukotrienes and other aspects of arachidonate metabolism

Peplow P V & Mikhailidis D P (1990) Prostagland. Leuk. Essent. Fatty Acids, 41, 71

Microangiopathy, the vascular basement membrane and Alzheimer’s disease

Perrin.ter L S & Chui H C (1990) Brain Res. Bull. 24, 677

Regulation of B-cell tolerance and triggering by macrophages and lymphoid dendritic cells

Phipps R P, Roper R L & Stein S H (1990) Immunol. Rev. 117, 135

Genetic Markers of Haematological Malignancy

Pinkerton P H & others (1990) Tumor Biol. 11, Suppl. 1, 1-78

Involvement of platelet-activating factor in renal processes

Polizky E & others (1989) Advan. Lipid Res. 23, 277

Drug induced agranulocytosis peripheral destruction of polymorphonuclear leukocytes and their marrow precursors

Piscotta A V (1990) Blood Rev. 4, 226

Interaction of alcohol and stress at the cardiovascular level

Pohorecky L A (1990) Alcohol. 7, 537

The significance of phenotyping leukemias using monoclonal antibodies

Pombo-de-Oliveira M S & Tabak D G (1990) Braz. J. Med. Biol. Res. 23, 763

The role of platelet-activating factor in endothelial cells

Prescott S M, McIntyre T M & Zimmerman G A (1990) Thromb Haemost 64, 99

Platelet-activating factor [Minireview]

Prescott S M, Zimmerman G A & McIntyre T M (1990) J. Biol Chem. 265, 17381

Biology and clinical significance of cytogenetic abnormalities in childhood acute lymphoblastic leukemia

Pui C H, Crist W M & Look A T (1990) Blood, 76, 1449

Plasma lipid transfer activities

Quig D W & Zilversmit D B (1990) Annu. Rev. Nutr. 10, 169

The metabolic effects of diuretics and other antihypertensive drugs — a perspective as of 1989

Rafferty E B (1990) Int. J. Cardiol. 28, 143

Genetics in Hematology III

Ranney H M & others (1990) Seminars Hematol. 27, 287–360

Focus on Angiotensin-converting Enzyme Inhibition: Satellite Meeting at the 23rd Annual Scientific Meeting of the European Society for Clinical Investigation, Athens, April 19–22, 1989

Reid J L & others (1990) Clin. Physiol. Biochem. 8, Suppl. 1, 1-44

Mechanisms of sodium homeostasis: sodium and water excretion in mammals — haemodynamic, endocrine, and neural mechanisms

Reinhardt H W & others (1990) Acta Physiol Scand. 139, Suppl.591, 3-107

Special issue: Growth and Differentiating Factors in Hematology

Reizenstein P & others (1990) Leukemia Res. 14, 63–751

Cardiovascular and biological effects of K+ channel openers, a class of drugs with vasorelaxant and cardioprotective properties [Minireview]

Richer C & others (1990) Life Sci. 47, 1693
Calcium signaling in human platelets
Rink T J & Sage S O (1990) Annu. Rev. Physiol. 52, 431

Development of the blood–brain barrier
Risau W & Wolburg H (1990) Trends Neurosci. 13, 173

Hematopoietic growth factors — overview and clinical applications.
1 Robinson B E & Quesenberry P J (1990) Am. J. Med. Sci. 300, 163

Hematopoietic growth factors — overview and clinical applications.
2 Robinson B E & Quesenberry P J (1990) Am. J. Med. Sci. 300, 237

Hematopoietic growth factors — overview and clinical applications.
3 Robinson B E & Quesenberry P J (1990) Am. J. Med. Sci. 300, 311

Neutral endopeptidase-24.11 inhibitors: from analgesics to antihypertensives?
Roques B P & Beaumont A (1990) Trends Pharmacol. Sci 11, 250

Role of CR3 in induced myelomonocytic recruitment — insights from in vivo monoclonal antibody studies in the mouse [Minireview]
Rosen H (1990) J. Leukocyte Biol. 45, 465

Murine models for human chronic myelogenous leukemia
Rosenberg N (1990) Cancer Cells, 2, 284

Microalbuminuria in diabetes mellitus — review and recommendations for the measurement of albumin in urine
Rowe D J F, Dawney A & Watts G F (1990) Ann. Clin. Biochem. 27, 297

Reflex control of the circulation during exercise: chemoreflexes and mechanoreflexes [Brief review]
Rowell L D & O’Leary D S (1990) J Appl. Physiol. 69, 407

Fragmin: The New Generation Antithrombotic Agent
Sakuragawa N & others (1990) Seminars Thrombosis Hemostasis. 16, Suppl., U1, 1–71

Endothelium-derived contractile factors
Sánchez-Ferrer C F & Marín J (1990) Gen. Pharmacol 21, 589

Red blood cell molecular abnormalities in nonhaematological diseases
Sandre G de, Girelli D & Olivieri O (1990) Int. J. Biochem. 22, 356

Regulation of the genes for heme pathway enzymes in erythroid and in non-erythroid cells [Concise review]
Sassa S (1990) Int. J. Cell Cloning, 8, 10

The membrane skeleton of erythrocytes: models of its effect on lateral diffusion [Minireview]
Saxton M J (1990) Int. J. Biochem. 22, 801

Postprandial Lipid Metabolism and Atherosclerosis — an International Symposium. Frankfurt. March 10, 1990
Schettler G & others (1990) Klin. Wochenschr. 68, Suppl. 22, R7, 1–124

Leukocyte biophysics — an invited review
Schmidtschonbein G W (1990) Cell Biophys. 17, 107

Oxygen radicals in intestinal ischaemia and reperfusion
Schoenenberg M H & Beger H G (1990) Chem-Biol. Inter. 76, 141

Platelet reactivity and arachidonic acid metabolism in type II hyperlipoproteinemia and its modification by cholesterol-lowering agents
Schörr K (1990) Eicosanoids. 3, 67

Eicosanoids in myocardial ischemia [Minireview]
Schörr K & Thieme M (1989) Biomed. Biochim. Acta. 48, 729

Role of ion movements in neutrophil activation
Sha’afi R I & Mosli T F P (1990) Annu. Rev. Physiol. 52, 365

Growth hormone and the microvascular complications of diabetes [Brief review]
Sharp P S & Johnston D G (1990) Trends Endocrinol. Metab. 1, 315

Oxidative denaturation of red blood cells in thalassemia
Shinar E & Rachmilewitz E A (1990) Seminars Hematol. 27, 70

Cellular mechanisms in hypertension and therapeutic implications in blacks
Shulman N B & others (1990) Cardiovasc. Drugs Ther. 4, Suppl. 2, 315

Biology and clinical aspects of the hematopoietic growth factors
Sieff C A (1990) Annu. Rev. Med. 41, 483

Functional analysis of the modes of amino transport in neutrophils and HL-60 cells
Simchowitz L & Bibb J A (1990) Annu. Rev. Physiol. 52, 381

Increased vascular wall sodium in hypertension: where is it, how does it get there and what does it do there? [Editorial review]
Simon G (1990) Clin. Sci. 70, 533–540

Genetics of atherosclerosis
Sing C F & Moll P P (1990) Annu. Rev. Genet. 24, 171

Decreased activity of the platelet Na⁺,K⁺-adenosine triphosphatase enzyme in allergic subjects
Skoner D P, Gentile D & Evans R (1990) J. Lab Clin. Med. 115, 535

Platelet-activating factor and related acetylated lipids as potent biologically active cellular mediators
Snyder F (1990) Am. J. Physiol. 259, No 5, PI 1, C697

Molecular bases of serum albumin origin [In Russian; English abstract]
Sorkina D A (1990) Vopr. Med. Khim. 36, 2

Hematopoietic Growth Factors in Transfusion Medicine. 20th Annual Scientific Symposium of the American Red Cross, Bethesda, MD, May 10–11, 1989
Spivak J, Drohan W & Dooley D, eds (1990) Progr. Clin. Biol. Res 338, 182 pp

Spices, antiplatelet activity and prostanoïd metabolism
Srivastava K C & Mustafa T (1989) Prostagland. Leuk. Essent. Fatty Acids. 38, 255

Prostaglandins and extracorporeal circulation
Stirling M B & Neutze J M (1990) Prostagland. Leuk. Essent. Fatty Acids. 40, 1

The lipid hypothesis and the role of hemodynamics in atherogenesis
Steinberg D & Witztum J L (1990) J. Am. Med. Assn. 264, 3041

Cardiovascular adaptations to mechanical overload
Stephens N L & Swygertada B (1990) Mol. Cell. Biochem 93, 1

The unique aspects of acute promyelocytic leukemia
Stone R M & Mayer R J (1990) J. Clin Oncol. 8, 191

Specific steroid-binding glycoproteins of human blood plasma: novel data on their structure and function
Strel’chyonok O A & Avvakumov G V (1990) J. Steroid Biochem 35, 519

Remodeling of the vascular tree in hypertension: drug effects
Struyker Boudier H A J, Bortel L M A B van & Dey M J G R (1990) Trends Pharmacol. Sci. 11, 240

Red cell deformability and haematological disorders
Stuart J & Nash G B (1990) Blood Rev 4, 141
The synthesis, catabolism, and pathophysiological role of platelet-activating factor
Stark A, Tencate J W, Hosford D, Menciusjuerta J M & Braquet P (1989) Advan. Lipid Res. 23, 219

Atherosclerosis and molecular pathology; mechanisms of cholesteryl ester accumulation in foam cells and extracellular space of atherosclerotic lesions
Takahara T & Minem C (1990) J. Pharmacoi. Dynam. 13, 385

Chromogranin A: storage and release in hypertension [Brief review]
Takayuddin M A (1990) Hypertension, 15, 237

Plasmodium and the infected erythrocyte: glucose transport in malaria infected erythrocytes
Tanabe K (1990) Parasitol. Today, 6, 225

Mechanisms of calcium2+ overload in reperfused ischemic myocardium
Tani M (1990) Annu. Rev. Physiol. 52, 543

Molecular basis of homing of intravenously transplanted stem cells to the marrow
Tavaassoli M & Hardy C L (1990) Blood 76, 1059

Autoantigenic HLA-DR-specific autoantibodies in T cell clones: possible regulatory function for B lymphocytes and hematopoietic precursors
Tilkin A-F, Vinci G, Michon J & Levy J-P (1990) Immunol. Rev. 116, 171

Tumor angiogenesis [In French; English abstract]
Tolelem G (1990) M/S Méd. Sci. 6, 426

Erythroenzymopathies and hemolytic anemia: the many faces of inherited variant enzymes
Valentine W N & Paglia D E (1990) J. Lab. Clin. Med. 115, 12

Donors of EDRF (Endothelin-Derived Relaxing Factor) — Workshop held in Strasbourg, France, July 5, 1989
Vanhouette P M & others (1989) J. Cardiovasc. Pharmacol. 14, Suppl. 1, S1-S139

Heparin and thrombosis — a seventy-year long story [Special lecture]
Verstraete M (1990) Haemostasis, 20, Suppl. 1, 4

Mechanisms of diabetic renal and cardiovascular disease
Viberti G C (1990) Acta Diabetol. Lat. 27, 267

Cell biology of Von Willebrand factor
Wagner D T (1990) Annu. Rev. Cell Biol. 6, 217

Leucocyte adhesion to endothelium — Review
Wardlaw A (1990) Clin. Exp. Allergy, 20, 619

Mechanisms of cardiovascular drugs as antioxidants
Weglicki W B, Mak I T & Simic M G (1990) J. Mol. Cell Cardiol. 22, 1199

GTP-binding proteins and signal transduction in the human neutrophil [Minireview]
Weingarten R & Bokoch G M (1990) Immunol. Lett. 26, 1

Free radicals and ischemic tissue injury
Werne W S & Lucchesi B R (1990) Trends Pharmacol. Sci. 11, 161

Studies on leukocyte β-adrenergic receptors in depression: a critical appraisal [Minireview]
Werstieck E S, Steiner M & Burns T (1990) Life Sci 47, 85

Lympocyte subsets in the blood — a diagnostic window on the lymphoid system
Westermann J & Pabst R (1990) Immunol. Today, 11, 406

The molecular and cellular biology of platelet-derived growth factor
Westmark B (1990) Acta Endocrinol 123, 131

The biology and clinical potential of growth factors that regulate myeloid cell production
Whetten A D (1990) Trends Pharmacol. Sci. 11, 285

Regulation of haemopoietic cell development by growth factors [Minireview]
Whetten A D (1990) Cell. Signal. 2, 323

Embryonic stem cells as targets for gene transfer — a new approach to molecular manipulation of the murine hematopoietic system
Williams D A (1990) Bone Marrow Transplant. 5, 141

Expression of introduced genetic sequences in hematopoietic cells following intravenous-mediated gene transfer
Williams D A (1990) Hum. Gene Ther. 1, 229

Structural basis of immune recognition of influenza virus hemagglutinin
Wilson I A & Cox N J (1990) Annu. Rev. Immunol. 8, 737

How surface-bound drugs inhibit thrombus formation [Current trends review]
Wilson J E (1990) Drug Dev. Res. 21, 79

Oxidative denaturation in congenital hemolytic anemias: the unstable hemoglobins
Winterbourn C C (1990) Seminars Hematol. 27, 41

Serum alpha-fetoprotein and its lectin reactivity in liver diseases: a review
Wu J T (1990) Ann. Clin. Lab. Sci. 20, 98

The XIVth International Symposium for Comparative Research on Leukemia and Related Diseases, Vail, Colorado, 8-12 October 1989
Yohn D S & others (1990) Cancer Res. 50, No. 17, Suppl. S561-S570

Leucocyte cellular adhesion molecules
Yong K & Khwaja A (1990) Blood Rev. 4, 211

Immunoregulatory cell dysfunction in chronic B-cell leukemias
Zaknoen S L & Kay N E (1990) Blood Rev. 4, 165

Production of prostaglandins during hemopoiesis and lymphocyte proliferation: potential participation in the control of cytokine signal transmission
Ziegler I (1990) Med. Res. Rev. 10, 95

Regulation of hemopoiesis by cytokines that restrict options for growth and differentiation
Zipori D (1990) Cancer Cells, 2, 205

**BONE**

The role of calcium in osteoporosis
Arnhold C D & Sanchez, S D (1990) Ann. Rev. Nutr. 10, 397

Guilt by association — HLA-B27 and ankylosing spondylitis
Benjamin R & Parham P (1990) Immunol. Today, 11, 137

Bile ducts — fragile molecules: disorders of collagen gene structure and expression
Byers P H (1990) Trends Genet 6, 293

Calcium intake and bone mass: a quantitative review of the evidence
Cumming R G (1990) Calcified Tissue Int. 47, 194

Metabolic bone disease in primary biliary cirrhosis
Diamond T H (1990) J. Gastroenterol. Hepatol. 5, 66

PTH receptor coupling to phospholipase C is alternate pathway of signal transduction in bone and kidney [Brief review]
Dunlay R & Hruska K (1990) Am. J. Physiol. 258, No 2, Pt 2, F223

DNA cytometry of musculoskeletal tumors — a review
Frechtlings A (1990) Acta Orthop. Scand. 61, 282

The role of protein growth factors in the regulation of bone growth
[In German]
Kukoschke K G & Mayer H (1990) Dtsch. Med. Wochenschr 115, 192]
Bone-seeking radiopharmaceuticals
Ligyn C L de, Gelsema W J, Tij T G, Huigen Y M & Vink H A (1990) Nucl. Med. Biol. Int J. Rad. Appl. Instrum. Pr B, 17, 161

The architecture of bone marrow cell populations [Concise review]
Lords B I (1990) Int. Cell Cloning, 8, 317

Glucocorticoid-induced osteoporosis — pathogenesis and management
Lukert B P & Rausch L G (1990) Ann. Int. Med 112, 352

The in vivo micronucleus assay in mammalian bone marrow and peripheral blood: a report of the US Environmental Protection Agency Gene-Tox Program
Mavourpin K H, Blakeney D H, Cimino M C, Salamone M F & Heddle J A (1990) Mutat. Res. 259, 29

Studies on the relationship between boron and magnesium which possibly affects the formation and maintenance of bones [Mini-review]
Nielsen F H (1990) Magnesium Trace Elem. 9, 91

The role of prostaglandins in bone in vivo
Norredin R W, Lee W S S & High W B (1990) Prostagland Leuk Essent. Fatty Acids, 41, 139

Progestosterone as a bone-trophic hormone
Prior J C (1990) Endocr. Rev. 11, 386

Bone remodeling and cancer [In French; English abstract]
Rossi J F (1990) Path. Biol. 38, 69

Sex steroids and osteoporosis — effects of deficiencies and substitutive treatments
Schui L P C & Schuur A H W M (1990) J. Steroid Biochem. Mol. Biol 37, 167

Precartilage condensation during skeletal pattern formation
Shimomura T & Kimata K (1990) Dev. Growth Differentiation, 32, 243

Development and evolutionary origins of vertebrate skeletogenic and odontogenic tissues
Smith M M & Hall B K (1990) Biol. Rev. 65, 277

Biology of bone endothelial cells
Streeten E A & Brandl M L (1990) Bone Mineral, 10, 89

The role of vitamin D in bone and intestinal cell differentiation
Suda T, Shmki T & Takahashi N (1990) Nutr. Res. Nutr. 10, 92

Effects of magnesium on skeletal metabolism [Mini-review]
Wallauch S (1990) Magnesium Trace Elem. 9, 1

**BRAIN AND NERVOUS SYSTEM**

*See also NEUROTRANSMITTERS AND RECEPTORS*

Mechanisms of organophosphor ester-induced delayed neurotoxicity
Abou-Donia M & Lapadula D M (1990) Annu. Rev. Pharmacol Toxicol 30, 405-440

Interactions between the brain and the immune system
Ader R, Felton D & Cohen N (1990) Annu. Rev. Pharmacol Toxicol 30, 561-602

Potential therapeutic uses of N-methyl-D-aspartate antagonists in cerebral ischemia
Albers G W (1990) Clin. Neuropharmacol. 13, 177

An assessment of the toxicological properties of pyrethroids and their neurotoxicity
Aldridge W N (1990) Crit. Rev. Toxicol. 21, 89

Specificity of molecular changes in neurons involved in memory storage
Alkon D L & Nelson T J (1990) FASEB J. 4, 1567

Transmitter release from synapses: does a preassembled fusion pore initiate exocytosis?
Almers W & Tse F W (1990) Neuron, 4, 813-818

Multi-author review: Commitment and Migration of Young Neurons in the Vertebrate Brain
Alvarezbuylla A & others (1990) Experientia, 46, 879-936

2nd World Congress of Neurosciences (Ibro): Chloride Channels and Carriers in Nerve, Muscle, and Glial Cells, Budapest, Hungary, August 1987
Alvarez-Zafra F J & Russell J M, eds (1990) *Wild Congr Neurosci.* 2, 425 pp.

β-Adrenoceptor blockers and calcium antagonists in the prophylaxis and treatment of migraine
Andersson K E & Vinge E (1990) Drugs, 39, 358-373

Central receptors and recognition sites mediating the effects of monoamines and anorectic drugs on feeding behavior
Anzel I (1990) *Cln Neuropharmacol.* 13, 361

Stress—ethanol interaction — involvement of endogenous opioid mechanisms
Aragon C M G, Trudeau L E & Amit Z (1990) *Neurosci. Biobehav. Rev.* 14, 535

Peptide transport systems for opiates across the blood-brain barrier
[Editorial review]
Banks W A & Kastin A J (1990) Am. J. Physiol. 259, No 1, Pt 1, El

The mechanical mind
Barlow H (1990) *Annu. Rev. Neurosci.* 13, 15

Modulation of neurogenic inflammation: novel approaches to inflammatory disease
Barnes P J, Belvisi M G & Rogers D F (1990) *Trends Pharmacol Sci.* 11, 185

Genetic linkage in mental illness — limitations and prospects
Baron M, Endicott J & Ott J (1990) *Br J Psychiat* 157, 645

Ion channels in vertebrate glia
Barres B A & Chun 1 H Y & Corry D P (1990) *Annu Rev Neurosci.* 13, 441

Steroidal control of behavioural, neuroendocrine and brain sexual differentiation: studies in a carnivore, the ferret
Baum M J, Carroll R S, Cherry J A & Tobet S A (1990) *J. Neuroendocrinol.* 2, 401

Dissecting the complexity of the nervous system by enhancer detection
Bellen H J, Wilson C & Gehring W J (1990) *BioEssays.* 12, 199

Ligand-gated ion channels in the brain: the amino acid receptor superfamy
Betz H (1990) *Neuron.* 5, 383-392

Sensory neuron-specific actions of capsaicin: mechanisms and applications
Bevan S & Szolcsanyi J (1990) *Trends Pharmacol. Sci.* 11, 330

Ion channel organization of the myelinated fiber
Black J A, Kocsis J D & Waxman S G (1990) *Trends Neurosci.* 13, 48

Convulsive disorders: the use of anticonvulsant drugs
Blick T P (1990) *Clin Neuropharmacol.* 13, 108

Convulsive disorders: mechanisms of epilepsy and anticonvulsant action
Blick T P & Klawans H L (1990) *Clin Neuropharmacol.* 13, 121

Ion conductances affected by 5-HT receptor subtypes in mammalian neurons
Bobker D H & Williams J T (1990) *Trends Neurosci.* 13, 169
Cytochemical markers of ischaemia in the heart and brain [Editorial review]

Borgers M, Vandeplassche G & Van Reempts J (1990) Histochem. J. 22, 125

Nerve growth factor (NGF) — involvement in plasticity and functional maintenance of nerve cells [In French, English abstract]

Bracht P (1990) M.S. Méd. Sci. 6, 854

Central nervous system effects of human immunodeficiency virus type 1

Bridge T P & Ingraham L J (1990) Annu. Rev. Med. 41, 159

Deposition of bilirubin acid in the central nervous system — a hypothesis for the development of kernicterus

Brodersen R & Stern L (1990) Acta Paediat. Scand. 79, 12

G proteins and potassium currents in neurons

Brown D A (1990) Annu. Rev. Physiol. 52, 215

Induction of heat shock (stress) genes in the mammalian brain by hypothermia and other traumatic events — a current perspective [Minireview]

Brown I R (1990) J. Neurosci. Res. 27, 247

Cognitive function in Parkinson's disease: from description to theory

Brown R G & Marsden C D (1990) Trends Neurosci. 13, 21

The quinolinic acid hypothesis in Huntington's chorea

Bruni R P M & Stoof J C (1990) J. Neurol. Sci. 95, 29

Cerebral blood flow and energy metabolism during stress

Bryan R M Jr (1990) Am. J. Physiol. 259, No 2, Pt 2, H269

A review of the biochemical pathways studied and abnormalities reported in the Rett syndrome [Minireview]

Burl L, Kump R, Knoll H & Loveless D (1990) Brain Dev 12, 444

Effects of alcohol on human aggression — an integrative research review

Bushman B J & Cooper H M (1990) Psychol. Bull. 107, 341

Histaminergic system: neuroendocrine function of brain histamine

Cacabelos R (1990) Methods Findings Exp. Clin Pharmacol 12, 341

Formation of active metabolites of psychotropic drugs: an updated review of their significance

Caccia S & Garattini S (1990) Clin. Pharmacokinet 18, 434-439

Pathways to regulated exocytosis in neurons

Camilli P de & Jahn R (1990) Annu. Rev. Physiol. 52, 625

Molecular analysis of a cellular decision during embryonic development of Drosophila melanogaster: epidermogenesis or neurogenesis

Campos-Ortega J A & Knust E (1990) Eur. J. Biochem 190, 1-10

Thirteenth GIF Lecture in Neurobiology — Expression and Assembly of a Functional Neuron. Genetic and molecular mechanisms of neurogenesis in Drosophila-melanogaster

Campos-Ortega J A & Knust E (1990) J. Physiol. Paris, 84, 1

Genetics of early neurogenesis in Drosophila melanogaster

Campos-Ortega J A & Knust E (1990) Annu. Rev. Genet. 24, 387

Interactions between glutamatergic and monoaminergic systems within the basal ganglia — implications for schizophrenia and Parkinson's disease

Carlsson M & Carlsson A (1990) Trends Neurosci. 13, 272

The role of perreceptor events in chemosensory processes

Carr W E S, Gleeson R A & Trapido-Rosenthal H G (1990) Trends Neurosci 15, 212

Symposium on Steroid and Neuronal Activity, Ciba Fdn. London, England, January 23-25, 1990

Chadwick D & Widdows K, eds (1990) CIBA Fdn Symp. 153, 284 pp.

Review: Adrenal cortical innervation and glucocorticoid secretion

Chariton B G (1990) J. Endocrinol. 126, 5-8

Serotonin-specific drugs for anxiety and depressive disorders

Charney D S, Krystal J H, Delgado P L & Heninger G R (1990) Annu. Rev. Med. 41, 437

The regulation and modulation of pH in the nervous system

Chesler M (1990) Progr. Neurobiol. 34, 401

Multiple roles of a histaminergic afferent neuron in the feeding behavior of Aplysia

Chiel H J, Weiss K R & Kupfermann I (1990) Trends Neurosci. 13, 223

The role of glutamate neurotoxicity in hypoxic-ischemic neuronal death

Choi D W & Rothman S M (1990) Annu. Rev. Neurosci. 13, 171

Therapeutic drug monitoring of anticonvulsants: state of the art

Choona i A & Rane A (1990) Clin. Pharmacokinet 18, 318-328

Anticonvulsant actions of phenytoin receptor ligands: correlation with N-methylaspartate antagonism in vivo [Minireview]

Church J & Lodge D (1990) Gen. Pharmacol. 21, 165

Melatonin in humans, neuroendocrinological and pharmacological aspects [Plenary lecture]

Claustrat B, Brun J & Chazot G (1990) Nucl. Med. Biol. Int. J. Radi. Appl. Instrum Pt. B, 17, 625

Methods in Neurosciences. I. Gene probes

Conn P M, ed. (1989) Methods Neurosci. 1, 464 pp.

Autism: review of neurochemical investigation

Cook E H (1990) Synapse, 6, 292

The phosphoinositide/protein kinase C system as a potential target for neurotoxicity

Costa L G (1990) Pharmacol. Res. 22, 393

Neuropsychological and biochemical changes evoked by valproic acid in the central nervous system

Cotartu D, Laidman J L & Evans S (1990) Progr. Neurobiol. 34, 343

Opioids can evoke direct receptor-mediated excitatory effects on sensory neurons

Crain S M & Shen K-F (1990) Trends Pharmacol. Sci. 11, 77

Expression of adhesion molecules and the establishment of boundaries during embryonic and neural development

Crousse L, Fireo A L, Huffman S, Jones F S & Friedlander D R (1990) Exp. Neurol. 109, 6

Nature of the genetic contribution to psychotic illness — a continuum viewpoint

Crow T J (1990) Acta Psychiat. Scand. 81, 401

Structural aspects of pathology in Alzheimer's disease

Crowther R A (1990) Biochim. Biophys. Acta, 1096, 1

Category-related recognition defects as a clue to the neural substrates of knowledge

Damasio A R (1990) Trends Neurosci. 13, 95

Face agnosia and the neural substrates of memory

Damasio A R, Tranel D & Damasio H (1990) Annu. Rev. Neurosci. 13, 89

Ontogeny of the somatosensory system: origins and early development of primary sensory neurons

Davies A M & Lumsden A (1990) Annu. Rev. Neurosci. 13, 61

Cerebrovascular Diseases: The 17th Princeton Conference, Durham, NC, March 16-18, 1990

Davis J N & others (1990) Stroke, 21, Suppl., 1—200
The possible involvement of endogenous opioid peptides and catecholamines in provoking menstrual irregularities in women athletes

De Crec C (1990) Int. J. Sports Med. 11, 329

Mechanism of action of ethanol — initial central nervous system actions

Deitrich R A, Dunwiddle T V, Harris R A & Erwin V G (1989) Pharmacol. Rev. 41, 489

Experimental approach of degeneration of the neurone — review [In French; English abstract]

Delacourte A (1990) C. R. Soc. Biol. 184, 5

Special issue: Human Neurochemistry

Devellis J & others (1990) J. Neurosci. Res. 27, R7, 441–712

In vivo brain dialysis of neurotransmitters

Dichiara G (1990) Trends Pharmacol. Sci. 11, 116

Heterocyclic antidepressants, monoamine oxidase inhibitor and neuroleptic withdrawal phenomena

Dilsaver S C (1990) Prog. Neuro-Psychopharmacol. Biol. Psychiat. 14, 137

Opioid receptors and pain

Diksi R (1990) Pharmacoe. Weekbl. Scel. Ed. 12, 41

G protein modulation of calcium currents in neurons

Donkin A C (1990) Annu. Rev. Physiol. 52, 243

Glial influences on axonal growth in the primary olfactory system

Doueute R (1990) Glia, 3, 433

The cellular and molecular events of central nervous system remyelination

Duboisdaq M & Armstrong R (1990) BioEssays, 12, 569

The interactions of the beta-haloethyl benzylamines. xylamine and p-n-butyl with catecholaminergic neurons

Dudley M W, Howard B D & Cho A K (1990) Annu. Rev Pharmacol. Toxicol. 30, 387–403

Sleep, brain activation and cognition

Dujardin K, Guerrien A & Leconte P (1990) Physiol. Behav. 47, 1271

Neural transplantation in animal models of dementia

Dunnett S B (1990) Eur. J. Neurosci. 2, 567

3rd International Symposium on Neural Transplantation. Churchill College, Cambridge, England, August 6–11, 1989

Dunnett S B & Richards S J, eds (1990) Prog. Brain Res. 82, 743 PP.

Acetylcholine and neuronal plasticity [In French; English abstract]

Dykes R W (1990) M/S Med. Scel. 6, 870

Extracerebral manifestations in migraine — a peptidergic involvement

Edvinsson L & Goadsby P J (1990) J. Intern. Med. 228, 299

Neuropsychological effect of lead in occupationally exposed workers: a critical review

Ehle A L & Mckee D C (1990) Crit. Rev Toxicol. 20, 237

Neurochemical and psychopharmacological aspects of aggressive behavior

Eichelman B S (1990) Annu. Rev. Med. 41, 149

γ-Aminobutyric acid outside the mammalian brain [Short review]

Erdö S L & Wolff J R (1990) J. Neurochem 54, 363

Peripheral nerve regeneration

Fawcett J W & Keynes R J (1990) Annu. Rev. Neurosci. 13, 43

Aromatic amino acids and monoamine synthesis in the central nervous system — influence of the diet

Fernstrom J D (1990) J. Nutr. Biochem. 1, 508

Peptides in the neocortex in Alzheimer’s disease and ageing

Ferrier I N & Leake A (1990) Psychoneuroendocrinology. 15, 89

Stochastic approaches to the study of synaptic function

Fesse R (1990) Progr. Neurobiol. 35, 85

The history of benzodiazepine dependence: a review of animal studies

File S E (1990) Neurosci. Biobehav. Rev. 14, 135

RNA and protein metabolism in the aging brain

Finch C E & Morgan D G (1990) Annu. Rev. Neurosci 13, 75

Role of oxygen free radicals in carcinogenesis and brain ischemia

Floyd R A (1990) FASEB J. 4, 2587

Neurobiology of zinc and zinc-containing neurons

Frederickson C J (1989) Int. Rev. Neurobiol. 31, 145

Stress and hypertension — a critical review

Freeman Z S (1990) Med. J. Aust. 153, 621

Kynurenine metabolism of tryptophan — implications for neurological disorders

Freese A, Swartz K J, During M J & Martin J B (1990) Neurology, 40, 691

Visual units in the central nervous system of the frog [Mini Review]

Gaillard F (1990) Comp. Biochem. Physiol. Pt A, 96, 357

Genes and epilepsy

Gardner R M (1990) J. Med. Genet. 27, 537

Genetic mapping of common diseases: the challenges of manic-depressive illness and schizophrenia

Gershon E S, Martinez M, Goldin L R & Geiman P V (1990) Trends Genet. 6, 282

Overexcitement and disinhibition — dynamic neurotransmitter interactions in alcohol withdrawal

Glue P & Nutt D (1990) Br. J. Psychiat 157, 491

Determinants of nerve cell patterns during development: a review

Goffinet A M (1990) Z. Zellforsch. 196, 149

Regulation of neuropeptide gene expression

Goodman R H (1990) Annu. Rev. Neurosci. 13, 111

5-HT1A Receptors in the Brain: a Subtype of Serotonin Receptors Involved in Blood Pressure Reduction — International Symposium, Bonn, 18 November 1989

Gothert M & others (1990) J Cardiovasc. Pharmacol 15, Suppl. 7, 51–856

Behavioral effects of 5-HT receptor ligands in the aversive brain stimulation, elevated plus-maze and learned helplessness tests

Graeff F G, Audi E A, Almeida S S, Graeff E O & Hunziker M H (1990) Neurosci. Biobehav. Rev. 14, 501

Neurotransmitters and neuromodulators in the basal ganglia

Graybiel A M (1990) Trends Neurosci. 13, 244

Basic mechanisms of action of drugs used in the treatment of esential tremor

Graybiel A M (1990) Trends Neurosci. 13, 244

Basic mechanisms of action of drugs used in the treatment of esential tremor

Guan X-M & Peroutka S J (1990) Clin Pharmacol 15, 210

The S. Kuffler Lecture. The rise of experimental neuroembryology. A personal reassessment

Hamburger V (1990) Int. J. Dev. Neurosci. 8, 121

Astrocytes in neurotransmission — a review

Hanssen E & Ronnback L (1990) Cell Mol. Biol. 36, 487
Calcium antagonists: Hypertension, atherosclerosis, and stroke — Proceedings of an International Symposium to the Fourth European Meeting on Hypertension — Milan, Italy, June 18, 1989

Hansson L & others (1990) J Cardiovasc. Pharmacol. 15, Suppl. 1, S1

Genetic aspects of nervous system development

Hardy P A (1990) J. Neurogenet. 6, 115

Early events in the embryogenesis of the vertebrate visual system: cellular determination and pathfinding

Harris W A & Holt C E (1990) Annu. Rev. Neurosci. 13, 155

In situ hybridization histochemistry and the study of gene expression in the human brain

Harrison P J & Pearson R C A (1990) Progr. Neurobiol. 34, 271

Riding the glial monorail: a common mechanism for glial-guided neuronal migration in different regions of the developing mammalian brain

Hatton M E (1990) Trends Neurosci. 13, 179

Emerging concepts of structure-function dynamics in adult brain: the hypothalamic-neurohypophyseal system

Hatton G I (1990) Progr. Neurobiol. 34, 437

Tension as a regulator and integrator of axonal growth

Heidemann S R & Buxbaum R E (1990) Cell Motil. Cytoskel. 17, 6

Neuropeptide-Y — an overview of central distribution, functional aspects, and possible involvement in neuropsychiatric illnesses

Hellig M & Widerlov E (1990) Acta Psychiatr. Scand. 82, 93

Diversity in mammalian tachykinin peptidergic neurons: multiple peptides, receptors, and regulatory mechanisms

Heike C J, Krause J E, Mantyh P W, Couture R & Bannon M J (1990) FASEB J 4, 1606

Developmental neurobiology of salt taste sensation

Hill D L & Mistretta C M (1990) Trends Neurosci. 13, 188

International Satellite Symposium to the 20th Annual Meeting of the American Society for Neurochemistry: Trophic Factors and the Nervous System, Ohio State University, OH, March 12-14, 1989

Horrocks L A, Neff N H, Yates A J & Hadjiconstantinou M, eds (1990) Fidia Res. Fdn Symp. Ser. 3, 358 pp.

The neurologic syndrome of vitamin E deficiency: laboratory and electrophysiologic assessment

Howard L J (1990) Nutr. Rev. 48, 169

Physiological and neuropharmacological aspects of the central respiratory mechanisms

Hukuhara T jr (1990) Folia Pharmacol. Jap. 95, 279

Muscarinic receptor subtypes

Hulme E C, Birdsall N J M & Buckley N J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 633 673

Nerve regeneration through allogeneic nerve grafts, with special reference to the role of the Schwann cell basal lamina

Ide C, Osawa T & Tobiya K (1990) Progr. Neurobiol. 34, 1

The molecular basis of brain injury and brain edema: the role of oxygen free radicals

Ikeda Y & Long D M (1990) Neurosurgery, 27, 1

A family of POU-domain and PIT-1 tissue-specific transcription factors in pituitary and neuroendocrine development

Ingraham H A & others (1990) Annu. Rev. Physiol. 52, 773

Neuropharmacological profile of V-9-M, a putative neuropeptide derived from procholecystokinin

Itch S & Takashima A (1990) Progr. Neurobiol. 34, 429

Sigma binding sites in the brain: an emerging concept for multiple sites and their relevance for psychiatric disorders [Minireview]

Izthak Y & Stein I (1990) Life Sci. 47, 1073

Normal and abnormal central nervous system GABA metabolism in childhood — review

Jaeken J, Casper F, Haegle K D & Schechter P J (1990) J Inher. Metab. Dis. 13, 793

Genes required for specifying cell fates in Drosophila embryonic sensory nervous system

Jan Y N & Jan L Y (1990) Trends Neurosci. 13, 493

The perinatal reorganization of the innervation of skeletal muscle in mammals

Jansen J K S & Fladby T (1990) Progr. Neurobiol. 34, 39

Carbohydrates and carbohydrate-binding proteins in the nervous system

Jessell T M, Hynes M A & Dodd J (1990) Annu. Rev. Neurosci. 13, 227

Neuropharmacology of phencyclidine: basic mechanisms and therapeutic potential

Johnson K M & Jones S M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 707-750

Mechanisms of cellular adaptive sensitivity changes — applications to opioid tolerance and dependence

Johnson S M & Fleming W W (1989) Pharmacol. Rev. 41, 435

Animal models of Parkinsonism [Minireview]

Kaakkola S & Teravanint H (1990) Pharmacol. Toxicol. 67, 95

Pyrimidine derivatives — psychotropic properties and molecular mechanisms of central action [In Russian; English abstract]

Karkishechenko N N, Maklyakov Y S & Stradomsky B V (1990) Farmakol. Toksikol. 33, 67

The use of molecular techniques in studying viral pathogenesis in the nervous system

Kennedy P G E (1990) Trends Neurosci. 13, 424

Intracellular calcium ion mobilization and nicotinic acetylcholine receptor-mediated signal transduction in neuro-skeletal muscle synapse [In Japanese; English abstract]

Kimura I (1990) Yakugaku Zasshi, 110, 163

The effect of neuroleptics on cognitive and psychomotor function

King D J (1990) Br. J. Psychiat. 157, 799

Mechanisms of dendritic cell function

King P D & Katz D R (1990) Immunol. Today. 11, 206

Lactography as an approach to monitor glucose metabolism on-line in brain and muscle [Minireview]

Korf J & Deboer J (1990) Int. J. Biochem. 22, 1371

Modulation of calcium channel function in nerve cell membrane [Minireview]

Kostyk P G & Doroshenko P A (1990) Gen. Physiol. Biophys. 9, 433

Role of microtubules in the organization of the Golgi apparatus

Kreis T F (1990) Cell Motil. Cytoskel. 15, 67

Functions of the nociceptive primary neurons [Minireview]

Kumazawa T (1990) Jap. J. Physiol. 40, 1-14

Neuropeptide-mediated transmission of nociceptive information and its regulation — novel mechanisms of analgesias [In Japanese; English abstract]

Kuraishi Y (1990) Yakugaku Zasshi, 110, 711

Axonal outgrowth by identified neurons in the spinal cord of zebrafish embryos

Kuwada J Y & Bernhardt R R (1990) Exp. Neurol. 109, 29
Viruses as transneuronal tracers

Kuypers H G J M & Ugolini G (1990) *Trends Neurosci.* 13, 71

Modern concepts of neurotoxicity [In Russian; English abstract]

Kvitinskikyryzhov Y N (1990) *Farmakol. Toksikol.* 53, 77

The inhibitory glycine receptor — a ligand-gated chloride channel of the central nervous system

Langosch D, Becker C M & Betz H (1990) *Eur. J. Biochem.* 194, 1

Alzheimers disease — proteins, genes and early diagnosis [In French; English abstract]

Laplanche J L, Chatelain J, Launay J M & Durex C (1990) *Ann. Biol. Clin. Paris.*, 48, 281

Cholinesterases preceding major tracts in vertebrate neurogenesis

Layer P G (1990) *BioEssays.* 12, 415

Endogenous opioid peptides and cardiac arrhythmias

Lee A Y S (1990) *Int. J. Cardiol.* 27, 145

Neuropeptide Y: an overview

Lehmann J (1990) *Drug Dev. Res.* 19, 329

The use of cell lines in neurobiology

Lendahl U & McKay R D G (1990) *Trends Neurosci.* 13, 132

Epileptic Syndromes — Genetic, Diagnostic, and Therapeutic Aspects

Leppik I E & others (1990) *Epilepsia.* 31, Suppl. 3, S1–S74

Segmentation and segmental differentiation in the development of the central nervous systems of leeches and flies

Levme M & Macagno E (1990) *Annu. Rev. Neurosci.* 13, 195

Differentiation signals in the CNS. type-2 astrocyte development in vitro as a model system

Lillien L E & Raff M C (1990) *Neuron.* 5, 111–119

Perceptual neural organization, some approaches based on network models and information theory

Linsker R (1990) *Annu. Rev. Neurosci.* 13, 257

3rd International Symposium on the Pain Clinic, Florence, Italy, September 10–14, 1988

Lipton S, Tunks E & Zoppi M, eds (1990) *Annu. Rev. Neurosci.* 13, 402 pp.

Regulation of free calmodulin levels by neuremodulin — neuron growth and regeneration

Liu Y C & Storm D R (1990) *Trends Pharmacol. Sci.* 11, 107

Biochemical pharmacology of isolated neuronal growth cones — implications for synaptogenesis

Lockebeze R O (1990) *Brain Res. Rev.* 15, 145

The role of fibroblast growth factors in the central nervous system [Brief review]

Logan A (1990) *Trends Endocrinol. Metab.* 1, 149

Molecular characterization of opioid receptors

Loh H H & Smith A P (1990) *Annu. Rev. Pharmacol. Toxicol.* 30, 123–147

Homeologues in mammalian development and the evolution of the cranium and central nervous system

Lonai P & Orr Urtreaga A (1990) *FASEB J.* 4, 1436

Nerve blood flow and oxygen delivery in normal, diabetic, and ischemic neuropathy

Low P A, Lagerlund T D & McManus P G (1989) *Int. Rev. Neurobiol.* 31, 355

Nicotine receptors in the mammalian brain

Luoje C W, Patrick J & Séguela, P (1990) *FASEB J.* 4, 2753

The cellular basis of segmentation in the developing hindbrain

Lumsden A (1990) *Trends Neurosci.* 13, 329

Capsaicin: actions on nociceptive C-fibres and therapeutic potential

Lynn B (1990) *Pain.* 41, 61

The neurotoxicity of MPTP and the relevance to Parkinson's disease

McCrodgen J M, Tipton K F & Sullivan J P (1990) *Pharmacol. Toxicol.* 67, 8

Physiological and pathophysiological roles of excitatory amino acids during central nervous system development

McDonald J W & Johnston M V (1990) *Brain Res. Rev.* 15, 41

The Korsakoff syndrome: a neurochemical perspective

McEntee W J & Mair R G (1990) *Trends Neurosci.* 13, 340

Neurochemistry and neurotoxicity of 3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy") [Short review]

McKenna D J & Peroutka S J (1990) *J. Neurochem.* 54, 14

Spontaneous occurrence and chemical induction of neurotumor in rats — influence of host factors and specificity of chemical structure

Maekawa A & Mitsumori K (1990) *Crit. Rev. Toxicol.* 20, 287

VIP neurons in the cerebral cortex

Magistretti P J (1990) *Trends Pharmacol. Sci.* 11, 250

The tissue-specific processing of pro-ACTH/melanocyte-stimulating hormone — recent advances and unsolved problems [Brief review]

Mains R E & Eipper B A (1990) *Trends Endocrinol. Metab.* 1, 388

Organic mental disorders in HIV-1 infection [Editorial review]

May J M (1990) *AIDS.* 4, 831

Reactive astrocytes — a review

Malhotra S K, Shnita T K & Elbrink J (1990) *Cytohys.* 61, 133

Metabolism of the malignant astrocytoma

Mangiaridi J R & Yodice P (1990) *Neurosurgery.* 26, 1

Binding of some antidepressants to the 5-hydroxytryptamine transporter in brain and platelets

Marcusson J O & Ross S R (1990) *Psychopharmacology.* 102, 145

The MPTP story — MAO activates tetrahydropyrrole derivatives to toxins causing Parkinsonism

Maret G, Testa B, Jenner P, Eltayar N & Carrupt P A (1990) *Drug Metab. Rev.* 22, 291

Parkinson's disease

Marsden C D (1990) *Lancet.* 335, 948

Aldose reductase inhibitors in the treatment of diabetic neuropathy: a review of the rationale and clinical evidence

Masson E A & Bouillon A J M (1990) *Drugs.* 39, 190–207

EAA pharmacology: excitatory amino acid receptors, second messengers and regulation of intracellular Ca++ in mammalian neurons

Mayer M L & Miller R J (1990) *Trends Pharmacol. Sci.* 11, 254

Aging — hypothalamic catecholamines, neuroendocrine-immune interactions, and dietary restriction [Minireview]

McItos J (1990) *Proc. Soc. Exp. Biol. Med.* 195, 304

EAA pharmacology: excitatory amino acid neurotoxicity and neurodegenerative disease

Meldrum B & Garthwaite J (1990) *Trends Pharmacol. Sci.* 11, 379

The brain angiotensin system: insights from mapping its components [Brief review]

Mendelsohn F A O & others (1990) *Trends Endocrinol. Metab.* 1, 189

Structure-function relationships in identified afferent neurones

Mene S (1990) *Anat. Embryol.* 181, 1–17
Histidine, histamine, and the neuroregulation of food intake — a review and hypothesis
Mercer L P, Dodds S J, Weber M D & Dunn J D (1990) *Nutrition*, 6, 273

κ-Opioid receptors and analgesia
Millan M J (1990) *Trends Pharmacol. Sci* 11, 70

Guanine nucleotide binding proteins in neuroblastoma x glioma hybrid, NG108-15, cells. Regulation of expression and function [Minireview]
Milligan G, McKenzie F R, McCutcheon I S, Mitchell F M & Mullaney J (1990) *Int. J. Biochem* 22, 701

A study on the role and mechanism of intracellular Ca²⁺ in the central nervous system [In Japanese: English abstract]
Miyamoto E (1990) *Folia Pharmacol. Jap.* 96, 141

Adenosine deaminase and purinergic neuroregulation
Nagy J J, Geiger J D & Staines W A (1990) *Neurochem. Int.* 16, 211

Development and plasticity of the Locus coeruleus: a review of recent physiological and pharmacological experimentation
Nakamura S & Sakaguchi T (1990) *Progr. Neurobiol.* 34, 505

The discovery and development of busptrone: a new approach to the treatment of anxiety
New J S (1990) *Med. Res. Rev.* 10, 283

Pharmacology of nootropics and metabolically active compounds in relation to their use in dementia
Nicholson C D (1990) *Psychopharmacology*, 101, 147

Functional comparison of neurotransmitter receptor subtypes in mammalian central nervous system
Nicoll R A, Malenka R C & Kauer J A (1990) *Physiol. Rev.* 70, 513

The parvalbumin-containing nonpyramidal neurons in the rat hippocampus
Nitsch R, Soriano E & Frotscher M (1990) *Anat. Embryol.* 181, 413–425

Studies on the transmembrane signalling mechanism of the brain using Xenopus oocytes
Nomura Y (1990) *Yakugaku Zasshi*, 110, 304

Basis for the action of calcium antagonists in neurology
Nuiten J M van & others (1990) *Eur. Neurol.* 30, Suppl. 2, 1

Degradation of thyrotropin-releasing hormone and luteinising hormone-releasing hormone by enzymes of brain tissue [Short review]
O'Cuinn G, O'Connor B & Elmore M (1990) *J. Neurochem.* 54, 1

Excitotoxic amino acids and neuropsychiatric disorders
Olney J W (1990) *Annu. Rev. Pharmacol. Toxicol.* 30, 47–71

Endogenous opiates — 1989
Olson G A, Olson R D & Kastin A J (1990) *Peptides*, 11, 1277

Pain and neurotransmitters
Otsuka M & Yanagisawa M (1990) *Cell Mol. Neurobiol.* 10, 293

Molecular genetic studies of manic-depression and schizophrenia
Owen M J & Mullan M J (1990) *Trends Neurosci.* 13, 29

The role of the blood–brain barrier in movement disorders
Paleologos N A & Groothuis D R (1990) *Clin. Neuropharmacol.* 13, 129

Is the neuronal basis of Alzheimer's disease cholinergic or glutamatergic?
Palcus A M & Gershon S (1990) *FASEB J.* 4, 2745

2-Phenylethylamine — a modulator of catecholamine transmission in the mammalian central nervous system [Short review]
Paterson I A, Juorio A V & Boulton A A (1990) *J. Neurochem.* 55, 1827

Control of cell fate in a vertebrate neurogenic lineage [Minireview]
Patterson P H (1990) *Cell*, 62, 1035–1038

Microangiopathy, the vascular basement membrane and Alzheimer's disease
Perlmuter L S & Chui H C (1990) *Brain Res. Bull.* 24, 677

Neurotoxins from venoms of the Hymenoptera — twenty-five years research in Amsterdam
Piek T (1990) *Comp. Biochem. Physiol. Pt C* 90, 223

Lipoxygenase metabolites of arachidonic acid in neuronal transmembrane signaling
Pomelli D & Greengard P (1990) *Trends Pharmacol. Sci.* 11, 367

The Kugelberg Lecture — Brain mechanisms of voluntary motor commands — a review
Porter R (1990) *Electroencephalography Clin. Neurophysiol.* 76, 282

The attention system of the human brain
Posner M I & Petersen S E (1990) *Annu. Rev. Neurosci.* 13, 25

Novel structure and genetics of prions causing neurodegeneration in humans and animals
Prusiner S B (1990) *Biologicals*, 18, 247

Role of genotype in the adaptation of the brain dopamine system to stress
Puglisiallegra S, Kempf E & Cabib S (1990) *Neurosci. Biobehav. Rev.* 14, 573

International Symposium on Fundamentals of Memory Formation: Neuronal Plasticity and Brain Function, Mainz, FRG, October 27–29, 1988
Rahmann H, ed. (1989) *Fortschr. Zool.* 37, 431 pp.

Adhesion molecules on endothelial cells in the central nervous system: an emerging area in the neuroimmunology of multiple sclerosis [Short analytical review]
Raine C S, Lee S C, Scheinberg L C, Duivestijn A M & Cross A H (1990) *Clin. Immunol. Immunopath.* 57, 173

Glucose homeostasis and endogenous opioid peptides [Therapeutic review]
Ramabadran K & Bansinath M (1990) *Int. J. Clin. Pharmacol. Ther. Toxicol.* 28, 89

Mechanisms of sodium homeostasis: sodium and water excretion in mammals — haemodynamic, endocrine, and neural mechanisms
Rehmann H W & others (1990) *Acta Physiol. Scand.* 149, Suppl. 701, 3–107

Antidepressants and brain neurochemistry
Richelson E (1990) *Mayo Clin Proc.* 65, 1227

Development of the blood–brain barrier
Risau W & Wolburg H (1990) *Trends Neurosci.* 13, 173

Occupational exposure and defects of the central nervous system in offspring: review
Roeleveld N, Zielhuis G A & Gabreels F (1990) *Eur. J. Neurol.* 3, 1005

Antiepileptic drugs — pharmaceutical mechanisms and clinical efficacy with consideration of promising developmental stage compounds
Rogawski M A & Porter R J (1990) *Pharmacol. Rev.* 42, 223

The role of growth factors in the control of neurogenesis
Rohrer H (1990) *Eur. J. Neurosci.* 2, 1005

Messenger molecules in the cerebellum
Ross C A, Bredt D & Snyder S H (1990) *Trends Neurosci.* 13, 216

Drug-induced Parkinsonism and other movement disorders
Ross R T (1990) *Can. J. Neurol. Sci.* 17, 155

Manipulating the mouse genome: implications for neurobiology
Rossant J (1990) *Neuron*, 4, 323–334
Central effects of CRF on metabolism and energy balance
Rothwell N J (1990) Neurosci Biobehav. Rev. 14, 263

Molecular probes in neuro-oncology — a review
Rutka T J, Trent J M & Rosenberg M L (1990) Cancer Invest. 8, 425

Regulation of brain atrial natriuretic peptide and angiotensin
receptors — quantitative autoradiographic studies
Saaavedra J M, Castren E, Gustafsson J S & Nazarali A J (1989) Int Rev. Neurobiol. 31, 257

Experimental uses of neuropeptide hormone analogs [Brief review]
Sawyer W H & Manning M (1989) Trends Endocrinol Metab. 1, 48

The role(s) of gangliosides in neural differentiation and repair: a perspective
Schachner M (1990) Brain Res. Bull. 24, 131

Aggressive behavior in birds — an experimental model for studies of brain-stereoid interactions [Minireview]
Schoringer A B & Callard G V (1990) Comp Biochem. Physiol. Pt A, 97, 307

Myelin-associated inhibitors of neurite growth
Schwab M E (1990) Exp. Neurol. 109, 2

Myelin-associated inhibitors of neurite growth and regeneration in the CNS
Schwab M E (1990) Trends Neurosci. 13, 452

The role of nutrition in neural tube defects
Scott J M, Kirk P N & Weir D G (1990) Annu. Rev. Nutr. 10, 277

Eicosanoids and peripheral neurotransmission
Scito R & Daniel E E (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 237

Impulse activity and the patterning of connections during CNS
development
Shatz C J (1990) Neuron, 5, 745

The regulation and function of c-fos and other immediate early genes in the nervous system
Sheng M & Greenberg M E (1990) Neuron, 4, 477–485

Pre-synaptic and post-synaptic cholinergic dysfunction in aged rodent brain regions — new findings and an interpretative review
Sherman K A & Friedman E (1990) Int. J. Dev. Neurosci. 8, 689

An ethological model for the study of activation and interaction of pain, memory and defensive systems in the attacked mouse — role of endogenous opioids
Siegfried B, Frischknecht H R & Desouza R L N (1990) Neurosci. Biobehav. Rev. 14, 481

Calcium, excitotoxins, and brain damage
Siesjo B K (1990) News Physiol. Sci. 5, 120

Hormonal control of neuropeptide gene expression in sexually dimorphic olfactory pathways
Simerly R B (1990) Trends Neurosci. 13, 104

Mechanism of the neurotoxicity of MPTP — an update
Singer T P & Ramsay R R (1990) FEBS Lett. 274, 1–8

Conference Science Award Lecture. Uncultured lobster muscle, cultured neurons and brain slices: the neurophysiology of zinc
Smart T G (1990) J. Pharm. Pharmacol. 42, 377

Drug transport in the central nervous system: role of carriers
[Minireview]
Spectov R (1990) Pharmacology, 40, 1

Neuroendocrine mechanisms involved in regulation of body weight, food intake and metabolism
Steffens A B, Strubbe J H, Balkan B & Scheurink A J W (1990) Neurosci. Biobehav. Rev. 14, 305

Prospects for specific immunotherapy in myasthenia gravis
Steinman L & Mantegazza R M (1990) FASEB J. 4, 2726

Meeting on Regulation of Gene Expression in the Nervous System, Catania, Italy, July 8–11, 1989
Stella A M G, Vellis J D & Perezpolo J R, eds (1990) Neuronal Development and Reorganization — Okazaki, Japan, February 7–10, 1990.
Stuermer C A O (1990) Neurosci. Res. Suppl. 13, 1–171

Steroid hormones and the cardiovascular system — direct actions of estradiol, progesterone, testosterone, glucocorticoids and mineralocorticoids, and soltriol [vitamin D] on central nervous regulatory and peripheral tissues
Stumpf W E (1990) Experimental. 46, 113

Physiological and pharmacological comparisons of angiotensin II receptors in neuronal and astrocyte glial cultures
Summers C, Myers L M. Kalberg C J & Raizada M K (1990) Progr Neurobiol. 34, 355

Cross-modal plasticity in cortical development: differentiation and classification of sensory neocortex
Sur M, Pallas S L & Roe A W (1990) Trends Neurosci. 13, 227

Pharmacological studies on drug dependence in rodents: Dependence on opioids and CNS depressants
Suzuki T (1990) Jap. J. Pharmacol. 52, 1

Symposium: Dietary Lipids and the Central Nervous System — Stockholm 2–3 November. 1988
Svennerholm L & others (1990) Upsala J. Med. Sci. Suppl. 48, 5–267

Pharmacological properties of newly synthesized derivatives of 3β-hydroxy-5α-3-oxosteroids and their interactions with opioid receptors [Minireview]
Takayanagi I, Koike K & Suzuki T (1990) Gen. Pharmacol. 21, 605

Do environmental toxins cause Parkinson's disease? — A critical review
Tanner C M & Langston J W (1990) Neurology, 40, No 10, Suppl 3, 17

Mast cells: the immune gate to the brain [Minireview]
Theoharides T C (1990) Life Sci. 46, 607
Molecular genetics of neuronal development in the Drosophila embryo
Thomas J B & Crews S T (1990) *FASEB J.* 4, 2476

Laboratory investigation of cerebrospinal fluid proteins
Thompson E J & Keir G (1990) *Ann. Clin. Biochem.* 27, 425

Glycine is a coagonist at the NMDA receptor/channel complex
Thomson A M (1990) *Progr. Neurobiol.* 35, 53

Ionic, neuronal and endocrine influences on the proopiomelanocortin system of the hypothalamus [Minireview]
Tilgada E & Wilson J F (1990) *Life Sci.* 46, 81-90

Biochemical aspects of drug-induced Parkinson's disease [Royal Irish Academy Lecture]
Tipton K F (1990) *Biochem. Soc. Trans.* 18, 129

On the assembly mechanism of neurofilaments [Minireview]
Tokutake S (1990) *J. Biochem.* 22, 1

Glial cells form boundaries for developing insect olfactory glomeruli
Tolbert L P & Oland L A (1990) *Exp. Neurol.* 109, 19

Central neuroregulation of hypothalamic corticotropin-releasing hormone (CRH-41, 42 secretion)
Tsagarakis S & Grossman A (1990) *J. Endocrinol. Invest.* 13, 765

The roles of microtubule-associated proteins in brain morphogenesis — a review
Tucker R P (1990) *Brain Res. Rev.* 15, 101

Action of inhibitors on brain glutamate decarboxylase [Minireview]
Tunnicliff G (1990) *Int. J. Biochem.* 22, 1235

Brain-gut peptides, renal function and cell growth [Editorial review]
Unwin R J, Ganz M D & Sterzel R B (1990) *Kidney Int.* 37, 1031

Neurotoxicological effects and the mode of action of pyrethroid insecticides
Vijverberg H P M & Vanderbercken J (1990) *Crit. Rev. Toxicol.* 21, 105

Involvement of free radicals in dementia of the Alzheimer type: a hypothesis
Volker L & Crino P B (1990) *Neurobiol. Aging.* 11, 567

Schizophrenia, affective psychoses, and other disorders treated with neuroleptic drugs — the enigma of tardive dyskinesia, its neurobiological determinants, and the conflict of paradigms
Waddington J L (1989) *Int. J. Neurosci.* 567

Immunomodulation by cocaine — a neuroendocrine mediated response [Minireview]
Watzl B & Watson R R (1990) *Life Sci.* 46, 1319

Postsynaptic neuronal plasticity and its hormonal control during insect metamorphosis
Weeks J C & Levine R B (1990) *Annu. Rev. Neurosci.* 13, 183

Neural substrates of latent inhibition — the switching model
Weiner I (1990) *Psychol. Bull.* 108, 442

A review of the physiological bases of the anorectic action of phenylpropanolamine (d,l-norephedrine)
Weltman P J (1990) *Neurosci. Biobehav. Rev.* 14, 339

Studies on leukocyte β-adrenergic receptors in depression: a critical appraisal [Minireview]
Werstiuk E S, Steiner M & Burns T (1990) *Life Sci.* 47, 85

Neurobehavioral effects of toxicity due to metals, solvents and insecticides
White R F, Feldman R G & Travers P H (1990) *Clin. Neuropharmacol.* 13, 392

Molecular approaches to the segmentation of the hindbrain
Wittk_mr D G & Krumlauf R (1990) *Trends Neurosci.* 13, 335

Activation of Renshaw cells
Windhorst U (1990) *Progr. Neurobiol.* 35, 135

Recent developments in the research of opioid receptor subtype molecular characterization [Short review]
Wollemann M (1990) *J. Neurochem.* 54, 1095

Memory traces in spinal cord
Wolpaw J R & Carp J S (1990) *Trends Neurosci.* 13, 137

Alzheimer's disease
Wurtman R J, Corkin S, Growdon J H & Ritterwalker E, eds (1990) *Advan. Neurol.* 51, 1

Biologically active analogues of the extracellular matrix — artificial skin and nerves
Yannas I V (1990) *Angew. Chem. Int. Ed.* 29, 20

Excitatory amino acid receptors in the brain — membrane binding and receptor autoradiographic approaches — EAA pharmacology
Young A B & Fagg G E (1990) *Trends Pharmacol. Sci.* 11, 126

Dopamine cell replacement: Parkinson's disease
Yurek D M & Sladek J R jr (1990) *Annu. Rev. Neurosci.* 13, 415

The T lymphocyte in experimental allergic encephalomyelitis
Zamvil S S & Steinman L (1990) *Annu. Rev. Immunol.* 8, 579

44-2C Cells: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]
Zeytin F N (1989) *Trends Endocrinol. Metab.* 1, 107

Mast cell degranulating peptide: a multi-functional neurotoxin
Ziai M R, Russek S, Wang H-C, Beer B & Blume A J (1990) *J. Pharm. Pharmacol.* 42, 457

Animal models of parkinsonism using selective neurotoxins — clinical and basic implications
Zigmond M J & Stricker E M (1989) *Int. Rev. Neurobiol.* 31, 1

5-HT-related drugs and human experimental anxiety
Zuardi A W (1990) *Neurosci. Biobehav. Rev.* 14, 507

**CADMIUM**

Retention of lead and cadmium in prehistoric and modern human teeth
Grandjean P & Jorgensen P J (1990) *Envir. Res.* 53, 6

The search for chelate antagonists for chronic cadmium intoxication
Jones M M & Cherian M G (1990) *Toxicology.* 62, 1

**CALCITONIN**

Calcitonin gene-related peptide (CGRP) and amylin and the endocrine pancreas
Ahren B & Petterson M (1990) *Int. J. Pancreatol.* 6, 1

Calmodulin-dependent protein kinase II
Fujisawa H (1990) *BioEssays.* 12, 27

Calcitonin — production, isolation and purification
Myshkina L A, Korotaev G K & Davidovits Y A (1990) *Bioorg. Khim.* 15, 1589

Symposium on Molecular and Cellular Regulation of Calcium and Phosphate Metabolism, Vienna, Austria, November 17, 1988
Peterlik M & Bronner F, eds (1990) *Progr. Clin. Biol. Res.* 332, 239 pp.

**CALCIUM**

Hypocalcemia in cancer
Abramson E C, Gajardo H & Kukreja S C (1990) *Bone Mineral.* 10, 161
Calcium channels in cellular membranes
Kostyuk P G (1990) J. Mol. Neurosci. 2, 123

Modulation of calcium channel function in nerve cell membrane
[Minireview]
Kostyuk P G & Doroshenko P A (1990) Gen. Physiol. Biophys. 9, 433

Electrogenic properties of the Na:Ca exchange
Lagnado L & McNaughton P A (1990) J. Membr. Biol. 113, 177

Coordinate interactions of cyclic nucleotide and phospholipid metabolizing pathways in calcium-dependent cellular processes
Laychock S G (1989) Curr. Top. Cell. Regul. 30, 203

α2-Adrenergic receptors and calcium: α2-receptor blockade in vascular smooth muscle as an approach to the treatment of hypertension
Lee J Y & DeBernardis J F (1990) Methods Findings Exp. Clin Pharmacol. 12, 213

Regulation of free calmodulin levels by neuregulin — neuron growth and regeneration
Liu Y C & Storm D R (1990) Trends Pharmacol. Sci. 11, 107

Calcium Antagonists in Hypertension — Proceedings of a Satellite Symposium, Bangkok, Thailand, February 9, 1990
Lochaya S & others (1990) Drugs, 40, Suppl. 2, 1-71

Ca2+ as a second messenger within mitochondria of the heart and other tissues
McCormack J G & Denton R M (1990) Annu. Rev. Physiol. 52, 451

Role of calcium ions in regulation of mammalian intramitochondrial metabolism
McCormack J G, Halestrap A P & Denton R M (1990) Physiol. Rev 70, 391

Calcium binding proteins. Elucidating the contributions to calcium affinity from an analysis of species variants and peptide fragments
Marsden B J, Shaw G S & Sykes B D (1990) Biochem Cell Biol 68, 587-601

Properties of parathyroid hormone-related protein and its role in malignant hypercalcaemia
Martin T J (1990) Q. J. Med. 76, 771

Emerging views on the structure and dynamics in the Ca2+-ATPase is sarcoplasmic reticulum [Minireview]
Martonosi A N & others (1990) FEBS Lett. 268, 365-370

EAA pharmacology: excitatory amino acid receptors, second messengers and regulation of intracellular Ca2+ in mammalian neurons
Mayer M L & Miller R J (1990) Trends Pharmacol. Sci. 11, 254

Intracellular Ca2+ storage organelles in non-muscle cells — heterogeneity and functional assignment [Minireview]
Meldolesi J, Mageddu L & Pozzan T (1990) Biochim. Biophys. Acta, 1055, 130

Calcium in the diet: food sources, recommended intakes, and nutritional bioavailability
Miller D D (1989) Advan. Food Nutr. Res 33, 103

Receptor-mediated regulation of calcium channels and neurotransmitter release
Miller R J (1990) FASEB J. 4, 3291

Interactions between analgesics and calcium channel blockers [Minireview]
Miranda H F & Paciete C (1990) Gen. Pharmacol. 21, 171

A study on the role and mechanism of intracellular Ca2+ in the central nervous system [In Japanese; English abstract]
Miyamoto E (1990) Folia Pharmacol. Jap. 96, 141

The role of calcium in the control of vascular tone as assessed by the Ca2+ indicator aequorin
Morgan K G (1990) Cardiovasc. Drugs Ther. 4, 1355

Signal transduction mechanisms of Ca2+ mobilizing hormones — the case of gonadotropin-releasing hormone
Naor Z (1990) Endocr. Rev. 11, 326

The dihydropyridine-sensitive calcium channel of the skeletal muscle — biochemistry and structure [Minireview]
Nastainczyk W, Ludwig A & Hofmann F (1990) Gen. Physiol. Biophys. 9, 321

Calcium channels, potassium channels, and voltage dependence of arterial smooth muscle tone [Brief review]
Nelson M T, Patlak J B, Worley J F & Standen N B (1990) Am. J. Physiol. 259, No 1, Pt I, C3

Basis for the application of calcium antagonists in neurology
Nuñez J M van & others (1990) Eur. Neurol. 30, Suppl.2, 1

Calcium ion and turgor regulation in plant cells [Topical review]
Okazaki Y & Tazawa M (1990) J. Membr. Biol. 114, 189

How calmodulin binds its targets — sequence independent recognition of amphiphilic alpha-helices
Oneil K T & Degrado W F (1990) Trends Biochem. Sci 15, 59

Molecular mechanisms of calcium-induced membrane fusion [Minireview]
Papahadjopoulos D, Nir S & Düögües N (1990) J Bioenerget. Biomembr. 22, 157

Oscillating intracellular Ca2+ signals evoked by activation of receptors linked to inositol lipid hydrolysis — mechanism of generation [Topical review]
Petersen O H & Wakui M (1990) J. Membr. Biol. 118, 93

Ca2+ activated cell volume recovery mechanisms
Pierce S K & Politis A D (1990) Annu. Rev. Physiol. 52, 27

Structural and functional aspects of calcium homeostasis in eukaryotic cells
Pietrobon D, Divirigilio F & Pozzan T (1990) Eur. J. Biochem 193, 599

Synexin (Annexin VII): a cytosolic calcium-binding protein which promotes membrane fusion and forms calcium channels in artificial bilayer and natural membranes [Topical review]
Pollard H B, Burns A L & Rojas E (1990) J. Membr. Biol. 117, 101

Genetic dissection of Ca2+-dependent ion channel function in Paramecium
Preston R R (1990) BioEssays, 12, 269

Cyclic GMP and calcium — the internal messengers of excitation and adaptation in vertebrate photoreceptors [Minireview]
Pugh E N & Lamb T D (1990) Vision Res. 30, 1923

New ligands for L-type Ca2+ channels
Ramp D & Triggle D J (1990) Trends Pharmacol. Sci 11, 112

Receptor-mediated calcium entry [Minireview]
Rink T J (1990) FEBs Lett 268, 381-385

Calcium signalling in human platelets
Rink T J & Sage S O (1990) Annu. Rev. Physiol. 52, 431

Role of an analogue of parathyroid hormone in the pathogenesis of malignant hypercalcemia [In French; English abstract]
Rizzoli R & others (1990) Path. Biol. 38, 656

Ca2+-binding to citrate cycle dehydrogenases [Minireview]
Rutter G A (1990) Int. J. Biochem. 22, 1081

Melanocortin receptors: targets for control by extracellular calcium
Salomon Y (1990) Mol. Cell. Endocrinol. 70, 139
The involvement of calcium in transport of secretory proteins from the endoplasmic reticulum
  Sambrook J F (1990) Cell, 61, 197-199
Role of G proteins in calcium channel modulation
  Schultz G, Rosenthal W, Hescheler J & Trautwein W (1990) Annu. Rev. Physiol. 52, 275
Calcium, excitotoxins, and brain damage
  Siejo B K (1990) Noves Physiol. Sci. 5, 120
Stimulus-response coupling: the search for intracellular calcium modulator proteins [Minireview]
  Smith V L, Kaesz M A & Dedman J R (1989) Cell Regul. 1, 165-172
Peptide mediators of hypercalcemia in malignancy
  Streuler G J & Nisenson R A (1990) Annu. Rev. Med. 41, 35
The pharmacology of calcium antagonists: a review
  Struyker-Boudier H A J, Smits J F M & De Mey J G R (1990) J Cardiovasc. Pharmacol. 15, Suppl. 4, 51
Calcium activated neural protease — structure-function relationship and functional implications [Minireview]
  Suzuki K & Ohno S (1990) Cell Struct. Funct. 15, 1
Mechanisms of calcium overload in reperfused ischemic myocardium
  Tani M (1990) Annu. Rev. Physiol. 52, 543
Ionized calcium and cyclic AMP in plasma and urine — biochemical evaluation in calcium metabolic disease
  Thode J (1990) Scand. J. Clin. Lab. Invest. 50, Suppl. 197, 13-43
Regulation of cardiac L-type calcium current by phosphorylation and G proteins
  Trautwein W & Hescheler J (1990) Annu. Rev. Physiol. 52, 257
Calcium channels, stores, and oscillations
  Tsien R W & Tsien R Y (1990) Cell, 61, 197-199
Calcium and vascular reactivity in ageing and hypertension [Editorial review]
  Wadsworth R M (1990) J Hypertension, 8, 975
Cytoplasmic Ca²⁺ in mammalian ventricle: dynamic control by cellular processes
  Wier G (1990) Annu. Rev. Physiol. 52, 467
Release of intracellularly stored Ca²⁺ by inositol 1,4,5-triphosphate — an overview [Minireview]
  Yamamoto H & Kanade H (1990) Gen. Pharmacol. 21, 387
Control of insulin secretion: a model involving Ca²⁺, cAMP and diacylglycerol
  Zawalich W S & Rasmussen H (1990) Mol. Cell. Endocrinol. 70, 119
Widening potential for Ca²⁺ antagonists: non-L-type-Ca²⁺ channel interaction
  Zernig G (1990) Trends Pharmacol. Sci. 11, 38

CANCER

Molecular mimicry of growth factors by products of tumor viruses
  Aaronson S A & Pierce J H (1990) Cancer Cells, 2, 212
Hyposensitivity in cancer
  Abramson E C, Gajardo H & Kukreja S C (1990) Bone Mineral. 10, 161
Growth control circuitry and the oncogene connection [Meeting review]
  Adams J M (1990) Cancer Cells, 2, 190
Biologicism of multifunctional cytokines: IL 6 and related molecules (IL 1 and TNF)
  Akira S, Hirano T, Taga T & Kishimoto T (1990) FASEB J 4, 2860
Intercellular communication in bronchial epithelial cells: review of evidence for a possible role in lung carcinogenesis
  Altman D C, Jones R T, Grinley P M & Resau J H (1990) Toxicol. Path. 18, 324
New targets for cancer chemotherapy — poly(ADP-ribosylation) processing and polysoprened metabolism
  Alderson T (1990) Biol. Rev. Cambridge Phil. Soc. 65, 623
Induced differentiation of K562 leukemia cells: a model for studies of gene expression in early megakaryoblasts
  Altalò K (1990) Leukemia Res 14, 501
Misconceptions on pollution and the causes of cancer
  Ames B N & Gold L S (1990) Angew. Chem. 29, 1191
Molecular mechanisms of ultraviolet radiation carcinogenesis
  Anuulisawaity H N & Pierceall W E (1990) Photochem Photobiol. 52, 1119
Cellular pharmacology of cisplatin: perspectives on mechanisms of acquired resistance
  Andrews P A & Howell S B (1990) Cancer Cell. Mon. Rev. 2, 35
Interferon in Hematologic Malignancies and Related Disorders
  Appelbaum F R & others (1990) Seminars Hematol. 27, No 3, Suppl. 4, 1-31
Cancer, cytokines, and cytotoxic cells: interleukin-2 in the immunotherapy of human neoplasms
  Atzeopieiu J & Kirchner H (1990) Klin. Wochenschr. 68, 1
Advances in the hypercalcemia of malignancy
  Bajouras D R & others (1990) Seminars Oncol. 17, No 2, Suppl. 5, 1
Pathobiology of chemical hepatocarcinogenesis. Part II. Metabolic and molecular changes
  Bannasch P (1990) J Gastroenterol. Hepatol 5, 310
ras oncogenes: their role in neoplasia
  Bartucci M (1990) Eur. J. Clin. Invest. 20, 225
Epidermal growth factor in breast cancer [Minireview]
  Barker S & Vinnam O P (1990) Int. J. Biochem. 22, 939
A hypothesis regarding the protective role of metallothioneins against the toxicity of DNA interactive antinecancer drugs
  Basu A & Lazo J S (1990) Toxicol. Lett 50, 123
Abnormalities of the erythrocyte membrane in chronic myelogenous leukemia
  Basu J, Kundu M, Rakshit M M & Chakrabarti P (1990) Biotechnol. Appl. Biochem. 12, 501
Microvascular endothelial cell heterogeneity: interactions with leukocytes and tumor cells
  Belloni P N & Tressler R J (1990) Cancer Metast. Rev. 8, 353
In situ hybridization: application to the study of gene expression during experimental hepatocarcinogenesis and human hepatocellular carcinoma
  Bernard U & Feldmann G (1990) Tumor Biol. 11, 173
Breast cancer: genetic alterations and prognostic factors
  Biéche I, ChampeÌÁme H & Lidereau R (1990) Path. Biol. 38, 727
Activation of proto-oncogenes in solid human tumors [In French; English abstract]
  Birnbaum D & Delapayere O (1990) Bull. Cancer, 77, 857
The influence of dietary fat on carcinogenesis. Lessons from experimental models
  Birt D F (1990) Nutr. Rev. 48, 1

34
Retroviruses and oncogenes. 2.
Bishop J M (1990) *Angew. Chem. 29*, 716

Nobel Lecture: Retroviruses and oncogenes. 2
Bishop J M (1990) *Biosci. Rep. 10*, 473

Antineoplastic drugs in 1990: a review (Part I)
Black D J & Livingston R B (1990) *Drugs*, 59, 489–501

Antineoplastic drugs in 1990: a review (Part II)
Black D J & Livingston R B (1990) *Drugs*, 59, 652–673

The betrayal of homeo box genes in normal development: the link to cancer
Blatt C (1990) *Cancer Cells*, 2, 186

Uptake of ephelamion remnant retinyl ester via the low density lipoprotein receptor — implications for the role of vitamin-A as a possible preventive for some forms of cancer
Blomhoff R, Skrede B & Norum K R (1990) *J. Intern. Med.* 228, 207

Tumor interactions with the vasculature: angiogenesis and tumor metastasis
Blood C H & Zetter B R (1990) *Biochim. Biophys. Acta. 1032*, 89

Symposium on Proto-Oncogenes in Cell Development, Ciba Foundation, London, England, September 19–21, 1989
Bock G & Marsh J, eds (1990) *Ciba Fdn Symp. 150*, 295 pp.

Viruses and malignant blood diseases [In French; English abstract]
Boiron M (1990) *Path. Biol. 38*, 57

8th Journée on Growth Factors and Oncogenes, Grenoble, France, March 10–11, 1989
Bolla M, Chambaz E M & Vrousos C, eds. (1989) *Colloq INSERM, 190*, 777 pp.

Retinoblastoma — from genetic epidemiology to molecular biology [In French; English abstract]
Bonaitipellie C (1990) *M/S Méd. Sci. 6*, 972

Interactions between inflammatory mediators in expression of antitumor cytostatic activity of macrophages [Minireview]
Bonta I L & Ben-Efraim S (1990) *Immunol. Lett. 25*, 295

Identification of candidate cancer, chemopreventive agents and their evaluation in animal models and human clinical trials — a review
Boone C W, Kelloff G J & Malone W E (1990) *Cancer Res. 50*, 2

The molecular biology of acute lymphoblastic leukemia
Botti A C & Verma R S (1990) *Anticancer Res. 10*, No.2B, 519

Tumor angiogenesis: the role of oncogenes and tumor suppressor genes
Bouck N (1990) *Cancer Cells*, 2, 179

170 GP expression and resistance to chemotherapy in human cancers [In French; English abstract]
Bourhis J, Riou G & Benard J (1990) *Bull. Cancer, 77*, 957

Evidence of association between plasma high-density lipoprotein cholesterol and risk factors for breast cancer
Broyd N SC McGuire V & Albino A P (1990) *Breast Cancer Res. Tumour Biol.* 113, 779

Metastasis of cancer cells [In French; English abstract]
Boyer B & others (1990) *M/S Méd. Sci. 6*, 433

Molecular mechanisms of oxygen radical carcinogenesis and mutagenesis: the role of DNA base damage
Breimer L H (1990) *Mol. Carcinogen. 3*, 188

Sunlight, DNA damage and skin cancer: a new perspective
Bridges B (1990) *Jap. J. Cancer Res. 81*, 105

Colorectal cancer — evidence for distinct genetic categories based on proximal or distal tumor location
Bufill J A (1990) *Ann. Int. Med. 113*, 779

Effects of lipids on cancer therapy
Burns C P & Spector A A (1990) *Nutr. Rev. 48*, 233

The final common pathway of cancer — Presidential Address [Special Lecture]
Busch H (1990) *Cancer Res. 50*, 4830

Consideration of both genotoxic and nongenotoxic mechanisms in predicting carcinogenic potential
Butterworth B E (1990) *Mutat. Res. 239*, 117

Tumor vaccines
Bystryn J-C (1990) *Cancer Metastas. Rev. 9*, 81

Oncogenes, antioncogenes, and the regulation of cell growth
Carbone M & Levine A S (1990) *Trends Endocrinol. Metab. 1*, 248

Idarubicin in the treatment of acute leukemias. An overview of preclinical and clinical studies
Carella A M, Berman E, Marraone M P & Gianzina T (1990) *Haematologica.*, 75, 159

Do humoral factors mediate cancer chemotherapy-induced emesis?
Carl P L, Cubeddu L X, Lindley C, Myers R D & Rezvani A H (1989) *Drug Metab. Rev. 21*, 319

Manipulations of cellular iron metabolism for modulating normal and malignant cell proliferation — achievements and prospects
Cazzola M, Bergamaschi G, Dezza L & Arosio P (1990) *Blood*, 75, 1903

The current state of oncogenes and cancer. Experimental approaches for analyzing oncogenic events in human cancer
Chiao P J, Bischoff F Z, Strong L C & Tainsky M A (1990) *Cancer Metastas. Rev. 9*, 65

The significance of induced forestomach tumors
Clayson D B, Iverson F, Nera E A & Lok E (1990) *Annu. Rev. Pharmacol. Toxicol. 30*, 441-463

The prevention of cancer [Coordinated Review Letter]
Clayson D B & others (1990) *Cancer Lett. 50*, 3-85

Experimental studies of radiation carcinogenesis in the skin: a review
Cogle J E & Williams J P (1990) *Int. J. Radiat. Biol.*, 57, 797

The role of glutathione and glutathione transferases in chemical carcinogenesis
Coles B & Ketterer B (1990) *Crit. Rev. Biochem. Mol. Biol. 25*, 47

Is the mitochondrial genome involved in carcinogenesis?
Corral M, Defer N & Kruh J (1990) *M/S Med. Sci. 6*, 359

Gamma-linolenic acid, arachidonic acid, and eicosapentaenoic acid as potential anticancer drugs
Das U N (1990) *Nutrition*, 6, 429

Glycosphingolipid function in cancer [Meeting review]
Dawson G (1990) *Cancer Cells*, 2, 327

Integrins and tumor invasion
Dedhar S (1990) *BioEssays, 12*, 583

Analytical methodologies for the quantitation of platinum anticancer drugs and related compounds in biological media
Dewaal W A J, Maessen F J M J & Kraak J C (1990) *J. Pharmaceut. Biomed. Anal. 8*, 1

Mutational analysis of human *NRAS* genes in malignant melanoma: rapid methods for oligonucleotide hybridization and manual and automated direct sequencing of products generated by the polymerase chain reaction
Dickerson A P, Wolkenhardt M & Albino A P (1990) *Gene Chromosom. Cancer, 1*, 257

Regulation of proliferation, invasion and growth factor synthesis in breast cancer by steroids [Plenary lecture]
Dickson R B, Thompson E W & Lippman M E (1990) *J. Steroid Biochem. Mol. Biol. 31*, 305
The cell of origin in Hodgkin's disease
Diehl V & others (1990) Seminars Oncol. 17, 660

An overview of the epidemiological evidence linking diet and cancer
Doll R (1990) Proc. Nutr Soc. 49, 119

Mechanisms of organ specificity in chemical carcinogenesis
Dong Z G & Jeffrey A M (1990) Cancer Invest. 8, 523

Metabolic effects of cancer
Douglas R G & Shaw J H F (1990) Br. J. Surg. 77, 246

Experimental models and biological mechanisms for tumor promotion
Drinkwater N R (1990) Cancer Cells. 2, 8

Biochemical markers as prognostic indices in breast cancer
Duffy M J (1990) Clin Chem. 36, 188

Activation of programmed cell death by anticancer agents, cisplatin as a model system
Eastman A (1990) Cancer Cells. 2, 275

Drug induced DNA damage and tumor chemosensitivity
Epstein R J (1990) J. Clin. Oncol. 8, 2062

Dietary fat and tumor metastasis
Ericsson K L & Hubbard N E (1990) Nutr Rev. 48, 6

A genetic model for colorectal tumorigenesis
Fearon E R & Vogelstein B (1990) Cell, 61, 759–767

Critical factors in the biology of human cancer metastasis — Twenty-eighth G.H.A. Clowes Memorial Award Lecture
Fidler I J (1990) Cancer Res. 50, 6130

Host and tumour factors in metastasis
Fidler I J (1990) Eur. J. Clin. Invest. 20, 481

Tumor necrosis factor — mechanism of action at the molecular, cellular and in vivo level — an overview
Fiore W & others (1990) Scand. J Clin. Lab. Invest. 50, Suppl. 202, 159

Role of oxygen free radicals in carcinogenesis and brain ischemia
Floyd R A (1990) FASEB J. 4, 2587

Endothelial Cells and Anigenic Growth Factors in Cancer Growth and Metastasis
Folkman J & others (1990) Cancer Metast. Rev. 9, 171–267

Tumor necrosis factor in the pathophysiology of infection and sepsis
[Short analytical review]
Fong Y & Lowry S F (1990) Clin. Immunol Immunopath. 55, 157

Protective dietary factors and lung cancer
Fontham E T H (1990) Int J Epidemiol. 19, Suppl. 1, S37

Chronic lymphocytic leukemia — new insights into biology and therapy
Foon K A, Rai K R & Gale R P (1990) Ann. Int. Med. 113, 525

Pharmacology of drugs that alter multidrug resistance in cancer
Ford J M & Hart W N (1990) Pharmacol. Rev. 42, 155

Malignant hyperpyrexia [Minireview]
Foster P S (1990) Int. J Biochem. 22, 1217

Thyroid and steroid hormone regulation of protooncogene expression
[Brief review]
Franklyn J A & Sheppard M C (1989) Trends Endocrmol. Metab. 1, 35

Analysis of dietary fat, calories, body weight, and the development of mammary tumors in rats and mice — a review
Freedman L S, Clifford C & Messina M (1990) Cancer Res. 50, 5710

Transformation injury and the uncellular phenotype of malignant cells
Frost P & Chernajovsky Y (1990) Cancer Metast. Rev. 9, 93

Workshop on Acute Lymphoblastic Leukemia, Tapatio, TX.
November 29–December 2, 1988

Gale R P & Hoelzer D, eds. (1990) UCLA Symp. Mol. Cell Biol. NS. 108, 339 pp.

Human papilloma viruses and carcinomas
Galloway D A & McDougal J K (1989) Advan. Virus Res. 37, 125

The current status of interferon α in haemtic malignancy
Galvani D W & Cowley J C (1990) Blood Rev. 4, 175

Alcohol and cancer
Garro A J & Lieber C S (1990) Annu Rev Pharmacol. Toxicol. 30, 219–249

Integration of retroviral DNA into the genome of the infected cell
Goff S P (1990) Cancer Cells. 2, 172

Consumption of methylxanthine-containing beverages and risk of pancreatic cancer
Gordis L (1990) Cancer Lett. 52, 1–12

Regulation of human T-cell leukemia virus expression
Green P L & Chen I S Y (1990) FASEB J. 4, 169

Characterization of roles of human cytochrome P-450 enzymes in carcinogen metabolism
Guengerich F P (1990) Asia Pacific J. Pharmacol. 5, 327

Morphology, physiology, and molecular biology of renin secretion
Hackenthal E, Paul M, Ganten D & Taubner R (1990) Physiol. Rev. 70, 1067

Nonimmunological aspects of MHC function in the regulation of cell proliferation and the malignant phenotype
Halotis T, Carlow D A & Elliott B E (1990) Cancer Cells. 2, 86–90

ras and GAP — who's controlling whom? [Minireview]
Hall A (1990) Cell, 61, 921–923

Regarding the discovery of cellular oncogenes (from the early 1900s until a recent Nobel Prize) [Minireview][In French; English abstract]
Harel I (1990) Bull. Cancer, 77, 191

Hepatocellular carcinogenesis: recent advances and speculations
Harris C C (1990) Cancer Cells. 2, 146

Symposium on Genetic Mechanisms in Carcinogenesis and Tumor Progression/Symposium on Growth Regulation of Cancer 2,
Keystone, CO, January 1989
Harris C C & Liotta L A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 114, 235 pp.

Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr Biochem. 1, 396

Antimutagens and anticarcinogens: a survey of putative interceptor molecules
Hartman P E & Shankel D M (1990) Envirom. Mutagen. 15, 145

Interleukin-6 and the acute phase response
Henrich P C, Castell J V & Andus T (1990) Biochem. J. 265, 621–636

Pulmonary neoplastic and lymphoproliferative disease in AIDS — a review
Heitman E R (1990) Radiology, 177, 347

THP-adriamycin: updated clinical results. Development of a new anthracycline in France [In French; English abstract]
Herault P (1990) Path. Biol. 38, 64

Human melanoma — development and progression
Herlyn M (1990) Cancer Metast. Rev. 9, 101

Overview of available data on diet and cancer mortality in France
Hill C (1990) Trends. 76, 299

Tumor progression — potential role of unstable genomic changes
Hill R P (1990) Cancer Metast. Rev. 9, 137
Unbalanced transmethylation and the perturbation of the differentiated state leading to cancer
Hoffman R M (1990) BioEssays, 12, 163

Crystalline silica and lung cancer -- a review of recent experimental evidence
Holland L M (1990) Regul. Toxicol. Pharmacol., 12, 224

Measurement of steroid-hormone receptors in carcinoma of the breast tissue [In German; English abstract]

Complex translocations, simple variant translocations and pH-negative cases in chronic myelogenous leukaemia
Huret J L (1990) Hum. Genet. 85, 565

Complex translocations, simple variant translocations and pH-negative cases in chronic myelogenous leukaemia
Huret J L (1990) Hum. Genet. 85, 565

Cytotoxic mechanism of tumor necrosis factor-alpha
Larrick J W & Wright S C (1990) FASEB J., 4, 3215

Tumor suppressor genes
Levine A J (1990) BioEssays, 12, 60

Tumor suppressor genes: the p53 and retinoblastoma sensitivity genes

The p53 protein and its interactions with the oncogene products of the small DNA tumor viruses [Mini-review]
Levine A J (1990) Virology, 177, 419

Tumor suppressor genes: the p53 and retinoblastoma sensitivity genes and gene products
Levine A J & Momand J (1990) Biochim. Biophys. Acta, 1032, 119

Estrogen carcinogenesis in hamster tissues — a critical review
Li J J & Li S A (1990) Endocr. Rev., 11, 524

Bone seeking radiopharmaceuticals
Ligyn C L de, Gelsema W J, Tj T G, Huigen Y M & Vink H A (1990) Nucl. Med. Biol. Int. J. Rad. Appl. Instrum. Pt B, 17, 161

The Role of Cellular Proteases and Their Inhibitors in Invasion and Metastasis
Liotta L A & others (1990) Cancer Metast. Rev., 9, 285-381

2nd Symposium on Growth Regulation of Cancer/Symposium on Genetic Mechanisms in Carcinogenesis and Tumor Progression, Keystone, CO, January 21-27, 1989
Lippman M E & Dickson R B, eds (1990) UCLA Symp. Mol. Cell. Biol. NS., 115, 202 pp.

Retroviruses and human mammary gland cancer
Litvinov S V (1990) Vopr. Virusol., 35, 8

Consumption of methylxanthine-containing beverages and the risk of breast cancer [Review Letter]
Lubin F & Ron E (1990) Cancer Lett., 53, 81-90

New light on Myc and Myb. 1. Myc
Luscher B & Eisenman R N (1990) Genes Dev., 4, 2025

P-Glycoprotein and progesterone receptor in human breast cancer
McGuire W L (1990) Cancer Cells, 2, 27

Mucins in breast cancer: recent immunological advances
McKenzie I F C & Xing P-X (1990) Cancer Cells, 2, 75-78

The potential of cyclosporin A as an anti-tumour agent
McLachlan G, Smart L M, Wallace H M & Thomson A W (1990) Int. J. Immunopharmacol., 12, 469

Review of the genotoxicity and carcinogenicity of 4,4'-methylene-dianiline and 4,4'-methylene-bis-2-chloroaniline
McQueen C A & Williams G M (1990) Mutat. Rev., 239, 133

Spontaneous occurrence and chemical induction of neurogenic tumors in rats — influence of host factors and specificity of chemical structure
Maekawa A & Misumori K (1990) Crit. Rev. Toxicol., 20, 287

Metastasis and angiogenesis
Mahadevan V & Hart I R (1990) Acta Oncol., 29, 97

Metabolism of the malignant astrocytoma
Mangiardi J R & Yodice P (1990) Neurosurgery, 26, 1
The invasive phenotypes
Mareel M M, Van Roy F M & De Baetselier P (1990) Cancer Metast. Rev. 9, 45

Chromosomal abnormalities in human breast cancer
Mars W M & Saunders G F (1990) Cancer Metast. Rev. 9, 35

Minimal residual disease in leukemia: Studies in an animal model for acute myelocytic leukemia (BNML) [Concise review]
Martens A C M, Bekkum D W van & Hugtenbou A (1990) Int. J. Cell Cloning. 8, 27

Familial, multiple endocrine neoplasia type 1: mutation of a tumor suppressor gene [Brief review]
Marx S J (1989) Trends Endocrinol. Metab. 1, 76

Ability of short term tests to predict carcinogenesis in rodents
Mason J M, Langenbach R, Shelby M D, Zeiger E & Tennant R W (1990) Annu Rev Pharmacol. Toxicol. 30, 149-168

The transforming growth factor-beta family
Massague J (1990) Annu. Rev. Cell Biol. 6, 597

Advances in the Applications of Monoclonal Antibodies in Clinical Oncology — meeting held at the Wolfson Institute, London, 21 23 June 1989
Matzku S & others (1990) Br J. Cancer, 62, Suppl.10, 1-96

Efficacy of cytotoxic T lymphocytes against virus-induced tumors
Melief C J M & Kast W M (1990) Cancer Cells, 2, 116

International Conference on Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, Siena, Italy, October 22-23, 1989
Melli M & Parente L, eds (1990) Progr Clin. Biol. Res 349, 463 pp.

Mutation and the Environment, Part D: Carcinogenesis. 5th International Conference on Environmental Mutagens, Case Western Reserve University, Cleveland, OH, July 10-15, 1989
Mendelsohn M L & Albertini R J, eds (1990) Progr Clin. Biol. Res 340, Pt D, 403 pp.

Immunohistochemistry of solid tumors. Brief review of selected problems
Miettinen M (1990) APMIS. 98, 191

Diet and cancer — a review
Miller A B (1990) Acta Oncol. 29, 87

Cellular interactions in metastasis
Miller F R & Heppner G H (1990) Cancer Metast. Rev. 9, 21

The significance of steroid metabolism in human cancer [Plenary lecture]
Miller W R & Oneill J S (1990) J. Steroid Biochem. Mol. Biol. 37, 317

Guanine nucleotide binding proteins in neuroblastoma x glioma hybrid, NG108-15, cells. Regulation of expression and function [Minireview]
Milligan G, McKenzie F R, McClue S J, Mitchell F M & Mullaney I (1990) Int. J. Biochem. 22, 701

Metabolic activation of carcinoogenic N-nitrosodialkylamines [In Japanese; English abstract]
Mochizuki, M (1990) Yakugaku Zasshi, 110, 359

The raf-1 kinase as a transducer of mitogenic signals
Morrison D K (1990) Cancer Cell Mon. Rev. 2, 377

T-cell clones that react against autologous human tumors
Mukherji B, Chakraborty N G & Sivanandham M (1990) Immunol. Rev. 116, 33

Hemostasis in malignancy
Nand S & Messmore H (1990) Am. J. Hematol. 35, 45

A multi-factor ranking scheme for comparing the carcinogenic activity of chemicals [ICPEMC Working Paper 1/2]
Nesnow S (1990) Mutat. Res. 239, 83

Light microscopy and morphometry of vinblastine in vivo cytotoxicity in the different developmental stages of rat incisor ameloblast epithelium
Nielsen H W (1990) APMIS. 98, Suppl.11, 5-56

Onco gene research using Droso phila as a model system
Nishida Y (1990) Jap. J. Genet. 65, 121

Philip Levine Award Lecture: Chromosome translocations and oncogenes in human lymphoid tumors
Nowell P C & Croce C M (1990) Am. J Clin Path. 94, 229

The role of tumor necrosis factor-alpha in acquired immunodeficiency syndrome
Odel M (1990) J Intern. Med. 225, 549

Synthesis and antitumour activity of new derivatives of anthracycline antibiotics modified in the aglycon moiety [In Russian; English abstract]
Obusheva E N (1990) Bioorg. Khim. 16, 1445

Factor-dependent human leukemia cell lines — new models for regulation of acute non-lymphocytic leukemia cell growth and differentiation
Oval J & Taelle R (1990) Blood Rev. 4, 270

Platelet-derived growth factor and its receptor in blood cell differentiation and neoplasia
Pantazis P, Giouzin A S & Nixon J (1990) Eur. J. Biochem. 198, 177

RNase-H of human leukemic cells — a new biological parameter in the study of human leukemias
Papaprilis A D & others (1990) Anticancer Res 10, No 5A, 1201

Colorctal carcinogenesis — sequential steps in the in vitro immortalization and transformation of human colonic epithelial cells
Paraskeva C & others (1990) Anticancer Res 10, No 5A, 1189

Mutagens and Carcinogens in the Diet. Satellite Symposium of the 5th International Conference on Environmental Mutagens, Madison, WI, July 5-7, 1989
Pariza M W, Aeschbacher H U, Felton J S & Sato S, eds (1990) Progr Clin. Biol Res 347, 332 pp.

Cellular immune response against autologous human malignant melanoma: are in vitro studies providing a framework for a more effective immunotherapy?
Parmiani G, Anichini A & Fossati G (1990) J Nat Cancer Inst. 82, 361

Cytogenetic abnormalities in cancer: with special emphasis on tumor heterogeneity
Pathak S (1990) Cancer Metast. Rev. 8, 299

Modification of Class-I major histocompatibility complex expression and tumor progression [In French; English abstract]
Paul P (1990) M/S Med. Sci. 6, 449

The role of redox-active metals in the mechanism of action of bleomycin
Petering D H, Byrnes R W & Anthohne W E (1990) Chem-Biol. Int. 73, 133

The ESTRO Regaud Lecture: Inherent radiosensitivity of tumor and normal tissue cells as a predictor of human tumor response
Peters L J (1990) Radiother. Oncol. 17, 177

Genetic Markers of Haematological Malignancy
Pinkerton P H & others (1990) Tumor Biol. 11, Suppl. 1, 1-78

Amino acid metabolism in human cancer cachexia
Pisters P W T & Brennan M F (1990) Annu Rev Nutr. 10, 107
Interferons: a new class of tumor suppressor genes?
Pitha P M (1990) *Cancer Cells*, 2, 215

Altered hepatic foci: their role in murine hepatocarcinogenesis
Pitot H C (1990) *Annu. Rev. Pharmacol. Toxicol.* 30, 465-500

The significance of phenotyping leukemias using monoclonal antibodies
Pombo-de-Oliveira M S & Tabak D G (1990) *Braz. J. Med. Biol Res.* 33, 763

Inherited predisposition to cancer
Ponder B A J (1990) *Trends Genet.* 6, 213

Breast Cancer — Critical Overviews of Natural History, Etiology, Molecular Biology and Screening by Mammography
Ponten J & others (1990) *Int. J. Cancer*, Suppl. 5, 1-76

New trends in photobiology: The possible role of ionic species in selective biodistribution of photosensitizing agents toward neoplastic tissue
Pottier R & Kennedy J C (1990) *J. Photochem Photobiol. B-Biol.* 8, 1

Studies of human breast cancer metastasis using nude mice
Price J E & Zhang R D (1990) *Cancer Metast. Rev.* 8, 285

Biology and clinical significance of cytogenic abnormalities in childhood acute lymphoblastic leukemia
Pui C H, Crist W M & Look A T (1990) *Blood.* 76, 1449

Anticancer and antiviral activities in Indian medicinal plants: a review
Rastogi R P & Dhawan B N (1990) *Drug Dev. Res.* 19, 1

Past and revised risk estimates for cancer induced by irradiation and their influence on dose limits
Richardson R B (1990) *Br. J. Radiol.* 63, 235

The p52 gene, mRNA, and protein: a potential marker for human breast cancer
Rio M C & Chambon P (1990) *Cancer Cells*, 2, 269

Role of an analogue of parathyroid hormone in the pathogenesis of malignant hypercalcemia [In French; English abstract]
Rizzoli R & others (1990) *Pathol. Biol.* 38, 656

Suramin: prototype of a new generation of antitumor compounds
Rocca R V la, Stein C A & Myers C E (1990) *Cancer Cells*, 2, 106

Cathespin-D in breast cancer — from molecular and cellular biology to clinical applications
Rocheforot H, Capony F & Garcia M (1990) *Cancer Cell Mon. Rev.* 2, 383

Recent advances in hepatitis-B viruses and hepatocellular carcinoma [Meeting review]
Rogler C E (1990) *Cancer Cells*, 2, 366

Oral contraceptives and breast cancer — review and meta-analysis
Romieu I, Berlin J A & Colditz G (1990) *Cancer*, 66, 2253

Oncosuppression by paroviruses [In French; English abstract]
Rommelaere J (1990) *M/S Méd. Sci* 6, 534

Dietary fiber and breast cancer
Rose D P (1990) *Nutr. Cancer*, 13, 1

Molecular models for human chronic myelogenous leukemia
Rosenberg N (1990) *Cancer Cells*, 2, 284

Adaptive immunotherapy for cancer
Rosenberg S A (1990) *Sci. Am.* 262, No 5, 62

Bone remodeling and cancer [In French; English abstract]
Rossi J F (1990) *Pathol. Biol.* 38, 69

Molecular cytogenetics — Rivetta Stone for Understanding Cancer — Twenty-Ninth G.H.A Clowes Memorial Award Lecture
Rowley J D (1990) *Cancer Res.* 50, 3816

The significance of biological heterogeneity
Rubin H (1990) *Cancer Metast. Rev.* 9, 1

Reviews in genetic toxicology: Special issue. Cancerogenic risk by endogenous factors and processes
Rüdiger H W, ed. (1990) *Mutat. Res.* 238, 173

Transforming collaborations between ras and nuclear oncogenes
Ruley H E (1990) *Cancer Cells*, 2, 258

Ectopic hormone production by small cell undifferentiated carcinomas
Russell P J, O'Mara S M & Raghavan D (1990) *Mol. Cell. Endocrinol.* 71, 1

myc Genes and their deregulation in lung cancer
Saksela K (1990) *J. Cell. Biochem.* 42, 153

Transforming growth factor-a — an oncodevelopmental growth factor
Salomon D S, Kim N, Saeki T & Ciardiello F (1990) *Cancer Cell Mon. Rev.* 2, 389

Differential gene expression in human cancer cells resistant to cisplatin [Basic science review]
Scanlon K J, Kashani-Sabet M & Miyachi H (1989) *Cancer Invest.* 7, 581

The search for early genetic events in tumorigenesis: an amplification paradigm
Schindlmeier R T (1990) *Cancer Cells*, 2, 149

Tumor necrosis factor: an update on basic research and clinical applications
Schleuning M & Munker R (1990) *Klin. Wochenschr* 68, 841

Review: Proto-oncogene products: fine-tuned components of signal transduction pathways [Minireview]
Schönthal A (1990) *Cell. Signal.* 2, 215

Hepatitis-B virus related hepatocellular carcinoma — chronicity of infection — the opening to different pathways of malignant transformation
Schroeder C H & Zentgraf H (1990) *Biochim. Biophys. Acta.* 1032, 137

Amplification of cellular oncogenes: a predictor of clinical outcome in human cancer
Schwab M & Amler L C (1990) *Gene Chromosome Cancer*, 1, 181

Interleukin-6 in infection and cancer [Minireview]
Sehgal P B (1990) *Proc. Soc. Exp. Biol. Med.* 195, 183

Tumour necrosis factor—a cytokine with multiple biological activities
Semenzato G (1990) *Br. J. Cancer*, 61, 354

Lymphokine activated killer cells: a new approach to immunotherapy of cancer
Semenzato G (1990) *Leukemia*, 4, 71

Activation of prodrugs by antibody-enzyme conjugates: a new approach to cancer therapy
Senter P D (1990) *FASEB J.* 4, 188

The myb oncogene
Shen-Ong G L C (1990) *Biochim. Biophys. Acta.* 1032, 39

Carcinogenicity of polyhalogenated biphenyls: PCBs and PBBs
Silberhorn E M, Glauert H P & Robertson L W (1990) *Crit. Rev. Toxicol.* 20, 439

Basic Science Lecture — Advances in Cancer Research — Bench to bedside
Seminovitch L (1990) *J. Thorac. Cardiovasc. Surg.* 100, 874

Molecular changes in carbohydrate antigens associated with cancer
Singhal A & Hakomori S (1990) *BioEssays.* 12, 223
Free radicals and anticancer drug resistance — oxygen free radicals in the mechanisms of drug cytotoxicity and resistance by certain tumors
Sinha B K & Mimaunna F O (1990) Free Radical Biol. Med. 6, 567

The impact of Hodgkin's disease in the immune system
Silvnick D J, Ellis T M, Nawrocki J J & Fisher R I (1990) Seminars Oncol. 17, 673

Steroid/thyroid receptor-like proteins with oncogene potential - a review
Slyser M (1990) Cancer Res 50, 451

DNA topoisomerase dysfunction: a new goal for antitumor chemotherapy
Smith P J (1990) BioEssays, 12, 161

Metastasis suppressor genes
Sobel M E (1990) J. Natl. Cancer Inst. 82, 267

Amplification of butyrylcholinesterase and acetylcholinesterase genes in normal and tumor tissues, putative relationship to organophosphorous poisoning
Soresq H & Zakut H (1990) Pharmaceut Res. 7, 1

Chlorins as photosensitizers in biology and medicine
Spikes J D (1990) J Photochem Photobiol. B-Biol. 6, 259

Role of the extracellular matrix in carcinogenesis of the intestinal tract
[In German, English abstract]
Stallmach A, Schuppan D & Kiecken E O (1990) Disch Med Wochenschr. 115, 467

Human tumor suppressor genes
Stanbridge E J (1990) Annu Rev Genet. 24, 615

Cell-matrix interactions during tumor invasion
Starkey J R (1990) Cancer Metast Rev. 9, 113

2nd Conference on Research Directions for Human Relevance in Carcinogenesis — Mouse Liver Carcinogenesis. Mechanisms and Species Comparisons, University of Texas, M D Anderson Cancer Center, Science Park Research Division, Austin, TX, November 30-December 3, 1988
Stevenson D C & others, eds (1990) Prog Clin Biol Res. 311, 444 pp.

The unique aspects of acute promyelocytic leukemia
Stone R M & Mayer R J (1990) J. Clin Oncol 8, 1913

Oncogenes, protooncogenes, and signal transduction — toward a unified theory
Storms R W & Bose H R (1989) Advan. Virus Res 37, 1

Cytolytic effector cells against human tumors: distinguishing phenotypes and function
Stöter H & Lotze M T (1990) Cancer Cell Mol. Rev. 2, 44

Cellular immortalization — an essential step or merely a risk factor in DNA virus-induced transformation
Strauss M & Griffin B E (1990) Cancer Cells, 2, 360

Peptide mediators of hypercalcemia in malignancy
Strewler G J & Nissensohn R A (1990) Annu. Rev Med. 41, 35

Expression and functions of P-glycoprotein (mdr1) gene product in normal and malignant tissues
Sugawara I (1990) Acta Path. Jap. 40, 545

An experimental analysis of cancer: role of ras oncogenes in multistep carcinogenesis
Sukumar S (1990) Cancer Cells, 2, 100

Free radicals, antioxidant enzymes, and carcinogenesis
Sun Y (1990) Free Radical Biol. Med. 8, 583

Drug delivery systems for antitumor activation of macrophages
Tabata Y & Ikada Y (1990) Crit Rev Ther Drug Carr Syst 7, 121

1st International Interface of Clinical and Laboratory Responses to Anticancer Drugs, Villejuif, France, March 13-15, 1989
Tappiero H, Robert J & Lampidis T J, eds (1989) Colloq. INSERM, 191, 355 pp.

Immunotherapy and biological therapy of cancer — current clinical status and future prospects
Taylor C W & Hersh E M (1990) Immunopharmacol. Rev. 1, 89

A membrane anti- oncogene implied in colorectal cancer [Minireview]
Thomas G (1990) M/S Med. Sci. 6, 292

The structure, metabolism and function of the carcinoembryonic antigen gene family
Thomas P, Ioth C A, Saini K S, Jessup J M & Steele G (1990) Biochim. Biophys. Acta, 1032, 177

Growth factors and oncogenes in prostate cancer
Thompson T C (1990) Cancer Cells, 2, 345

How to kill cancer cells: membranes and cell signaling as targets in cancer chemotherapy
Trifunovic R & Hickman J A (1990) Cancer Cells, 2, 95

Recent progresses in toxological risk evaluation of chemical carcinogens [In French, English abstract]
Truhaut R (1990) J. Pharm Belg. 45, 131

The undercoat of adherent junctions, a key specialized structure in organogenesis and carcinogenesis [Minireview]
Tsukita Sh, Tsukita Sa & Nagafuchi A (1990) Cell Struct Funct. 15, 7

Chromosomal translocations in lymphoid neoplasia — a reappraisal of the recombinase model
Tycko B & Sklar J (1990) Cancer Cells, 2, 1

Tumorigenesis by slow-transforming retroviruses — an update
Vanholuizen M & Berns A (1990) Biochim. Biophys. Acta, 1032, 213

Retroviruses and oncogenes, 1
Varmus H E (1990) Angew. Chem. 29, 707

Nobel Lecture: Retroviruses and oncogene-1
Varmus H E (1990) Bioch. Rep 10, 413

Antineoplastic activity of the combination of interferon and cytotoxic agents against experimental and human malignancies — a review
Wadler S & Schwartz E L (1990) Cancer Res. 50, 3473

Assessment of clonality in human tumors — a review
Wamscoat J S & Fey M F (1990) Cancer Res. 50, 1355

Potential use of α-glucaric acid derivatives in cancer prevention
Walaszek Z (1990) Cancer Lett. 54, 1-8

Chromosome analysis of solid tumors and its place in clinical practice and research [In German, English abstract]
Walter T A & Housfeld D K (1990) Disch Med Wochenschr. 115, 708

Glutathione-S-transferases — role in alkylating agent resistance and possible target for modulation chemotherapy
Waxman D J (1990) Cancer Res. 50, 6449

Growth factors and pituitary tumors [Brief review]
Webster J, Ham J, Bevan J S & Scanlon M F (1989) Trends Endocr. Metabol. 1, 95

The retinoblastoma gene and cell growth control
Weinberg R A (1990) Trends Biochem. Sci. 15, 100
Inflammation and cancer — role of phagocyte-generated oxidants in carcinogenesis
Weitzman S A & Gordon L I (1990) Blood, 76, 655

Biology of small cell lung cancer: an overview
Weynants P, Humblet Y, Canon J L & Symann M (1990) Eur. Resp. J. 3, 699

Macrophages and cancer
Whitworth P W, Pak C C, Fagojo J, Kleinerman F S & Fidler I J (1990) Cancer Metast. Rev. 8, 319

Vitamin A and lung cancer
Willett W C (1990) Nutr. Rev. 48, 201

Cellular mechanisms of tumor rejection in rats
Yamaki T, Uede T & Kikuchi K (1990) Natur. Immun. Cell Growth Regul. 9, 1

Immunoregulatory cell dysfunction in chronic B-cell leukemias
Zaknoen S L & Kay N E (1990) Blood Rev. 4, 165

Proto-oncogenes in cell differentiation
Zelenka P S (1990) BioEssays, 12, 22

44-2C Cells: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]
Zveitin F N (1989) Trends Endocrinol. Metab. 1, 107

A model for tumor cell killing by topoisomerase poisons
Zhang H, Darpa P & Liu L F (1990) Cancer Cells, 2, 23

Hypocrellins and their use in photosensitization
Zhenjun D & Lown J W (1990) Photochem. Photobiol. 52, 609-616

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See also: POLYSACCHARIDES

Complexes of metal cations with carbohydrates in solution
Asgyl S J (1989) Advan. Carbohydr. Chem. Biochem. 47, 1

Molecular mechanisms of sugar transport across mammalian and microbial cell membranes
Baldwin S A (1990) Biotechnol. Appl. Biochem. 12, 512

Regulation of carbohydrate metabolism by glucose 1,6-bisphosphate in extrahapatic tissues; comparison with fructose 2,6-bisphosphate [Mini-review]
Beitner R (1990) Int. J. Biochem. 22, 553

Carbohydrate ligands of the IEC cell adhesion molecules [Mini-review]
Brandley B K, Swiedler S J & Robbins P W (1990) Cell, 63, 861

Soluble galactoside-binding vertebrate lectins — a protein family with common properties [Mini-review]
Caron M, Bladics D & Joubert R (1990) Int. J. Biochem. 22, 1379

Facilitated diffusion of glucose
Carruthers A (1990) Physical. Rev. 70, 1135

Defining hypoxia: a systems view of VO2, glycolysis, energetics, and intracellular pH [Brief review]
Connett J R, Honig C R, Gayeski T E J & Brooks G A (1990) J. Appl. Physiol. 68, 833

Oligosaccharide synthesis by enzymatic transglycosylatlon
Cote G L & Tao B Y (1990) Glycoconjugat. J. 7, 145

Hereditary fructose intolerance [Mini-review]
Cross N C P & Cox T M (1990) Int. J. Biochem. 22, 685

C-13-nuclear magnetic resonance — spectral studies of the interactions of metal ions with carbohydrates — use of relaxation probes
Dill K & Carter R D (1989) Advan. Carbohydr. Chem. Biochem. 47, 125

Do carbohydrate antigens stimulate human T cells?
Emrich F (1990) APIMIS, 98, 1

Complex carbohydrates, Pt F
Ginsberg V, ed. (1989) Methods Enzymol. 179, 639 pp.

On the carbohydrate binding specificity of lectins — the game is never over [Mini-review]
Goldstein I J (1990) Ind. J. Biochem. Biophys. 27, 368

Facilitative glucose transporters — an expanding family
Gould G W & Bell G I (1990) Trends Biochem. Sci 15, 18

The genes of hepatic glucose metabolism [Mini-review]
Graemer D & Pilks S (1990) J. Biol. Chem. 265, 10173

Type-specific carbohydrate antigens of pathogenic bacteria. 1. Enterobacteriaceae
Griffiths A J & Davies D B (1990) Carbohydrate Polymers, 14, 241

Metabolic effects of dietary fructose
Hailfrisch J (1990) FEBS J. 4, 2652

Proton-linked sugar transport systems in bacteria [Mini-review]
Hennder J B F (1990) J. Bioenerget Biomerkr. 22, 525

Recommendations for adopting standard conditions and analytical procedures in the measurement of fructosamine concentration
Hill R P, Hindle E J, Howey J E A, Leenon M & Lloyd D R (1990) Ann. Clin. Biochem. 27, 413

Galactose disorders an overview
Holton J B (1990) J. Inher. Metab. Dis 13, 476

Carbohydrates and carbohydrate-binding proteins in the nervous system
Jessell T M, Hynes M A & Dodd J (1990) Annu. Rev. Neurosci. 13, 227

β-Galactoside transport in E. colt: a functional dissection of lac permease
Kaback H R, Bibi E & Roepe P D (1990) Trends Biochem. Sci 15, 309

Regulation of glucose-transporter gene expression in vitro and in vivo
Kahn B B & Flier J S (1990) Diabetes Care, 13, 548

Glycoconjugates and cell surface interactions in pre-implantation and peri-implantation mammalian embryonic development
Kimber S J (1990) Int Rev. Cytol. 120, 53-167

Membrane potentials and the mechanism of intestinal Na+-dependent sugar transport
Kimich G A (1990) J Membr. Biol. 114, 1

Towards an understanding of the structural basis of ‘forbidden’ transport pathways in the Escherichia telltactose carrier: mutations probing the energy barriers to uncoupled transport [Microreview]
King S C & Wilson T H (1990) Mol. Microbioi. 4, 1433

Lactography as an approach to monitor glucose metabolism on-line in brain and muscle [Mini-review]
Korf J & Deboer J (1990) Int. J Biochem. 22, 1371

Insulin-receptor tyrosine kinase and glucose transport
Lane M D & others (1990) Diabetes Care, 13, 565

Glucose metabolism, 2nd messengers and insulin secretion [Mini-review]
Lavochk S G (1990) Life Sci. 47, 2307

Carbohydrate analysis of glycoproteins: a review
Lee K B, Loganathan D, Merchant Z M & Linhardt R J (1990) Appl. Biochem. Biotechnol. 23, 53

High-performance anion-exchange chromatography for carbohydrate analysis
Lee Y C (1990) Anal. Biochem. 189, 151
Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions
Lepers A, Cacan R & Verbert A (1990) Biochimie, 72, 1

Conformational analysis of carbohydrate chains of glycoconjugates
[In Russian: English abstract]
Lipkind G M (1990) Bioorg. Khim 16, 5

Glutaminolysis and glycolysis interactions in proliferant cells
[Minireview]
Medina M A & Castro I N de (1990) Int J. Biochem. 22, 681

Carbohydrates and fertilization in animals
Miller D J & Ax R L (1990) Mol Reprod Dev. 26, 184

Natural C-glycoside antibiotics and approaches to determining structure of their carbohydrate moiety [In Russian; English abstract]
Murenets N V (1990) Antibiot. Khimoterap 35, No.6, 47

Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part I)
O’Byrne S & Feely J (1990) Drugs, 40, 6–18

Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part II)
O’Byrne S & Feely J (1990) Drugs, 40, 203–219

Dietary carbohydrate source and copper bioavailability
Odel B L (1990) Nutr. Rev. 48, 425

Expression and biosynthesis of ABH-related carbohydrate antigens in normal and pathologic human urothelium
Orntoft T F (1990) APMIS, 98, Suppl. 17, 5–34

Immobihzation of glycoconjugates by their oligosaccharides - use of hydrazido-derivatized matrices
Oshannessy D J & Wilchek M (1990) Anal. Biochem. 191, 1

Muramic acid as a glycoconjugate component in Mollusca
Gastropoda [Minireview]
Ottaviani E, Bolognani Fantin A M, & Bolognani L (1990) Comp. Biochem. Physiol. Pt B, 96, 627–632

Magnesium and glucose homeostasis
Paolillo G, Scheen A, Donofrio F & Lefebvre P (1990) Diabetologia, 33, 511

Fructose-2,6-bisphosphate in control of hepatic gluconeogenesis — from metabolites to molecular genetics
Pilkis S J, Elmaghrabi M R & Claus T H (1990) Diabetes Care, 13, 582

The carbohydrate- and lipid-containing cell wall of mycobacteria, phenolic glycolipids: structure and immunological properties
Pezzo G (1990) Crit. Rev Microbiol. 17, 395

Glucose homeostasis and endogenous opioid peptides [Therapeutic review]
Ramabhadran K & Bansinath M (1990) Int J. Clin Pharmacol. Ther. Toxircol 28, 89

Signal transduction by the bacterial phosphotransferase system. Diauxie and the err gene (J. Monod revisited) [Minireview]
Roseman S & Meadow N D (1990) J. Biol. Chem. 265, 2993–2996

Stable isotopically-enriched D-glucose: strategies to introduce carbon, hydrogen and oxygen isotopes at various sites
Serianni A S, Vuormen T & Bondo P B (1990) J. Carbohydr. Chem. 9, 513

Molecular changes in carbohydrate antigens associated with cancer
Singhal A & Hakomori S (1990) BioEssays, 12, 373

Fructose-2,6-bisphosphate as a regulatory molecule in plants
Stitt M (1990) Annu. Rev. Plant Physiol Plant Mol. Biol. 41, 153–185

The dynamics of glycan–protein interactions in immunoglobulins. Results of spin label studies
Sykulev Y K, Nezlin R S (1990) Glycoconjugate J. 7, 163

Immunocytochemical localization of the intracellular sites of sialylation in rat hepatocytes and colonic epithelial cells [Robert Feulgen Prize Laureates]
Taatsjes D J (1990) Acta Histochem Suppl 40, 9

Plasmodium and the infected erythrocyte: glucose transport in malaria infected erythrocytes
Tanabe K (1990) Parasitol. Today, 6, 225

The thermal decomposition of carbohydrates. 1. The decomposition of mono-saccharides, di-saccharides and oligo-saccharides
Tomask P, Palasinski M & Wiejak S (1989) Advan. Carbohydr. Chem. Biochem, 47, 203

The thermal decomposition of carbohydrates. 2. The decomposition of starch
Tomask P, Wiejak S & Palasinski M (1989) Advan. Carbohydr. Chem. Biochem, 47, 239

Anomeric and EXO-anomeric effects in carbohydrate chemistry
Tvaroska I & Bleha T (1989) Advan. Carbohydr. Chem. Biochem 47, 45

The pyrenoid is the site of ribulose 1,5-bisphosphate carboxylase oxygenase accumulation in the Hornwort (Bryophyta, Anthocerotae) chloroplast
Vaughn K C, Campbell E O, Hasegawa J, Owen H A & Renzaglia K S (1990) Prototplasma, 156, 17

Mutual inhibition of sugars and amino acid intestinal absorption [Minireview]
Visnukull M P (1990) Comp. Biochem. Physiol. Pt A, 93, 17

Induction of a phosphomannosyl binding lectin activity in Guardia Ward H D, Kacsoh G T & Pereira M E (1990) BioEssays, 12, 211

Symposium on Glycobiology, Frisco, CO, January 14–20, 1989
Welpip J K, Jaworski E, eds (1990) UCLA Symp. Mol. Cell Biol NS. 111, 206 pp.

Glucose regulation of insulin gene expression
Welsh M (1989) Diabete Metab. 15, 367

Glucose homeostasis and hypothalamic-pituitary-adrenocortical axis during development in rats
Widmaier E P (1990) Am. J. Physiol. 259, No 5. Pt 1, E601

Regulation of sugar and ethanol metabolism in Saccharomyces cerevisiae
Wills C (1990) Crit Rev Biochem. Mol. Biol. 25, 245

The fructosamine assay in diagnosis and control of diabetes mellitus. Scientific evidence for its clinical usefulness?
Windeler J & Koberheng J (1990) J. Clin. Chem. Clin. Biochem 28, 129

Acute and chronic effects of hyperglycaemia on glucose metabolism
Yki-Jarvinen H (1990) Diabetologia, 33, 579

Enhancement of hepatic glycoenzymes by gluconeogenic precursors. substrate flux or metabolic control? [Editorial review]
Youn J H & Bergman R N (1990) Am. J. Physiol 258, No 6. Pt 1, E899

Regular review: Impaired glucose tolerance
Yudkin J.S., Alberti K G M M, McLarty D G & Swai A B M (1990) Br Med J. 301, 397

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See: LIPIDS
CARTILAGE

Precartilage condensation during skeletal pattern formation
Shinomura T & Kimata K (1990) Dev. Growth Differentiation, 32, 243

CATECHOLAMINES AND RECEPTORS

β-Adrenoceptor blockers and calcium antagonists in the prophylaxis and treatment of migraine
Anderson K E & Vinge E (1990) Drugs, 59, 358-373

Function of myocardial α-adrenoceptors [Minireview]
Bentley B G (1990) Life Sci. 40, 743

Visual deficits related to dopamine deficiency in experimental animals and Parkinson's disease patients
Bodis-Wollner I (1990) Trends Neurosci. 13, 296

Minireview: D-2 dopamine autoreceptor selective drugs; do they really exist?
Drukarch B & Stoof J C (1990) Life Sci. 47, 361

The interactions of the beta-haloethyl benzylamines, xylamine and D-4 with catecholaminergic neurons
Studley M W, Howard B D & Uso A K (1990) Annu. Rev. Pharmacol. Toxicol. 30, 387-403

Overflow of catecholamine neurotransmitters to the circulation — source, fate, and functions
Eisler M & others (1990) Physiol Rev. 70, 963

Central α-2 adrenoceptors regulate central and peripheral functions
Fornai F, Blandizzi C & Del Tacca M (1990) Pharmacol Res. 22, 541

Modulation of vasopressin antidiuretic action by renal α2-adrenoceptors [Editorial review]
Gerli M (1980) Am J Physiol 259, No 1, Pr 2, F1

Dopamine in gastrointestinal disease
Glavin G B & Szabo S (1990) Digest. Dis. Sci. 35, 1153

Turning off the signal: desensitization of β-adrenergic receptor function
Hausdorff W P, Caron M G & Lefkowitz R J (1990) FASEB J 4, 2881

Dopamine uptake: a review of progress in the last decade
Horn A S (1990) Progr. Neurobiol. 34, 387

Asthma: a disorder of adrenergic receptors!
Insel P A & Wasserman S I (1990) FASEB J 4, 2732

Catecholamine cardiomyopathy — review and analysis of pathogenetic mechanisms
Jiang J P & Downing S E (1990) Yale J. Biol. Med. 63, 581

Tryptamine may couple dopaminergic and serotonergic transmission in the brain [Minireview]
Juorio A V & Paterson I A (1990) Gen. Pharmacol. 21, 613

α2-Adrenergic receptors and calcium: α2-receptor blockade in vascular smooth muscle as an approach to the treatment of hypertension
Lee J Y & DeBernardis J F (1990) Methods Findings Exp. Clin. Pharmacol. 12, 213

Role of phosphorvlation in desensitization of the β-adrenoceptor
Lefkowitz R J, Hausdorff W P & Caron M G (1990) Trends Pharmacol. Sci. 11, 190

PET studies of the dopaminergic system
Lenzi G L, Perani D & Fazio F (1990) J. Nucl. Med. Allied Sci. 34, 1

11th International Congress of Pharmacology, 8–10 July 1990, Essen, Germany — Significance of Peripheral Dopaminergic System in Cardiovascular and Renal Function
Lokhandwala M F & others (1990) J. Autonem. Pharmacol. 10, Suppl. 1, S3-S123

Cardiovascular dopamine receptors: role of renal dopamine and dopamine receptors in sodium excretion [Minireview]
Lokhandwala M F & Hegde S S (1990) Pharmacol. Toxicol. 66, 237

Ontogeny of fetal adenylate cyclase: mechanisms for regulation of beta adrenergic receptors
Maler J A, Roberts J M & Jacobs M M (1989) J. Dev. Physiol. 12, 249-261

Aging — hypothalamic catecholamines, neuroendocrine-immune interactions, and dietary restriction [Minireview]
Meites J (1990) Proc. Soc. Exp. Biol. Med. 195, 304

Peripheral adrenergic receptors in hypertension [Brief review]
Michel M C, Brodde O-E, Insel P A (1990) Hypertension, 16, 107

HPLC with electrochemical detection of catecholamines in human plasma. A mini-review
Musso N K, Vergassola C, Pende A & Lotti G (1990) J. Liq. Chromatogr. 13, 1075

Dopamine receptor subtypes and arousal
Ongini E & Longo V G (1989) Int. Rev. Neurobiol. 31, 239

2-Phenylethylamine — a modulator of catecholamine transmission in the mammalian central nervous system [Short review]
Paterson I A, Juorio A V & Boulton A A (1990) J. Neurochem. 55, 1827

A review of the clinical pharmacokinetics and metabolism of the alpha-1-adrenoceptor antagonist indoramin
Pierce D M (1990) Xenobiotica, 20, 1357

Kole of genotype in the adaptation of the brain dopamine system to stress
Pugliisiallegra S, Kempf F & Cahih S (1990) Neurosci. Biobehav. Rev. 14, 523

Alpha-1-adrenergic and beta-adrenergic receptors in brown adipose tissue and the adrenergic regulation of thyroxine 5'-deiodinase
Raasmajja A (1990) Acta Physiol. Scand. 139, Suppl.590, 7-61

Adrenergic receptors: models for regulation of signal transduction processes [Brief review]
Raymond J R, Hnatowich M, Lefkowitz R J & Caron M G (1990) Hypertension, 15, 119

Retinal dopamine D1 and D2 receptors: characterization by binding or pharmacological studies and physiological functions
Schorderet M & Nowak J Z (1990) Cell. Mol. Neurobiol. 10, 303

PET imaging of dopamine receptors in human basal ganglia: relevance to mental illness
Seccullal O (1990) Trends Neurosci. 13, 302

Dopamine receptors and transporters in Parkinson's disease and schizophrenia
Seeman P & Nizmk H B (1990) FASEB J. 4, 2737

The third-dopamine receptor — a new target for neuroleptics [In French; English abstract] [Minireview]
Sokoloff P, Giros B, Martres M P & Schwartz J C (1990) M/S Méd. Sci. 6, 800

Aspects of the structure of the D2 dopamine receptor
Strange P G (1990) Trends Neurosci. 13, 373

β-adrenoceptor partial agonists: a renaissance in cardiovascular therapy?
Waller D G (1990) Br. J. Clin. Pharmacol. 30, 157
The gap junction family — structure, function and chemistry
Dermietzel R, Hwang T K & Spray D S (1990) Anat. Embryol. 182, 517

Regulation of hemopoiesis by bone marrow stromal cells and their products
Dorshkind K (1990) Annu. Rev. Immunol. 8, 111

Properties of the cell surfaces of pathogenic bacteria
Doyle R J & Sonnenfeld E M (1980) Int. Rev. Cytol. 118, 33

Cell cycle control in eukaryotes: molecular mechanisms of cdc2 activation
Draetta G (1990) Trends Biochem. Sci. 15, 378

Genetic functions and cell-cell interactions in the pheromone-inducible plasmid transfer system of Enterococcus faecalis
[Microreview]
Dunn G M (1990) Mol. Microbiol. 4, 689

Invited review: Multicell spheroids as a model for cell kinetic studies
Dundor R E (1990) Cell Tissue Kinet. 22, 141

1989 Douglas Lea Memorial Lecture. The cell dose concept: potential application in radiation protection
Feinendegen L E (1990) Phys. Med. Biol. 35, 597

Endothelial Cells and Angiogenic Growth Factors in Cancer Growth and Metastasis
Folkman J & others (1990) Cancer Metast. Rev. 9, 1-27

From the structure to the function of villin, an actin-binding protein of the brush border
Frederich E, Pringault E, Arpin M & Louvard D (1990) BioEssays, 12, 403

Defensins
Gantz T, Selsted M E & Lehrer R I (1990) Eur. J. Haematol. 44, 1-8

Cell fate in early mammalian development [In French]
Gardner R L (1990) Recherche, 21, 1476

Photosensitization of cultured cells and viruses by pyrene lipids
[Minireview]
Gatt S, Dinur T, Abourabia S, Kotler M & Fibach E (1990) Ind. J. Biochem. Biophys. 27, 359

Insulin-like growth factors and thecal-granulosa-cell function
Gaetello F, Morretti-Rojas L, Rojas F J & Asoh R H (1990) Hum. Reprod. 5, 785

The tissue matrix — cell dynamics and hormone action
Gotzenberg R H, Pienta K J & Coffey D S (1990) Endocrin. Rev. 11, 399

Salmonella virulence — new clues to intramacrophage survival
Grossman E A & Saier M H (1990) Trends Biochem. Sci. 15, 30

Phagocytosis of Legionella pneumophila
Halablab M A, Richards L & Bazin M J (1990) J. Med. Microbiol. 33, 75

Astrocytes in neurotransmission — a review
Hansson E & Ronnback L (1990) Cell Mol. Biol. 36, 487

Structure of the integrin VLA-4 and its cell-cell and cell-matrix adhesion functions
Hemler M E, Elices M J, Parker C & Takada Y (1990) Immunol. Rev 114, 45

Mismatch repair in mammalian cells
Heywood L A & Burke J F (1990) BioEssays, 12, 473

Electrotransfection of plant protoplasts with viral nucleic acids
Hibi I (1989) Advan. Virus Res. 37, 329

Plant protoplast fusion by electroporation
Hibi T (1989) Advan. Cell Culture, 7, 147

Cell biomechanics — a brief overview
Hochmuth R M (1990) J. Biomech. Eng. 112, 233

Vitronectin receptor: tissue specific expression or adaptation to culture?
Horton M (1990) Int. J. Exp. Path. 71, 741

Evasive strategies of trophoblast cells: selective expression of membrane antigens
Hunt I S & Hsi R-I (1990) Am. J Reprod Immunol. 23, 57

Association of acetylcholinesterase with the cell surface [Topical review]
Inestrosa N C & Perelman A (1990) J. Membr. Biol. 118, 1

The mast cell system in reproductive toxicology
Ionov I D (1990) Reprod. Toxicol. 4, 251

Calcium oscillations in electrically non-excitable cells [Minireview]
Jacob R (1990) Biochim. Biophys. Acta. 1052, 427

Microtubules, membrane traffic, and cell organization [Minireview]
Kelly R B (1990) Cell, 61, 5-7

Cell-cell repulsion: clues from the growth cone? [Minireview]
Keynes R J & Cook G (1990) Cell, 62, 609-610

Mechanisms of dendritic cell function
Küng P D & Katz D R (1990) Immunol. Today, 11, 206

Macrophages in HIV infection. Symposium organized under the Franco-German Agreement for Cooperation in AIDS Research, Frankfurt, FRG, May 5-6, 1989
Kirn A & Stutte H J, eds (1990) Res. Viral. 141, 129

The neutrophil and leukotrienes — role in health and disease
König W & others (1990) Eicosanoids, 3, 1

Extracellular matrix [Minireview]
Labat-Robert J, Bihari-Varga M & Robert L (1990) FEBS Lett. 268, 386-393

Assembly of the cell nucleus
Laskey R A & Lewu G H (1990) Trends Genet. 6, 406

Coordinate interactions of cyclic nucleotide and phospholipid metabolizing pathways in calcium-dependent cellular processes
Laychock S G (1989) Curr. Top. Cell Regul. 30, 203

International Meeting on Biomembranes and Nutrition: Nutrients Affecting Lipid Composition and Properties of Cell Membranes, Paris, France, June 12-14, 1989
Leger C L & Berezat G, eds (1989) Colloq. INSERM, 195, 575 pp.

The use of cell lines in neurobiology
Lendahl U & McKay R D G (1990) Trends Neurosci. 13, 132

The recognition event between virus and host cell receptor — a target for antiviral agents
Lentz T L (1990) J. Gen. Virol. 71, 751

Ion channels and cell volume regulation — chaos in an organized system
Lewis S A & Donaldson P (1990) News Physiol. Sci. 5, 112

The architecture of bone marrow cell populations [Concise review]
Lord B I (1990) Int. J. Cell Cloning, 8, 317

Surface-induced swarmer cell differentiation of Vibrio parahaemolyticus [MicroReview]
McCartier L & Silverman M (1990) Mol. Microbiol. 4, 1057

Colonizing-forms of extracts with high proliferative potential (HPP-CFC) [Concise review]
McNiece I K, Bertocchi F, Kriegler A B & Quesenberry P J (1990) Int. J Cell Cloning, 8, 146

To understand function, study structure [Minireview]
Maizels N (1990) Cell, 60, 887-889
Macrophage-parasite interactions in Leishmania infections

Mauel J (1990) J Leukocyte Biol. 47, 187

Terminally differentiating epithelial tissues in primary explant culture: a model of growth and development

Merchant D J (1990) In Vitro, 26, 543

The structure of mutation in mammalian cells

Meuth M (1990) Biochim. Biophys. Acta, 1032, 1

Retrovirus packaging cells

Miller A D (1990) Hum. Gene Ther. 1, 5

Cellular interactions in metastasis

Miller F R & Heppner G H (1990) Cancer Metast. Rev. 9, 21

Role of the cell wall hydrosoluble polysaccharides in the physicochemical behaviour of the flax fibres — application to an enzymatic retting — review [In French; English abstract]

Morvan C, Jauneau A, Voreux H, Morvan O & Demarty M (1990) C R Soc Biol. 184, 18

Cell-cycle aspects of growth and maturation of mammalian oocytes

Motlik J & Kubelka M (1990) Mol. Reprod. Dev. 27, 366

Universal control mechanism regulating onset of M-phase

Nurse P (1990) Nature, 344, 503–508

The 1990 Marjory Stephenson Prize Lecture: On fission

Nurse P (1990) J Gen. Microbiol. 136, 1921–1923

Cell-mediated killing: effector mechanisms and mediators

Ojcius D M & Young J D-E (1990) Annu Rev. Cell. Blol 6, 461

Leukocyte adhesion to endothelium in inflammation [Minireview]

Osborn L (1990) Cell, 62, 3–6

Vinculin

Otto J J (1990) Cell Motil. Cytoskel. 16, 1–6

Leukocyte-cell adhesion: A molecular process fundamental in leukocyte physiology

Patarroyo M & others (1990) Immunol. Rev. 114, 67

Cytogenetic abnormalities in cancer: with special emphasis on tumor heterogeneity

Pathak S (1990) Cancer Metas. Rev 8, 299

Control of cell fate in a vertebrate neurogenic lineage [Minireview]

Patterson P H (1990) Cell, 62, 1035–1038

Drug induced agranulocytosis peripheral destruction of polymorphonuclear leukocytes and their marrow precursors

Pisciotta A V (1990) Blood Rev. 4, 226

The role of endothelial cells in inflammation [Overview]

Pober J S & Cotran R S (1990) Transplantation, 50, 537

The carbohydrate- and lipid-containing cell wall of mycobacteria, phenolic glycolipids: structure and immunological properties

Puzo G (1990) Crit. Rev. Microbial. 17, 305

Stem cell potential of ductular and periductular cells in the adult rat pancreas

Rao M S, Yeldandi A V & Reddy J K (1990) Cell Differentiation Dev. 29, 155

Granulocyte-macrophage colony-stimulating factor: pleiotropic cytokine with potential clinical usefulness

Ruef C & Coleman D L (1990) Rev. Infect. Dis. 12, 41

Desmosomes and hemidesmosomes – constitutive molecular components

Schwarz M A, Owaribe K, Kartenbeck J & Franke W W (1990) Annu Rev Cell Biol 6, 461

Persistence of group A streptococci and biodegradation of their cell walls from the viewpoint of the immunopathogenesis of nonpurulent post streptococcal diseases [In Russian; English abstract]

Shikhman A R, Chernyakova A M & Brik J I (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No. 2, 74

Roles of adhesion molecules in T-cell recognition: Fundamental similarities between four integrins on resting human T cells (LFA-1, VLA-4, VLA-5, VLA-6) in expression, binding and costimulation

Shimizu Y, Sevenet G A van, Horgan K J & Shaw S (1990) Immunol. Rev 114, 109

Cellular mechanisms in hypertension and therapeutic implications in blacks

Shulman N B & others (1990) Cardiosvasc Drugs Ther 4, Suppl. 2, 315

Interactions between epithelial cells and T lymphocytes: role of adhesion molecules

Singer K H (1990) J. Leukocyte Biol. 48, 367

Cell-cell adhesion molecules in Dictyostelium

Siu C-H (1990) BioEssays, 12, 357

Scavenger functions of the liver endothelial cell

SmidtH B, Persoft H, Gustafson S & Laurent T C (1990) Biochem J. 266, 313–327

The hormone-induced regulation of contact-dependent cell-cell communication by phosphorylation

Stagg R B & Fletcher W H (1990) Endocr. Rev 11, 302

Role of the extracellular matrix in carcinogenesis of the intestinal tract [In German; English abstract]

Stammach A, Schuppah D & Riecken E O (1990) Dtsch Med. Wochenschr. 115, 467

Light scattering measurement in an arc lamp-based flow cytometer

Steen H B (1990) Cytometry, 11, 223

The Ayerst Award Lecture 1989. Biochemistry of natural freeze tolerance in animals: molecular adaptations and applications to cryopreservation

Stokey K B (1990) Biochem. Cell Biol 68, 687–698

How cells crawl

Stossel T P (1990) Am. Sci. 78, 408

Cytolytic effector cells against human tumors: distinguishing phenotypes and function

Stolte H & Lotze M T (1990) Cancer Cell. Mon Rev 2, 44

A review. Agitation effects on microbial cell–cell interactions

Stratford M & Wilson P D G (1990) Lett Appl Microbzol II, 1

Biology of bone endothelial cells

Streeter E A & Brandi M L (1990) Bone Mineral. 10, 85

Transdifferentiation of quiescent parenchymatous cells into tracheary elements

Sugiyama M & Komamine A (1990) Cell Differentiation Dev 31, 77

Drug delivery systems for antitumor activation of macrophages

Tabata Y & Ikada Y (1990) Crit Rev. Ther Drug Carr Syst. 7, 121

Folicular dendritic cells as accessory cells

Tew J G, Kosco M H, Burton G F & Szakal A K (1990) Immunol. Rev 117, 185

Endothelium-derived relaxing factor (EDRF)

Toda N & Okamura T (1990) Folia Pharmacol Jap 95, 295

How cells maintain stability

Todorov I N (1990) Sci Am. 263, No 6, 32–39

Failla Memorial Lecture. Time, cells and X rays. Temporal aspects of some responses of cultured cells to X irradiation

Tolmach L J (1990) Radiat. Res. 123, 119
Distribution and function of organized concentrations of actin filaments in mammalian spermatogetic cells and Sertoli cells
Vogl A W (1989) Int. Rev. Cytol. 119, 1

Reductive biotransformations of organic compounds by cells or enzymes of yeast
Ward O P & Young C S (1990) Enzyme Microb. Technol. 12, 482

The cell biology and pathogenic role of pulmonary intravascular macrophages
Warner A E & Brain J D (1990) Am. J. Physiol. 258, No 2, Pt 1, L1

Abnormal regulation of ion channels in cystic fibrosis epithelia
Welsh M J (1990) FASEB J. 4, 2718

Macrophages and cancer
Whitworth P W, Pak C C, Esgro J, Kleinerman E S & Fidler I J (1990) Cancer Metast. Rev. 8, 319

Cell polarity and development of the first epithelium
Wiley L M, Kidder G M & Watson A J (1990) BioEssays, 12, 67

Biologically active analogues of the extracellular matrix — artifical skin and nerves
Yamas I V (1990) Angew. Chem. Int. Ed. 29, 20

Leucocyte cellular adhesion molecules
Yong K & Khwaja A (1990) Blood Rev. 4, 211

CHEMOTAXIS

Functions of the flagellar modes of rotation in bacterial motility and chemotaxis [Microreview]
Eisenbach M (1990) Mol. Microbiol. 4, 161

Human monocyte chemotactic protein-1 (MCP-1)
Leonard E J & Yoshimura T (1990) Immunol. Today, 11, 97

CHEMOTHERAPY

See: DRUGS AND DRUG METABOLISM

CHLORIDES

2nd World Congress of Neuroscience (Ibno): Chloride Channels and Carriers in Nerve, Muscle, and Glial Cells, Budapest, Hungary, August 1987
Alvarez-Zeefmans F J & Russell J M, eds (1990) Wld. Congr. Neurosci. 2, 425 pp.

Anticonvulsant steroids and the GABA/benzodiazepine receptor–chloride ionophore complex
Belelli D, Lan N C & Gee K W (1990) Neurosci. Biobehav. Rev. 14, 315

Chloride binding proteins: Mechanistic implications for the oxygen-evolving complex of photosystem II [Minireview]
Coleman W J (1990) Photosynthesis Res. 23, 1

Chloride channels of biological membranes
Fialkow F. & Petito A (1990) Biochim. Biophys. Acta, 1031, 247

The cystic fibrosis defect approached from different angles — new perspectives on the gene, the chloride channel, diagnosis and therapy
Halley D J & others (1990) Eur. J. Pediatr. 149, 670

The inhibitory glycine receptor — a ligand-gated chloride channel of the central nervous system
Langosch D, Becker C M & Betz H (1990) Eur. J. Biochem. 194, 1

Halorhodopsin, a light-driven electrogenic chloride-transport system
Lanyi J K (1990) Physiol Rev. 70, 319

Regulation of Cl and K’ channels in airway epithelium
McCann J D & Welsh M J (1990) Am. J. Physiol. 52, 115

Development and biological applications of chloride-sensitive fluorescent indicators
Verkman A S (1990) Am. J. Physiol. 259, No 3, Pt 1, C375

CHLOROPHYLL

Chlorophyll binding proteins with antenna function in higher plants and green algae
Bassi R, Rigoni F & Giacometti G M (1990) Photochem. Photobiol. 52, 1117

CHLOROPLASTS

Current views on chloroplast protein import and hypotheses on the origin of the transport mechanism [Minireview]
Archer E K & Keegstra K (1990) J. Bioenerget. Biomembr. 22, 789

Control of protein formation in chloroplasts
Boschetti A, Breidenbach E & Blattler R (1990) Plant Sci. 68, 131

On the translocation of proteins across the chloroplast envelope [Minireview]
Fluge U I (1990) J Bioenerget. Biomembr. 22, 769

Phylogenetic distribution of superoxide dismutase supports an endosymbiotic origin for chloroplasts and mitochondria [Minireview]
Greace S C (1990) Life Sci. 47, 1875

Rough thylakoids — translation on photosynthetic membranes
Jagendorf A T & Michaels A (1990) Plant Sci. 71, 137

Chloroplast ribosomal proteins and their genes
Mache R (1990) Plant Sci. 72, 1

Protein transport into and within chloroplasts
Smeenkens S, Weisbeek P & Robinson C (1990) Trends Biochem. Sci. 15, 73

The pyrenoid is the site of ribulose 1,5-bisphosphate carboxylase oxygenase accumulation in the Hornwort (Bryophyta, Anthocerotae) chloroplast
Vaughn K C, Campbell E O, Hasegawa J, Owen H A & Renzaglia K S (1990) Protoplasma, 156, 117

CHOLESTEROL

The interaction of prostaglandin-E1 with serum lipoproteins — possible role in cholesterol homeostasis
Bergelson 1. D (1990) Lipids, 25, 757

Evidence of association between plasma high-density lipoprotein cholesterol and risk factors for breast cancer
Boyd N F & McGuire V (1990) J. Nat. Cancer Inst. 82, 460

1990 Supelco Award Address: Kole of cholesterol in the microsomal membrane
Brenner R R (1990) Lipids, 25, 581

Oxidative stress and abnormal cholesterol metabolism in patients with adult respiratory distress syndrome
Cross C E & others (1990) J. Lab. Clin. Med. 115, 396

Regulation of cholesterol metabolism in the intestine
Field F J, Kam N T P & Mathur S N (1990) Gastroenterology, 99, 539

Interaction between cholesterol and phospholipid in hydrated bilayers
Finean J B (1990) Chem. Phys. Lipids, 54, 147
Regulation of the mevalonate pathway
Goldstein J L & Brown M S (1990) Nature, 343, 425

Cholesterol and coronary heart disease — future directions
Grundy S M (1990) J Am. Med. Assn 264, 3053

The LDL receptor locus in familial hypercholesterolemia —
mutable analysis of a membrane protein
Hoobs H H, Russell D W, Brown M S & Goldstein J L (1990) Annu
Rev Genet, 24, 133

Hep G2 cells as a resource for metabolic studies: lipoprotein,
cholesterol, and bile acids
Javitt N B (1990) FASEB J. 4, 161

26-Hydroxycholesterol: synthesis, metabolism, and biologic activities
Javitt N B (1990) J Lipid Res. 31, 1527

Hormonal regulation of cytochrome P450 enzymes, cholesterol side-
chain cleavage and 17α-hydroxylase/CYP17 in Leydig cells
[Minitreview]
Paync A (1990) Biol. Reprod, 42, 299

Biliary Cholesterol Transport and Precipitation: Proceedings of the
Workshop on Frontiers in Gallstone Formation - Warrenton,
Virginia, April 16–19, 1989
Strasberg S M & others (1990) Hepatology, 12, No 3. Pt. 2, Suppl,
1S–219S

Atherosclerosis and molecular pathology: mechanisms of cholesteryl
ester accumulation in foam cells and extracellular space of
atherosclerotic lesions
Takano T & Mineo C (1990) J. Pharmacobio-Dynam. 13, 385

CHROMATIN
Nucleoprotein structures initiating DNA replication, transcription,
and site-specific recombination [Minitreview]
Euchols H (1990) J. Biol. Chem. 265, 14697

Nucleosomes — regulators of transcription
Granstein M (1990) Trends Genet 6, 395

Protein-H1 — a role for chromatin structure in the regulation of
bacterial gene expression and virulence [Minitreview]
Higgins C F & others (1990) Mol Microbiol. 4, 707

Chromosome structure at interfaces between major chromatin types:
alpha- and beta-heterochromatin
Miklos G L G & Cotsell J N (1990) BioEssays, 12, 1

Imprinting a determined state into the chromatin of Drosophila
Paro R (1990) Trends Genet: 6, 416

DNA methylation and chromatin structure: a view from below
Selker E U (1990) Trends Biochem Sci 15, 105

The structure and assembly of active chromatin
Svaren J & Chalkley R (1990) Trends Genet, 6, 22

Potential genetic functions of tandem repeated DNA sequence blocks
in the human genome are based on a highly conserved "chromatin
folding code"
Vogt P (1990) Hum Genet 84, 301

Immunochemical approaches to the study of histone H1 and high
mobility group chromatin proteins
Zlatanova J S (1990) Mol. Cell Biochem 92, 1

CHROMATOGRAPHY
Size exclusion chromatography
Barth H G & Boyes B E (1990) Anal. Chem. 62, R381

Silica gel and carbon column packings for use in high-performance
liquid chromatography
Berek D & Novak I (1990) Chromatographia, 30, 582

Preparative supercritical fluid chromatography
Berger C & Perrut M (1990) J Chromatogr 505, 37

Graphitized carbon black — a unique adsorbent for gas
chromatography and related techniques
Bruner F, Crescentini G & Mangani F (1990) Chromatographia, 30,
565

Trends in the combination of high-performance liquid
chromatography and electroanalytical methods
Buchberger W (1990) Chromatographia, 30, 577

Gas chromatography
Clement R E, Onuska F I, Eiceman G A & Hill H H (1990) Anal
Chem. 62, R414

Gas chromatographic retention indices of monoterpenes and
sesquiterpenes on methyl silicone and Carbowax 20M phases
Davies N W (1990) J. Chromatogr. 503, 1

Liquid chromatography theory and methodology
Dorsey J G, Foley J P, Cooper W T, Barford R A & Barth H G
(1990) Anal Chem. 62, R324

Liquid chromatographic analysis of antiepileptic drugs — an overview
Fazio A, Perucca E & Pisani F (1990) J. Liq Chromatogr. 13, 3711

Environmental applications of ion chromatography
Frankenberger W T Jr, Mehr H C & Gjerde D T (1990) J
Chromatogr. 504, 211

Chromatographic determination of bile acids in biological fluids with
sensitive and selective detection [in Japanese; English abstract]
Goto J (1990) Yakugaku Zasshi, 110, 807

Separation of drug enantiomers by HPLC using chiral stationary
phases — a selective review
Gubitz G (1990) Chromatographia, 30, 555

9th International Symposium on HPLC of Proteins, Peptides and
Polynucleotides, Philadelphia, PA, November 6–8, 1989
Hearn M T W & others (1990) J. Chromatogr. 512, 1–433

Indirect spectrophotometric detection in reversed-phase HPLC —
applications in drug analysis [In French; English abstract]
Herné P (1990) J Pharm. Belg. 45, 151

Some aspects of capillary supercritical fluid chromatography
Janssen H-G & Cramers C A (1990) J Chromatogr. 505, 19

High-performance anion-exchange chromatography for carbohydrate
analysis
Lee Y C (1990) Anal. Biochem. 189, 151

The state of the art and prospects for application of ion
chromatography to pharmaceutical analysis (a review) [in Russian]
Listov S A, Pakhomov V P & Arzamastsev A P (1990) Khimiya
Zh. SSR, 24, 76

Review. Chromatographic and non-chromatographic assays of t-
carnitine family components
Marzo A, Cardace G, Monti N, Muck S & Martelli E A (1990) J
Chromatogr. Biomed. Appl. 327, 247

HPLC with electrochemical detection of catecholamines in human
plasma. A mini-review
Musso N R, Vergassola C, Pende A & Lotti G (1990) J Liq
Chromatogr. 13, 1075

Hydrazido-derivatized supports in affinity chromatography (Review)
O'Shannessy D J (1990) J. Chromatogr. 510, 13

The internal surface reverse phase. Concepts and applications
Perry J A (1990) J. Liq Chromatogr. 13, 1047
Packed columns in supercritical fluid chromatography
Petersen M (1990) J. Chromatogr. 505, 3

Chromatography and mass spectrometry — an overview
Schmid E R (1990) Chromatographia, 30, 573

Column liquid chromatography — equipment and instrumentation
Synovec R E, Johnson E L, Moore L K & Renn C N (1990) Anal. Chem. 62, R357

Coupling of supercritical fluid extraction with chromatographic techniques
Vamsi H, Chrevet J-P, Lingeman H, Jong C J de & Brinkman U A Th (1990) J. Chromatogr. 505, 45

13th International Symposium on Column Liquid Chromatography, Stockholm, June 25–30, 1989, Part I

Westerlund D & others (1990) J. Chromatogr. 506, May 11, 1

Liquid chromatographic methods validation for pharmaceutical products
Wilson T D (1990) J. Pharmaceut. Biomed. Anal. 8, 389

CHROMOSOMES

The possible role of Z DNA in chromosomal translocations
Arnheim N (1990) Cancer Cells, 2, 121

Puffs, genes, and hormones revisited [Minireview]
Ashburner M (1990) Cell, 61, 1–3

Genome rearrangement and genetic instability in Streptomyces spp [Minireview]
Birch A, Häusler A & Hütter R (1990) J. Bact. 172, 4138-4142

Telomeres: structure and synthesis [Minireview]
Blackburn E H (1990) J. Biol. Chem. 265, 5919

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]
Boeke J D (1990) Cell, 61, 193–195

Structural features of the HMG chromosomal proteins and their genes
Bustin M, Leh 1 D A & Landsman D (1990) Biochim. Biophys. Acta, 1049, 231

Genome structure and evolution of Naegleria and its relatives
Clark C G (1990) J. Protozool. 37, Suppl. 52

Evolution of SimuliforUs and the phylogeny of human chromosomes
Clemente I C, Ponsã M, Garcia M & Egozcue J (1990) Hum. Genet. 84, 493

The initiation of chromosomal DNA replication in eukaryotes
Diffl ey J F X & Stillman B (1990) Trends Genet. 6, 427

Gametocidal chromosomes and their induction of chromosome mutations in wheat
Endo T R (1990) Jap. J. Genet. 65, 135

Non-kinetochores transport phenomena, microtubule-chromosome associations, and force transmission in nuclear division
Fuge H (1990) Protoplasma. 158, 1

The human genome: a prospect for paediatrics
Gardiner R M (1990) Arch. Dis. Child. 65, 457

Studies on scaffold attachment sites and their relation to genome function
Gasser S M, Amati B B, Cardenas M E & Hofmann J F X (1989) Int. Rev. Cytol. 119, 57

Telomeres, telomerase and senescence
Greider C W (1990) BioEssays. 12, 363

Complex translocations, simple variant translocations and pH-negative cases in chronic myelogenous leukaemia
Hurel J L (1990) Hum. Genet. 85, 565

The evolution of heteromorphic sex chromosomes
Jablonska E & Lamb M J (1990) Biol. Rev. 65, 249

Organization of the bacterial chromosome
Krawiec S & Riley M (1990) Microbiol. Rev. 54, 502

Molecular analysis of chromosome abnormalities occurring in human T-cell malignancies
Larsen C J (1990) M/S Méd. Sci. 6, 344

Cyto genetic methods for the mouse: preparation of chromosomes, karyotyping, and in situ hybridization
Lee J J, Warburton D & Robertson E J (1990) Anal. Biochem. 189, 1

The initiation of meiotic chromosome pairing - the cytological view
Loidl J (1990) Genome. 33, 759

$100 protein and Down syndrome
Marks A & Allore R (1990) BioEssays. 12, 381

Chromosomal abnormalities in human breast cancer
Mars W M & Saunders G F (1990) Cancer Metast. Rev. 9, 35

Mutation and the Environment, Part B: Metabolism, Testing Methods, and Chromosomes. 5th International Conference on Environmental Mutagens, Case Western Reserve University, Cleveland, OH, July 10–15, 1989

Mendelsohn M L & Albertini R J, eds (1990) Progr. Clin. Biol. Res. 340, Pt. B, 496 pp.

Chromosome structure at interfaces between major chromatin types: alpha- and beta-heterochromatin
Miklos G L G & Cotsell J N (1990) BioEssays. 12, 1

Cis- and trans-acting factors involved in centromere function in Saccharomyces cerevisiae [Microreview]
Murphy M & Fitzgerald-Hayes M (1990) Mol. Microbiol. 4, 329

Trisomy 21 — Down Syndrome
Neri G & others (1990) Am. J. Med. Genet. Suppl. 7, 5-322

Philip Levine Award Lecture: Chromosome translocations and oncogenes in human lymphoid tumors
Nowell P C & Croce C M (1990) Am. J. Clin. Path. 94, 229

Molecular Genetics of Chromosome 21 and Down Syndrome: Sixth Annual Symposium of the National Down Syndrome Society, New York, NY, December 7–9, 1989

Patterson D & Epstein C J, eds (1990) Progr. Clin. Biol. Res. 360, 294 pp

Structure of the human centromere at metaphase
Pluta A I, Cooke C A & Earnshaw W C (1990) Trends Biochem. Sci 15, 181

Isolation of individual chromosomes and their use in the study of human and animal genomes [Brief review]
Poletaev A I (1989) Mol. Biol. Engl. Tr. 23, No 4, Pt 1, 713

Chromosome synopsis and genetic recombination — their roles in meiotic chromosome segregation
Roeder G S (1990) Trends Genet. 6, 385

Manipulating the mouse genome: implications for neurobiology
Rossant J (1990) Neuron. 4, 323-334

Yeast artificial chromosomes — tools for mapping and analysis of complex genomes
Schlessinger D (1990) Trends Genet. 6, 248

Chemically induced aneuploidy in higher plants
Sharma C B S R (1990) Mutagenesis, 5, 105

Special issue: The Functional Organization of Chromosomes and the Nucleus
Stewart A & others (1990) Trends Genet. 6, 377-433
Diagnostic molecular genetics of the fragile X
Sutherland G R & Mulley J C (1990) **Clin. Genet.** 37, 2

Chromosomal translocations in lymphoid neoplasia — a reappraisal of the recombinase model
Tycko B & Sklar J (1990) **Cancer Cells.** 2, 1

Potential genetic functions of tandem repeated DNA sequence blocks in the human genome are based on a highly conserved “chromatin folding code”
Vogt P (1990) **Hum. Genet.** 84, 301

Chromosome analysis of solid tumours and its place in clinical practice and research [In German; English abstract]
Walter T A & Hossfeld D K (1990) **Dtsch. Med. Wochenschr.** 115, 108

The human Y-chromosome and its role in sex determination [In French; English abstract]
Weissenbach J & Petit C (1990) **M/S Med Sci.** 6, 785

Centromeres of mammalian chromosomes
Willard H F (1990) **Trends Genet.** 6, 410

How does the end begin? Formation and maintenance of telomeres in ciliates and yeast
Zakian V A, Runge K & Wang S S (1990) **Trends Genet.** 6, 12

COLLAGEN

Collagen gene expression and tooth development. An overview
Andujar M B & Magloire H (1990) **J. Biol. Bucc.** 18, 117

Brittle bones — fragile molecules: disorders of collagen gene structure and expression
Byers P H (1990) **Trends Genet.** 6, 293

Genes for MiHC, TCR and Mls determine susceptibility to collagen induced arthritis
David C S (1990) **APMIS.** 98, 575

Type-II collagen autoimmunity in animals and provocations leading to arthritis
Holmdahl R & others (1990) **Immunol. Rev.** 118, 193

Autoimmunity to collagen-II and myelin basic protein — comparative studies in humans and rodents
Klareskog L & Olson Y (1990) **Immunol. Rev.** 118, 285

Extracellular matrix [Minireview]
Labat-Robert J, Bihari-Varga M & Robert L (1990) **FEBS Lett.** 268, 386–393

Biosynthesis of collagen crosslinks [Minireview]
Laat J A, Armstrong L G & Reiser K M (1990) **Int. J. Biochem.** 22, 559

Type-IV collagen, major component of basement membranes — current knowledge [In French; English abstract]
Mercier P & Ekindjian O G (1990) **Ann. Biol. Clin. Paris.** 48, 695

Mutations that alter the primary structure of type I collagen. The perils of a system for generating large structures by the principle of nucleated growth [Minireview]
Prockop D J (1990) **J. Biol. Chem.** 265, 15349

Complex and diversified regulatory programs control the expression of vertebrate collagen genes
Ramirez F & Liberto M Di (1990) **FASEB J.** 4, 1616

COMPLEMENT

See: IMMUNOLOGY AND IMMUNOCHEMISTRY

COMPUTERS

Nucleic acid sequence analysis software for microcomputers
Cannon G (1990) **Anal. Biochem.** 190, 147

Molecular evolution: computer analysis of protein and nucleic acid sequences
Doolittle R F, ed. (1990) **Methods Enzymol.** 183, 736 pp

CONNECTIVE TISSUE

Immunological features of diffuse connective tissue diseases
Burgio G R & Martini A (1990) **Eur. J. Pediatr.** 149, 224

Fibroblast growth factor and herpes simplex virus receptors [In French; English abstract]
Courtois Y (1990) **M/S Méd. Sci.** 6, 674

Endothelial, platelet and leukocyte interactions in ischemic heart disease — insights into potential mechanisms and their clinical relevance
Dinerman J L & Mehta J L (1990) **J. Am. Coll. Cardiol.** 16, 207

Heat-shock proteins in autoimmune arthritis: A critical contribution based on the adjuvant arthritis model
Eden W van (1990) **APMIS.** 98, 383

Heberden papers: Molecular biology approaches in rheumatology research
Feldmann M & others (1990) **Ann. Rheumatic Dis. Suppl.** 1, 425

Exocytosis: the role of Ca++ , GTP and ATP as regulators and modulators in the rat mast cell model
Gomperts R D (1990) **J. Exp. Path.** 71, 473

Mast cells as a source of multifunctional cytokines
Gordon J R, Burd P R & Galli S J (1990) **Immunol. Today.** 11, 458

The role of vascular endothelium in the pathogenesis of connective tissue disease — endothelial injury, activation, participation and response
Kahaleh M B (1990) **Clin. Exp. Rheumatol.** 8, 595

T lymphocyte immune dysfunctions in systemic lupus erythematosus
Kammer G M & Stem R L (1990) **J. Lab. Clin. Med.** 115, 273

Re-evaluation of fibroblasts and fibroblast-like cells
Komuro T (1990) **Anat. Embryol.** 182, 103–112

Protein phosphorylation and insulin phosphate metabolism in activated mast cells
Kuratsawa M (1990) **Clin. Exp. Allergy.** 20, 7

The role of fibroblast growth factors in the central nervous system [Brief review]
Logan A (1990) **Trends Endocrinol. Metab.** 1, 149

Mast cells in nonallergic immune responses in vivo
Mekori Y A & Zeidan L (1990) **Israel J. Med. Sci.** 26, 337

Staub and Bovet Award 1989 Lecture. Some aspects of mast cell subtypes from human lung tissue
Overveld F J van (1990) **Agents Actions.** 30, 24

Mast cells. The immune gate to the brain [Minireview]
Theohartdes T C (1990) **Life Sci.** 46, 607

Fibroblast growth factor in the eye and prospects for its therapeutic use
Tripathi R C, Kolli S P & Tripathi B J (1990) **Drug Dev. Res.** 19, 225

The effects of interleukin-1 on articular cartilage destruction as observed in arthritic diseases, and its therapeutic control
Verschuer P J & Vannoorden C J F (1990) **Clin. Exp. Rheumatol.** 8, 303
Structure and expression of osteonectin mRNA in human tissue
Young M F & others (1990) Connective Tissue Res. 24, 17

Mast cell degranulating peptide: a multi-functional neurotoxin
Ziai M R, Russo S, Wang H-C, Beer B & Blume A J (1990) J. Pharm. Pharmacol. 42, 457

COPPER
Dietary carbohydrate source and copper bioavailability
Ode11 B L (1990) Nuts. Rev. 48, 425

Biochemical changes in copper deficiency
Prohaska J R (1990) J. Nuts Biochem. 1, 452

CYCLIC ADENOSINE MONOPHOSPHATE
See: ADENOSINE MONOPHOSPHATE
See also: NUCLEOTIDES

CYCLIC GUANOSINE MONOPHOSPHATE
See: GUANOSINE MONOPHOSPHATE AND POLYPHOSPHATES
See also: NUCLEOTIDES

CYTOCHEMISTRY
See: HISTOCHEMISTRY

CYTOCHROMES
The steady-state kinetics of cytochrome c oxidation by cytochrome oxidase
Cooper C E (1990) Biochim. Biophys. Acta, 1017, 187

Leukotriene-B4 hydroxylase characterization — comparison between hepatic cytochrome-P-450 and polymorphonuclear leukocytes metabolisms in various species — original scientific paper
Delaforge M, Boucher J L & Leclaire J (1990) Accta Pharmaceut. Jugoslav. 40, 461

Effect of enzymatic methylation of cytochrome c on its function and synthesis [Minireview]
Frost B, Syed S K, Kim S & Paik W K (1990) Jnt. J. Biochem. 22, 1069

Biogenesis of mitochondrial c-type cytochromes [Minireview]
Gonzales D H & Neupert W (1990) Acta Pharmaceut. Jugoslav. 40, 461

Evolution of the P450-gene superfamily — animal-plant warfare, molecular drive and human genetic differences in drug oxidation
Gonzales D H & Nebert D W (1990) Trends Genet. 6, 182

Characterization of roles of human cytochrome P-450 enzymes in carcinogen metabolism
Guengerich F P (1990) Asia Pacific J. Pharmacol. 5, 327

Mechanisms of cytochrome P-450 catalysis
Guengerich F P & Macdonald T L (1990) FASEB J. 4, 2453

Chemical mechanisms of cytochrome P-450
Guengerich F P (1990) Asia Pacific J. Pharmacol. 5, 253

The cytochrome-P450-I gene family of microsomal hemoproteins and their role in the metabolic activation of chemicals
Ioannides C & Parke D V (1990) Drug Metab. Rev. 22, 1

Substrate specificities and functions of the P450 cytochromes [Minireview]
Juchau M R (1990) Life Sci. 47, 738

Multiple mechanisms in the regulation of ethanol-inducible cytochrome-P450IIE1
Koop D R & Tierney D J (1990) BioEssays, 12, 429

The 1988 Bernard B. Brodie Award Lecture — Functional Diversity of Hepatic Cytochromes-P-450
Levin W (1990) Drug Metab. Disposition, 18, 824

Selectivity in the inhibition of mammalian cytochromes P-450 by chemical agents
Murray M & Reidy G F (1990) Pharmacol. Rev. 42, 85

Phosphorylation of cytochrome-P450 ioenzymes in intact hepatocytes and its importance for their function in metabolic processes
Oeschbartumwicz B & Oesch F (1990) Arch. Toxicol. 64, 257

The maintenance of cytochrome P-450 in rat hepatocyte culture: some applications of liver cell cultures to the study of drug metabolism, toxicity and the induction of the P-450 system
Paine A J (1990) Chem-Biol. Inter. 74, 1

Hormonal regulation of cytochrome P450 enzymes, cholesterol side-chain cleavage and 17a-hydroxylase/C19-20 lyase in Leydig cells
[Minireview]
Payne A (1990) Biol. Reprod. 42, 399

CytochromeP-E complexes of microorganisms
Trumpower B L (1990) Microbiol. Rev. 54, 101–129

The proton-pumping Q cycle. Energy transduction by coupling of proton translocation to electron transfer by the cytochrome bc1 complex
[Minireview]
Trumpower B L (1990) J. Biol. Chem 265, 11409

Mechanistic studies and selective catalysis with cytochrome P-450 model systems
White P W (1990) Bioorg. Chem. 18, 440

Cytochrome-P450IIE1 — roles in nitrosamine metabolism and mechanisms of regulation
Yang C S, Yoo J S H, Ishizaki H & Hong J Y (1990) Drug Metab. Rev. 22, 147

CYTOSKELETON
See: ORGANELLES AND SUBCELLULAR STRUCTURES

DEVELOPMENT
See: GROWTH, GROWTH FACTORS AND DEVELOPMENT

DIABETES
What causes diabetes?
Atkinson M A & Maclaren N K (1990) Sci. Am. 263, No 1, 62

Diabetes and hemorheology
Attali J K & Valensi P (1990) Diabète Métab. 16, 1

Obesity and diabetes
Bray G A (1990) Acta Diabetol. Lat. 27, 81

Type-I diabetes: a chronic autoimmune disease of human, mouse, and rat
Castano L & Eisenbarth G S (1990) Annu. Rev. Immunol. 8, 647

Is the endogenous digitalis like factor the link between hypertension and metabolic disorders as diabetes mellitus, obesity and acromegaly?
Clerico A & Giampietro O (1990) Clin. Physiol. Biochem. 8, 153

Genetic susceptibility to the development of spontaneous insulin-dependent diabetes mellitus in the rat [Short analytical review]
Cole E (1990) Clin. Immunol. Immunopath. 37, 1

51
Hyperlipidemia in diabetes mellitus
Dunn F L (1990) Diabetes/Metab. Rev. 6, 47

The immunogenetics of insulin-dependent (type I) diabetes [Brief review]
Fletcher J A & Barnett A H (1989) Trends Endocrinol. Metab. 1, 44

Vitamin E and platelet eicosanoids in diabetes mellitus
Gisinger C, Watanabe J & Colwell J A (1990) Prostagland. Leuk. Essent. Fatty Acids. 40, 169

Glycated proteins and gestational diabetes-mellitus
Hod M, Orvieto R, Friedman S, Schoenfeld A & Oravia J (1990) Israel J. Med. Sci. 26, 638

Metabolism and toxicity of chemicals in diabetes
Ioannides C (1990) Acta Pharmaceut. Jugoslav. 40, 423

Identification of susceptibility loci for type-l (insulin-dependent) diabetes by trans-racial gene mapping
Jenkins D & others (1990) Diabetologia, 33, 387

Nerve blood flow and oxygen delivery in normal, diabetic, and ischemic neuropathy
Low P A, Lagerlund T D & McManus P G (1989) Int. Rev. Neurobiol. 31, 355

Diabetes and hypertension
Mahler R J (1990) Horm. Metab. Res. 22, 599

Aldose reductase inhibitors in the treatment of diabetic neuropathy: a review of the rationale and clinical evidence
Masson E A & Boulton A J M (1990) Drugs. 39, 190-202

Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part I)
O'Byrne S & Feely J (1990) Drugs. 40, 6-18

Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part II)
O'Byrne S & Feely J (1990) Drugs. 40, 203-219

Lipid Disorders in Diabetes — Satellite to the Congress Triglyceridedef: The Role in Diabetes and Atherosclerosis — Vienna, May 23, 1990
Paolelli R & others (1990) J. Cardiovasc. Pharmacol. 16, Suppl 9 R2, S1-S35

ATP-Regulated K channels and diabetes-mellitus
Kursman P, Berggren P O, Bovinck K & Efendia S (1990) Nema. Physiol Sci. 5, 143

Microalbuminuria in diabetes mellitus — review and recommendations for the measurement of albumin in urine
Rowe D J F, Dawney A & Watts G F (1990) Ann. Clin. Biochem. 27, 297

Growth hormone secretion in type-I diabetes — a review
Schaper N C (1990) Acta Endocrinol. 122, Suppl 2, 1

Growth hormone in type I diabetic and healthy man
Schaper N C & others (1990) Acta Endocrinol. 122, Suppl 2, 3

Growth hormone and the microvascular complications of diabetes [Brief review]
Sharp P S & Johnston D G (1990) Trends Endocrinol Metab. 1, 315

Genetic control of autoimmunity in type I diabetes
Todd J A (1990) Immunol. Today, 11, 122

Animal models of spontaneous diabetic kidney disease
Velasquez M T, Kimmel P L & Michaelis O E IV (1990) FASEB J. 4, 2850

Mechanisms of diabetic renal and cardiovascular disease
Viberti G C (1990) Acta Diabetol. Lat. 27, 267

Antibody markers in predicting type 1 diabetes: a review
Wilkin T J (1990) J. Roy. Soc. Med. 83, 632

Antibody markers for type 1 diabetes: the issues [Brief review]
Wilkin T J (1990) Trends Endocrinol. Metab. 1, 204

Insulin autoantibodies as markers for type-l diabetes
Wilkin T J (1990) Endocr Rev 11, 92

The fructosamine assay in diagnosis and control of diabetes mellitus. Scientific evidence for its clinical usefulness?
Winderer J & Kobberling J (1990) J Clin Chem. Clin Biochem 28, 120

DIFFERENTIATION
See: GROWTH, GROWTH FACTORS AND DEVELOPMENT

DNA
See also: BIOTECHNOLOGY
CHROMATIN
GENETICS
VIRUSES

Growth control circuitry and the oncogene connection [Meeting review]
Adams J M (1990) Cancer Cells. 2, 193

DNA methylation. The effect of minor bases on DNA-protein interactions
Adams R L P (1990) Biochem. J. 265, 300-320

Positive control [Minireview]
Adhya S & Garges S (1990) J Biol Chem. 265, 10797–10800

Molecular analysis of the REV2 gene of Saccharomyces cerevisiae — a review. Paper presented at a meeting on DNA Repair Network — Molecular Radiation Biology, München–Neuherberg, March 21–23, 1990
Ahne F, Wendel S & Eckardt-Schupp F (1990) Radiat. Environ. Biophys. 29, 293

Reporter genes: application to the study of mammalian gene transcription
Alam J & Cook J L (1990) Anal. Biochem. 188, 245

In vivo somatic mutations in humans — measurement and analysis
Albertini R J, Nicklas J A, Oncell J P & Robison S H (1990) Annu. Rev. Genet. 24, 303

Ion distributions around DNA and other cylindrical polymers — theoretical descriptions and physical implications
Anderson C F & Record M T (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 423

The possible role of Z DNA in chromosomal translocations
Arneheim N (1990) Cancer Cells. 2, 121

PCR analysis of DNA sequences in single cells — single sperm gene mapping and genetic disease diagnosis — review
Arneheim N, Li H H & Cuatrecasas P (1990) Genomics, 8, 415

Puffs, genes, and hormones revisited [Minireview]
Ashburner M (1990) Cell, 61, 1–3

Linkage map of Escherichia coli K-12, edition 8
Baslamam B J (1990) Microbiol. Rev. 54, 130-197

Hunt for the dominant autosomal polycystic kidney disease gene [Minireview] [In French, English abstract]
Bachner L (1990) M/S M&d. Sci. Ser. 23, No 5, Pt I, 963

Biotinylated oligonucleotides as molecular hybridization probes [Brief review]
Badashkeeva A G & Zarytova V F (1989) Mol. Biol. Engl. Tr. 23, No 3, Pt 1, 963

ras oncogenes: their role in neoplasia
Barbacid M (1990) Eur J. Clin. Invest. 20, 225
DNA probe diagnosis of parasitic infections [Minireview]

Barker R H Jr (1990) Exp. Parasitol. 70, 494

In vivo assays used to measure the activity of topoisomerases [Minireview]

Barrett J F, Sucicliffe J A & Gootz T D (1990) Antimicrob. Agents Chemother. 34, 1–7

Yeast as a model system for understanding the control of DNA replication in eukaryotes

Bartlett R & Nurse P (1990) BioEssays. 12, 457

Quantitative variations of nuclear DNA during plant development: a critical analysis

Bass P (1990) Biol. Rev. 65, 185

A hypothesis regarding the protective role of metallothioneins against the toxicity of DNA interactive anticancer drugs

Basu A & Lazo J S (1990) Toxicol. Lett. 50, 123

A molecular view of the Ultrathorax homeotic gene of Drosophila

Beachy P A (1990) Trends Genet. 6, 46

Bacteriophage A DNA: the beginning of the end [Minireview]

Becker A & Murraldo H (1990) J. Bact. 172, 2819–2824

Toward a unified approach to genetic mapping of eukaryotes based on sequence tagged microsatellite sites

Beckmann J S & Soller M (1990) Bio/Technology, 8, 930

Phage-T4 intAs — self-splicing and mobility

Belfort M (1990) Annu. Rev. Genet. 24, 363

Recognition of DNA by type-II restriction enzymes

Bennett S P & Halford S E (1989) Curr. Top. Cell. Regul. 30, 57

In situ hybridization: application to the study of gene expression during experimental hepatocarcinogenesis and human hepatocellular carcinoma

Bernau D & Feldmann G (1990) Tumor Biol. 11, 173

Genome rearrangement and genetic instability in Streptomyces spp [Minireview]

Birch A, Häusler A & Hüttler R (1990) J. Bact. 172, 4138–4142

Activation of proto-oncogenes in solid human tumors [In French; English abstract]

Birnbaum D & Delapeyriere O (1990) Bull. Cancer. 77, 857

Retroviruses and oncogenes. 2

Bishop J M (1990) Anw. Chem. 29, 716

Nobel Lecture: Retroviruses and oncogenes. 2

Bishop J M (1990) Biochim. Biophys. Acta. 1049, 231

The betrayal of homeo box genes in normal development: the link to cancer

Blatt C (1990) Cancer Cells. 2, 186

Symposium on Proto-Oncogenes in Cell Development, Ciba Foundation, London, England. September 19–21, 1989

Boek J D (1990) Cell. 61, 193–195

Targeted gene modification for gene therapy of stem cells

Boog S S (1990) Int. J. Cell Cloning. 8, 80

8th Journée on Growth Factors and Oncogenes, Grenoble, France, March 10–11, 1989

Bolla M, Chambaz E M & Vroussos C, eds. (1989) Colloq. INSERM, 190, 222 pp.

Binding and unwinding — how 1 antigen engages the SV40 origin of DNA replication [Minireview]

Borrower J A, Dean P R, Ballock P A & Hurwitz J (1990) Cell. 60, 181–184

The use of gene technology in the clinical laboratory [Plenary lecture]

Borresen A (1990) Scand. J. Clin. Lab. Invest. 50, Suppl. 202, 9

Tumor angiogenesis: the role of oncogenes and tumor suppressor genes

Bouck N (1990) Cancer Cells. 2, 179

Genetic engineering of plants for insect resistance

Boulter D, Gatehouse J A, Gatehouse A M R & Hilder V A (1990) Endeavour. 14, 183

Human hepatocytes in genotoxicity assays

Braumuller G & Masielli A (1990) Pharmacol. Rev. 22, 301

Molecular mechanisms of oxygen radical carcinogenesis and mutagenesis: the role of DNA base damage

Breimer L H (1990) Mol. Carcinog. 3, 188

Sunlight, DNA damage and skin cancer: a new perspective

Bridges B (1990) Jap. J. Cancer Res. 81, 105

Induction of heat shock (stress) genes in the mammalian brain by hyperthermia and other traumatic events — a current perspective [Minireview]

Brown I R (1990) J. Neurosci. Res. 27, 247

I-Transposable elements and I-R hybrid dysgenesis in Drosophila

Bucheton A (1990) Trends Genet. 6, 16

Structural features of the HMG chromosomal proteins and their genes

Busin M, Lelus D A & Lammish M (1990) Biochim. Biophys. Acta. 1049, 231

Consideration of both genotoxic and nongenotoxic mechanisms in predicting carcinogenic potential

Butterworth B E (1990) Mutat. Res. 239, 117

Brittle bones — fragile molecules: disorders of collagen gene structure and expression

Byers P H (1990) Trends Genet. 6, 293

Genes of Acanthamoeba — DNA, RNA and protein sequences (a review)

Byers T J, Hugo E R & Stewart V J (1990) J. Protozool. 37, Suppl. S17

Symposium on Biotechnology and Human Genetic Predisposition to Disease, Steamboat Springs, CO, March 27–April 3, 1989

Barrett J F, Ormen G S, Caskey C T, Hood L E & Kamely D, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 126, 241 pp.

Oncogenes, antioncogenes, and the regulation of cell growth

Carbone M & Levine A S (1990) Trends Endocrin. Metab. 1, 248

DNA methylation and development

Cedar H & Razin A (1990) Biochim. Biophys. Acta. 1049, 1

Flavivirus genome organization, expression, and replication

Chambers T J, Hahn C S, Galler R & Rice C M (1990) Annu. Rev. Microbiol. 44, 640

The improving prospects for yield increase by genetic engineering in antibiotic producing streptomycetes

Chater K F (1990) Bio/Technology. 8, 115

The current state of oncogenes and cancer. Experimental approaches for analyzing oncogenic events in human cancer

Cheo P J, Bischoff F Z, Strong L C & Tainsky M A (1990) Cancer Metas. Rev. 9, 63

The thyroglobulin gene: evolutionary and regulatory issues [Brief review]

Christophe D & Vassart G (1990) Trends Endocrin. Metab. 1, 351

Symposium on Transgenic Models in Medicine and Agriculture, Taos, NM, January 28–February 3, 1989

Church R B, ed. (1990) UCLA Symp. Mol. Cell. Biol. NS, 116, 166 pp.
The initiation of chromosomal DNA replication in eukaryotes

Methods in Neurosciences. I. Gene probes

Clegg M T & O'Brien S J, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 122, 322 pp.

P element transposition [Minireview]

Craig N L (1990) Cell, 26, 390-402

Intrinsically bent DNA [Minireview]

Crothers D M, Haran T E & Nadeau J I G (1990) J. Biol. Chem. 265, 7093

Genes for MHC. TCR and Mls determine susceptibility to collagen induced arthritis

David C S (1990) APMIS, 98, 575

Homeobox genes and the vertebrate body plan

De Robertis E M, Oliver G & Wright C V E (1990) Sci. Am. 263, No 1, 46

Mutational analysis of human NRAS genes in malignant melanoma: rapid methods for oligonucleotide hybridization and manual and automated direct sequencing of products generated by the polymerase chain reaction

Dicker A P, Volkenandt M & Albino A P (1990) Gene Chromosome Cancer, 1, 257

The initiation of chromosomal DNA replication in eukaryotes

Difley J F X & Stillman B (1990) Trends Genet 6, 427

Patterns of DNA methylation in the mammalian genome [review]

Doerfler W (1990) Biol. Chem. Hoppe-Seyl. 371, 455

Eukaryotic DNA methylation: facts and problems [Minireview]

Doerfler W & others (1990) FEBS Lett. 268, 329-333

The ras superfamily of small GTP-binding proteins

Downward J (1990) Trends Biochem. Sci. 15, 469

Interspecific barriers won by inactivation of the DNA repair system? [Minireview]

Dreyfus J C (1990) M/S Méd. Sci. 6, 152

Bacterial topoisomerases and the control of DNA supercoiling

Drlica k (1990) Trends Genet. 6, 433

Nucleoprotein structures initiating DNA replication, transcription, and site-specific recombination [Minireview]

Echols H (1990) J. Biol. Chem. 265, 14697

The role of germinale gene expression and somatic mutation in the generation of autoantibodies to DNA

Elat D (1990) Mol. Immunol. 27, 203

Drug-induced DNA damage and tumor chemosensitivity

Epstein R J (1990) J. Clin. Oncol. 8, 2062

Cis-elements and DNA-binding proteins involved in transcription regulation [In French; English abstract]

Etienne J, Brault D & Firmin S (1990) Ann. Biol. Clin. Paris, 48, 681

Control of globin gene transcription

Evans T, Felsenfeld G & Reitman M (1990) Annu. Rev. Cell Biol. 6, 95

Frameshift mutagenesis by acridines and other reversibly-binding DNA ligands

Ferguson L R & Denny W A (1990) Mutagenesis, 5, 529

Transgenic mice as an in vivo model for self-reactivity

Ferrick D A, Ohashi P S, Wallace V A, Schilham M & Mak T W (1990) Immunol. Rev. 118, 257

Proceedings of the Second Symposium on Genetic Engineering of Animals, Ithaca, NY, June 1989

First N L & others (1990) J. Reprod. Fertil. Suppl. 41, 3 195

Reviews of genetic toxicology. Genotoxicity of chromium compounds.

A review

Flora S de, Bagasno M, Serra D & Zanacchi P (1990) Mutat. Res. 238, 99-172

Pathology of Gene Expression

Fiatt L & Antonsson S A, eds (1989) Serono Symp. Ser. Advan Exp Med 2, 364 pp.

The Enzymology of DNA Repair [Special issue]

Friedberg E C & others (1990) Mutat. Res. 236, 145-301

Recent progress in the molecular genetic analysis of erythrocythromatosis

Fujii H & Miwa S (1990) Am. J. Hematol. 34, 301

Genetic engineering of plants for virus resistance [Brief review]

Gadani F, Mansky L M, Medici R, Miller W A & Hill J H (1990) Arch. Virol. 115, 1

Genes and epilepsy

Gardiner R M (1990) J. Med. Genet. 27, 537

The human genome: a prospect for paediatrics

Gardiner R M (1990) Arch. Dis. Child. 65, 457

Organo-specific and inducible expression of potato genes [Brief review]

Gartel A L (1990) Mol. Biol. Engl. Tr. 24, No 2, Pt 1, 236

Studies on scaffold attachment sites and their relation to genome function

Gasser S M, Amati B B, Cardenas M E & Hofmann J F X (1989) Int. Rev. Cytol. 119, 57

DNA fingerprinting

Gazit E & Gazit E (1990) Israel J. Med. Sci. 26, 158

The structure of the homeodomain and its functional implications

Gehring W J & others (1990) Trends Genet 6, 322

Genetic mapping of common diseases: the challenges of manic-depressive illness and schizophrenia

Gershon E S, Martinez M, Goldin L R & Gejman P V (1990) Trends Genet. 6, 282

Interpretation of DNA vibrational spectra by normal coordinate analysis [Minireview]

Ghioni M, Leltirol R, Liquiçi J & Taillandier E (1990) Int. J. Biochem. 22, 691

How many transposable elements escape negative selection

Gieri A (1990) Trends Genet. 6, 155

Chromiluminenceplex multiplex DNA sequencing [Product review]

Gilleve P M (1990) Nature, 348, 657

Molecular light switches for plant genes

Gilmarin P M, Sarokin L, Memelink J & Chua N-H (1990) Plant Cell, 2, 369-378

Study of mutational specificity in the lacI gene of Escherichia coli as a window on the mechanisms of mutation

Glickman D R (1990) Envi. Mol. Mutagen. 16, 48

The phylogenetic odyssey of the erythrocyte. 2. The early or invertebrate prototypes

Glomski C A & Tamburlin J (1990) Histol. Histopath. 5, 513

Integration of retroviral DNA into the genome of the infected cell

Goff S P (1990) Cancer Cells, 2, 172

Retroviral reverse transcriptase: synthesis, structure, and function

Goff S P (1990) J. Acq. Immun. Defic. Syndrome, 3, 817

The genes of hepatic glucose metabolism [Minireview]

Granner D & Pilkis S (1990) J. Biol. Chem. 265, 10173
Volume 298, Supplement

FEBS LETTERS

April 1992

Characterization of a cyclic AMP regulatory element DNA-binding protein [Brief review]

Haeflir J P & Habener J F (1990) Trends Endocrinol. Metab. 1, 155

ras and GAP — who’s controlling whom? [Minireview]

Hall A (1990) Cell, 61, 921-923

The cystic fibrosis defect approached from different angles — new perspectives on the gene, the chloride channel, diagnosis and therapy

Heylcy D J & others (1990) Har J Pediat. 140, 670

Regarding the discovery of cellular oncogenes (from the early 1900s until a recent Nobel Prize) [Minireview] [In French; English abstract]

Harel J (1990) Bull. Cancer, 77, 191

Hepatitis B virus DNA in peripheral blood leukocytes: a brief review

Harrison T J (1990) J. Med. Virol. 31, 33

The role of PS0 and SNM genes in DNA repair of the yeast

Saccharomyces cerevisiae [Minireview]

Henriques J A P & Brendel M (1990) Curr. Genet. 18, 387

The hsp70 multigene family of Caenorhabditis elegans [Minireview]

Heschl M F P & Baillie D L (1990) Comp. Biochem. Physiol. Pt B, 66, 633

Mismatch repair in mammalian cells

Heywood L A & Burke J F (1990) BioEssays, 12, 473

Tumor progression — potential role of unstable genomic changes

Hill R P (1990) Cancer Metastas. Rev. 9, 137

DNA supercoiling and eukaryotic transcription — cause and effect

Hirose S & Ohta T (1990) Cefl Struct Funct. 25, 133

Molecular genetics of eukaryotic DNA excision repair

Hoeijmakers J H J & Bootsma D (1990) Cancer Cells, 2, 311

Mechanisms for the control of gene activity during development

Holliday R (1990) Biol. Rev Cambridge Phil. Soc. 65, 431

DNA hybridization for the diagnosis of microbial disease

Hopkin J M & Wakefield A E (1990) Q. J. Med 75, 415

Origin of DNA replication of filamentous coliphages

Horiiuchi K (1990) Jap. J. Genet. 65, 225

Nucleotide excision repair in Escherichia coli

Houten B van (1990) Microbiol. Rev 54, 18-51

The emerging structure of the Agrobacterium T-DNA transfer complex

Howard E & Citovsky V (1990) BioEssays. 12, 103

Retinitis pigmentosa: genetic mapping in X-linked and autosomal forms of the disease

Humphries P, Farrar G J, Kenna P & McWilliam P (1990) J. Med. Genet. 38, 1

The in vitro replication of DNA containing the SV40 origin [Minireview]

Hurstwit J, Dean F B, Kwong A D & Lee S-H (1990) J. Biol. Chem. 265, 18043

Cell patterning and segment polarity genes in Drosophila

Ingham P W & Nakano Y (1990) Dev. Growth Differentiation, 32, 563

One kind of regulatory mechanism in genetic expression [In French]

Israel A (1990) Recherche, 21, 1552

The polymerase chain reaction in transfusion medicine

Jackson J B (1990) Transfusion, 30, 51

Clinical review: recombinant DNA strategies for determining the molecular basis of endocrine disorders

Jameson J L & Arnold A (1990) J Clin Endocrinol Metab 70, 301

Genes required for specifying cell fates in Drosophila embryonic sensory nervous system

Jan Y N & Jan L Y (1990) Trends Neurosci. 12, 493

Genet. 38,

Humphries P, Farrar G J, Kenna P & McWilliam P (1990) J. Med. Genet. 38, 1

The in vitro replication of DNA containing the SV40 origin [Minireview]

Hurstwit J, Dean F B, Kwong A D & Lee S-H (1990) J. Biol. Chem. 265, 18043

Cell patterning and segment polarity genes in Drosophila

Ingham P W & Nakano Y (1990) Dev. Growth Differentiation, 32, 563

One kind of regulatory mechanism in genetic expression [In French]

Israel A (1990) Recherche, 21, 1552

The polymerase chain reaction in transfusion medicine

Jackson J B (1990) Transfusion, 30, 51

Clinical review: recombinant DNA strategies for determining the molecular basis of endocrine disorders

Jameson J L & Arnold A (1990) J Clin Endocrinol Metab 70, 301

Genes required for specifying cell fates in Drosophila embryonic sensory nervous system

Jan Y N & Jan L Y (1990) Trends Neurosci. 12, 493

New light on visual pigment genes [Minireview]

Jay B (1990) Br. J. Ophthalmol. 74, 238

Studies on mammalian mutants defective in rejoicing double-strand breaks in DNA

Jego P A (1990) Mutat. Res. 239, 1

Identification of susceptibility loci for type-1 (insulin-dependent)

diabetes by trans-racial gene mapping

Jenkins D & others (1990) Diabetologia, 33, 387

Gene-for-gene complementarity in plant-pathogen interactions

Keen N T (1990) Annu. Rev. Genet. 24, 447

Specificity of restriction endonucleases and DNA modification

Kessler C & Mania V (1990) Gene, 92, 1-248

Recent progress in the use of the technique of non-radioactive in situ hybridization histochemistry — new tools for molecular neurobiology

Kiyama H, Emson P C & Tohyama M (1990) Neurosci. Res. 9, 1

Regulation of transposition in bacteria

Kieckner N (1990) Annu. Rev Cell Biol. 6, 297

DNA cytometry of musculoskeletal tumors — a review

Kreibergs A (1990) Acta Orthopae. Scand. 61, 82

HSV DNA integration: observations and inferences

Kulkosky J & Skalka A M (1990) J. Acq. Immun. Defic. Syndrome, 3, 839

Coronavirus: organization, replication and expression of genome

Las M M C (1990) Annu. Rev Microbiol. 44, 303

Symposium on Plant Gene Transfer, Park City, UT, April 1-7, 1989

Lamb C J & Beachy R N, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 129, 342 pp

Mitochondrial diseases: gene mapping and gene therapy [Minireview]

Lander E S & Lodish H (1990) Cell, 61, 925-926

p53-Oncogene or anti-oncogene?

Lane D P & Beachy B S (1990) Genes Dev. 4, 1

Genetic instability and hypervariability in Streptomyces ambofaciens:

towards an understanding of a mechanism of genome plasticity

Leblond P, Demuyter P, Simonet J M & Decaris B (1990) Cell. 62, 845-847

Perspectives on methylmalonic acidemia resulting from molecular cloning of methylmalonyl CoA mutase

Lehn P (1990) BioEssays, 12, 335

Retroviral-mediated gene transfer into the hematopoietic tissue in vivo

[In French; English abstract]

Lehn P (1990) M/S Méd. Sci. 6, 791

Homologous recombination — new approaches to transgenesis in mammals

Lemarchand V & Montagutelli X (1990) M/S Méd. Sci. 6, 18

Tumor suppressor genes

Levine A J (1990) BioEssays, 12, 60

The p53 protein and its interactions with the oncogene products of the small DNA tumor viruses [Minireview]

Levine A J (1990) Virology, 177, 419

Tumor suppressor genes: the p53 and retinoblastoma sensitivity genes and gene products

Levine A J & Mornand J (1990) Biochim. Biophys. Acta, 1032, 119

Commitment and activation at Pol II promoters: a tail of protein–protein interactions

Lewin B (1990) Cell, 61, 1161-1164

The two faces of higher eukaryotic DNA replication origins

Linkens M H K & Huberman J A (1990) Cell, 62, 845-847
Homeogene...: a new class of tumor suppressor genes'?

Contrasting modes and temps of genome evolution in land plant organelles

Palmer J D (1990) Trends Genet 6, 115

Hsr-omega, a novel gene encoded by a Drosophila heat shock puffed gene

Nussinov R (1990) J Mol Biol 229, 259

Expression of variable antigen genes in African trypanosomes [In French; English abstr]

Pays E (1990) M/S Med Sci 6, 510

Enzymes of enterobacterial Escherichia coli -- characterization, mechanism of effect and genetic control [In Russian; English abstract]

Petrovskaya V G & Bondarenko V M (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. No 7, 92

Genetic Markers of Haematological Malignancy

Pinkerton P H & others (1990) Tumor Biol. 11, Suppl 1, 1-78

Transvection and long-distance gene regulation

Pirota V (1990) BioEssays, 12, 409

Interferons: a new class of tumor suppressor genes?

Pitha P M (1990) Cancer Cells, 2, 215

Isolation of individual chromosomes and their use in the study of human and animal genomes [Brief review]

Poletaev A I (1989) Mol. Biol. Engl. Tr. 23, No 4, Pt 1, 713

TonB and the Gram negative dilemma [Microreview]

Postle K (1990) Mol Microbiol. 4, 2019

Gene transfer to cereals — an assessment

Potrykus I (1990) Bio/Technology, 8, 535
DNA damage and repair following treatment with ionizing radiation — review
Powell S & McMillan T J (1990) Radiother. Oncol. 19, 95
Activators and targets
Ptashne M & Gann A F (1990) Nature, 346, 329-331
Role of genotype in the adaptation of the brain dopamine system to stress
Pugliaisaglia S, Kempf E & Cabib S (1990) Neurosci. Biobehav. Rev. 14, 523
Nuclear proto-oncogenes FOS and JUN
Ransone L J & Verma I M (1990) Annu. Rev. Cell Biol. 6, 539
Parasimony analysis of mammalian class II histocompatibility genes
Rask L, Andersson L, Gustafsson K & Jonsson A-K (1990) Immunol. Rev. 113, 187
Symposium on Molecular Mechanisms in DNA Replication and Recombination, Keystone, CO, March 27-April 3, 1989
Richardson C C & Lehman I R, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 127, 415 pp.
Sequence-dependent formation of alkyl DNA adducts — a review of methods, results and biological correlates
Richardson F C & Richardson K K (1990) Mutat. Res. 233, 127
Molecular mechanisms regulating Drosophila-P-element transposition
Rio D C (1990) Annu. Rev. Genet. 24, 543
The pS2 gene, mRNA, and protein: a potential marker for human breast cancer
Rio M-C & Chambon P (1990) Cancer Cells, 2, 269
Frameshift mutation — determinants of specificity
Ripley L S (1990) Annu. Rev. Genet. 24, 189
Chromosome synopsis and genetic recombination — their roles in mitotic chromosome segregation
Roeder G S (1990) Trends Genet. 6, 385
The role of introns in evolution [Minireview]
Rogers J H (1990) FEBS Lett. 268, 339-343
Signal transduction by the bacterial phosphotransferase system.
Dauxie and the crr gene (J. Monod revisited) [Minireview]
Roseman S & Meadow N D (1990) J. Bacteriol. 165, 2993-2996
Transforming collaborations between ras and nuclear oncogenes
Ruley H E (1990) Cancer Cells, 2, 258
Ultrastructure of myotubers and cells synthesizing DNA in the developing and regenerating lymph-heart muscles
Rumyanishev P P & Krylova M I (1990) Int. Rev. Cytol. 190, 1
Environmental stimuli and transcriptional activity generate transient changes in DNA torsional tension
Saavedra R A (1990) BioEssays, 12, 125
Invertrons, a class of structurally and functionally related genetic elements that includes linear DNA plasmids, transposable elements, and genomes of adenovirus type viruses
Sakaguchi K (1990) Microbiol. Rev. 54, 66-74
myc genes and their deregulation in lung cancer
Saksela K (1990) J. Cell. Biochem. 45, 153
Integration specificity of retrotransposons and retroviruses
Sandmeyer S B. Hansen L J & Chalkey D L (1990) Annu. Rev. Genet. 24, 491
17th Nobel Conference of the Karolinska Institute — Growth Factors: from Genes to Clinical Application, Stockholm, Sweden, September 7-8, 1989
Sara V R, Hall K & Low H, eds (1990) Karolinska Inst. Nobel Conf. Ser. 17, 265 pp.
Relationship of cell growth to the regulation of tissue-specific gene expression during osteoblast differentiation

Stein G S, Lian J B & Owen T A (1990) *FASEB J.*, 4, 3111

Meeting on Regulation of Gene Expression in the Nervous System, Catania, Italy, July 8–11, 1989

Stella A M G, Vellis J D & Perezpolo J R, eds (1990) *Neurol. Neurochir. Parisian.*, 59, 465 pp.

Application of DNA typing methods to *Candida albicans* epidemiology and correlations with phenotype

Stevens D A, Odds F C & Scherer S (1990) *Rev. Infect. Dis.*, 12, 258

Oncogenes, protooncogenes, and signal transduction — toward a unified theory

Storms R W & Bost H R (1989) *Adv. Virus Res.*, 37, 1

Cellular immortalization — an essential step or merely a risk factor in DNA virus-induced transformation

Strauss M & Griffin B E (1990) *Cancer Cells.*, 2, 360

Replisome experiments with nucleotide base analogues

Stratheo P & Hubscher U (1990)

A role for DNA methylation in vertebrate gene expression? [Minireview]

Sukumar S (1990) *Cancer Cells.*, 2, 199

An experimental analysis of cancer: role of ras oncogenes in multistep carcinogenesis

Sukumar S (1990) *Cancer Cells.*, 2, 199

Basic concepts and practical applications of recombinant DNA techniques in detection of human papilloma virus (HPV) infections

Syrjanen S M (1990) *APMIS*, 98, 95

Molecular cloning and molecular biological studies of human thymidylate synthase gene [In Japanese; English abstract]

Takeishi K (1990) *Yokagaku Zasshi.*, 110, 891

Hepatitis delta virus: cis and trans functions required for replication [Minireview]

Taylor J M (1990) *Cell.*, 61, 511–513

Mutations of the human insulin receptor gene [Brief review]

Taylor S L, Camma A, Kadowaki H, Kadowaki T & Accili D (1990) *Trends Endocrinol. Metab.*, 1, 134

The structure, metabolism and function of the carcinogenicity antigen gene family

Thomas P, Toth C A, Saini K S, Jessup J M & Steele G (1990) *Biochim. Biophys. Acta.*, 1032, 177

Eukaryotic DNA helicases [Minireview]

Thommes P & Hübscher U (1990) *FEBS Lett.*, 268, 325–328

Eukaryotic DNA replication — enzymes and proteins acting at the fork

Thommes P & Hübscher U (1990) *Eur. J. Biochem.*, 194, 699

Puffs and gene regulation — molecular insights into the Drosophila edysine regulatory hierarchy

Thummel C S (1990) *BioEssays.*, 12, 561

A new approach for the analysis of HLA class II polymorphism: HLA oligotyping

Tierney J-M, Jeannet M & Mach B (1990) *Blood Rev.*, 4, 9

Human globin gene activation region (LAR): role in temporal control

Townes T M & Bhringer K (1990) *Trends Genet.*, 6, 219

Oncogenes in growth and development

Travali S, Koniecki J, Petralia S & Baserga R (1990) *FASEB J.*, 4, 3209

Why bend DNA? [Minireview]

Travers A A (1990) *Cell.*, 60, 177–180

Specific nuclear DNA-binding proteins [In Russian; English abstract]

Turpaev K T & Vassartzy Y S (1990) *Genetika.*, 26, 804

Chromosomal translocations in lymphoid neoplasia — a reappraisal of the recombinase model

Tycko B & Sklar J (1990) *Cancer Cells.*, 2, 1

PET genes of *Saccharomyces cerevisiae*

Tzagoloff A & Dreyfus M C (1990) *Microbiol. Rev.*, 54, 211–225

Retroviruses and oncogenes. I.

Varmus H E (1990) *Anawg. Chem.*, 29, 707

Nobel Lecture: Retroviruses and oncogenes-1

Varmus H E (1990) *Biosci. Rep.*, 10, 413

Structural and functional organization of poly(dG-dT).poly(dC-dA) sequences in the genome of eukaryotic organisms

Vasakidze R P, Manulashvil A N & Gabrielidze I Y (1990) *Mol. Biol. Engl. Tr.*, 24, No 1, Pt 1, 5

A review of techniques and results obtained in one laboratory by an integrated system of methods designed for routine clinical flow cytometric DNA analysis

Vindeliov L L & Christiansen I J (1990) *Cytometry.*, 11, 755

Potential genetic functions of tandem repeated DNA sequence blocks in the human genome are based on a highly conserved “chromatin folding code”

Vogt P (1990) *Hum Genet.*, 84, 301

Gene amplification using polymerase chain reaction

Volkenandt M, Löhr M & Dicker A P (1990) *Dtsch. Med. Wochenschr.*, 115, 670

Drosophila-src family proteins [Minireview]

Wadsworth C S (1990) *Comp. Biochem. Physiol. Pt B.*, 97, 403

On transferring genes into stem cells and mice [EMBO Medal review]

Wagner E F (1990) *EMBO J.*, 0, 3025

Assessment of clonality in human tumors — a review

Wainscoat J S & Fein M F (1980) *Cancer Res.*, 50, 1355

Disease, race, geography and genes

Waldenstrom J (1990) *J. Intern. Med.*, 228, 419

Gene transfer in insects

Walker V K (1989) *Adv. Cell Culture.*, 7, 87

Colloquium on Ionizing Radiation Damage to DNA: Molecular Aspects, Lake Tahoe, CA, January 16–21, 1990

Wallace S S & Painter R B, eds (1990) *UCLA Symp. Mol. Cell. Biol.*, NS, 136, 331 pp.

The role of DNA topoisomerases in recombination and genome stability: a double-edged sword? [Minireview]

Wang J C, Caron P R & Kim R A (1990) *Cell.*, 62, 403–406

The effects of plant transposable element insertion on transcription initiation and RNA processing

Weil C F & Wessler S R (1990) *Annu. Rev. Plant Physiol. Plant Mol. Biol.*, 41, 527–552

The retinoblastoma gene and cell growth control

Weinberg R A (1990) *Trends Biochem. Sci.*, 15, 199

Antisense RNA and DNA

Wensnraub H M (1990) *Sci. Am.*, 262, No 1, 40

Transforming properties of the HTLV-I tax gene

Weiss R A & Schulz T F (1990) *Cancer Cells.*, 2, 281

Eukaryotic DNA methylation and gene expression

Weissbach A, Ward C & Bolden A (1989) *Curr. Top. Cell. Regul.*, 30, 1

Processing of recombinant intermediates in vitro

West S C (1990) *BioEssays.*, 12, 151
Molecular evolution and genetic engineering of protein domains involving aspartate transcarboxylase
Wild J R & Wales M E (1990) Annu. Rev. Microbiol. 44, 193

Embryonic stem cells as targets for gene transfer — a new approach to molecular manipulation of the murine hematopoietic system
Williams D A (1990) Bone Marrow Transplant. 5, 141

Expression of introduced genetic sequences in hematopoietic cells following retroviral-mediated gene transfer
Williams D A (1990) Hum. Gene Ther. 1, 229

Position effects on eukaryotic gene expression
Wilson C, Bellen H J & Gehring W J (1990) Annu. Rev. Cell Biol. 6, 679

Recent progress in vitamin-A research — nuclear retinoic acid receptors and their interaction with gene elements
Wolf G (1990) J. Nutr. Biochem. 1, 284

DNA technology
Wong R S & Passaro E (1990) Am. J. Surg. 159, 610

The polymerase chain reaction — miracle or mirage? — A critical review of its uses and limitations in diagnosis and research
Wright P A & Wynford-Thomas D (1990) J. Path. 162, 99

Construction of libraries of structural genes (cDNA) and “jumping” libraries in λ-vectors
Zabarovskii E P & Allikmets R L (1989) Mol. Biol. Engl. Tr. 23, No 5, Pt 1, 949

Proto-oncogenes in cell differentiation
Zelenka P S (1990) BioEssays, 12, 22

A model for tumor cell killing by topoisomerase poisons
Zhang H, Darpa P & Liu L F (1990) Cancer Cells, 2, 23

Microbial DNA topoisomerases and their inhibition by antibiotics
Zimmer C, Strot K & Strot I (1990) J Basic Microbiol 30, 209

DRUGS AND DRUG METABOLISM

See also: ANTIBIOTICS AND ANTIMICROBIAL SUBSTANCES

Renal failure caused by chemicals, foods, plants, animal venoms, and misuse of drugs — an overview
Abuelo J G (1990) Arch. Intern. Med. 150, 505

Treatment of the anemia of chronic renal failure with recombinant human erythropoietin
Adamson J W & Eschbach J W (1990) Annu. Rev. Med. 41, 349

Nuclear magnetic resonance in clinical pharmacology and measurement of therapeutic response
Aellig W H (1990) Br. J. Clin. Pharmacol. 29, 157

Symposium on Parasites; Molecular Biology, Drug and Vaccine Design, Keystone, CO, April 3–10, 1989
Agabian N & Cerami A, eds (1990) UCLA Symp. Mol. Cell Biol NS, 130, 504 pp.

Liposomal amphotericin-B as a therapeutic measure to control experimental aspergillosis in BALB/c mice
Ahmad I, Sarkar A K & Bachhawat B K (1990) Ind. J. Biochem Biophys. 27, 370

Potential therapeutic uses of N-methyl-aspartate antagonists in cerebral ischemia
Albers G W (1990) Clin. Neuropharmacol. 13, 177

New targets for cancer chemotherapy — poly(ADP-riboseylation) processing and polyisoprene metabolism
Alderson T (1990) Biol. Rev. Cambridge Phil. Soc. 65, 623

Cellular pharmacology of cisplatin: perspectives on mechanisms of acquired resistance
Andrews P A & Powell S B (1990) Cancer Cell. Mon. Rev. 2, 35

Central receptors and recognition sites mediating the effects of monoamines and anorectic drugs on feeding behavior
Angel J (1990) Clin. Neuropharmacol. 13, 361

Meso-2,3-dimercaptosuccinic acid: chemical, pharmacological and toxicological properties of an orally effective metal chelating agent
Aposhian H V & Aposhian M M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 279–306

The use of cultured epithelial and endothelial cells for drug transport and metabolism studies
Audus K L, Barrel R L, Hidalgo J J & Borchardt R T (1990) Pharmaceut. Res. 7, 435

Effects of antiaugular drugs on myocardial energy metabolism in coronary artery disease
Bagger J P (1990) Pharmacol. Toxicol. 66, Suppl. 4, 6–25

Influence of cimetidine on the pharmacokinetics of other drugs
Banditt P, Meyer F P & Walther H (1990) Pharmazie, 45, 11

Peptide transport systems for opiates across the blood–brain barrier
Banks W A & Kastin A J (1990) Am. J. Physiol. 259, No 1, Pt 1, El

Modulation of neurogenic inflammation: novel approaches to inflammatory disease
Barness P J, Belvisi M G & Rogers D F (1990) Trends Pharmacol. Sci., 11, 185

A hypothesis regarding the protective role of metallothioneins against the toxicity of DNA interactive anticancer drugs
Basu A & Lazo J S (1990) Toxicol. Lett. 50, 123

Primary sequence of cyclic nucleotide phosphodiesterase isozymes and the design of selective inhibitors
Beavo J A & Reifennyder D H (1990) Trends Pharmacol. Sci. 11, 150

Fluconazole: A novel advance in therapy for systemic fungal infections [Symposium]
Bennett J E (1990) Rev Infect. Dis. 12, Suppl. 3, S263

Clinical pharmacology of caffeine
Benowitz N L (1990) Annu. Rev. Med. 41, 277

Sensory neuron-specific actions of capsaicin: mechanisms and applications
Bevan S & Szotcsánjy J (1990) Trends Pharmacol. Sci. 11, 330

GABA and Benzodiazepine Receptor Subtypes: Molecular Biology, Pharmacology, and Clinical Aspects. 6th Cape Boi Conference on Neuroscience, Villasimius, Italy, June 1989
Biggio G & Costa E, eds (1990)

Antineoplastic drugs in 1990: a review (Part II)
Black D J & Livingston R B (1990) Drugs, 39, 489–501

Antineoplastic drugs in 1990: a review (Part I)
Black D J & Livingston R B (1990) Drugs, 39, 652–673

Convulsive disorders: the use of anticonvulsant drugs
Bleck T P (1990) Clin. Neuropharmacol. 13, 198

Convulsive disorders: mechanisms of epilepsy and anticonvulsant action
Bleck T P & Klawans H I. (1990) Clin Neuropharmacol. 13, 121

A new perspective on the antiatherosclerotic activity of Ca2+-channel blockers
Block L H & Emmons L R (1990) Eur. J Clin. Invest. 20, 236
The 3-D structure of HIV-1 protease and the design of antiviral agents for the treatment of AIDS
Blundell T L & others (1990) Trends Biochem. Sci. 15, 425

Symposium on the Biology of Nicotine Dependence, Ciba Foundation, London, England, November 7-9, 1989
Boek G & Maras J, eds (1990) CIBA Fdn Symp. 152, 254 pp.

Review — Induction of drug-metabolizing enzymes by xenobiotics
Boek K W, Lipp H P & Boekhannig B S (1990). Xenobiotica, 20, 1101

Alterations of the cAMP-adenylate cyclase system in the failing heart. Consequences for therapy with positive inotropic agents
In German; English abstract
Bohm M, Schwinger R H G & Erdmann E (1990) Klin Wochenschr 68, 887

Identification of candidate cancer, chemopreventive agents and their evaluation in animal models and human clinical trials — a review
Boone C W, Kelloff G J & Malone W E (1990) Cancer Res 50, 2

Experimental models in skin pharmacology
Bouclier M, Cavey D, Kail N & Hensby C (1990) Pharmacol. Rev. 42, 127

Drug and metabolite-induced perturbations in nuclear structure and function. a review
Brasch K (1990) Biochem. Cell Biol. 68, 408-426

Molecular mechanisms of diuretic agents
Breyer J & Jacobson H R (1990) Annu. Rev. Med. 41, 265

The development of new radiopharmaceuticals
Britten K E (1990) Eur J. Nucl Med. 10, 373

Recent developments in hepatic drug oxidation: implications for clinical pharmacokinetics
Brosten K (1990) Clin. Pharmacokinet. 18, 220-239

Defective drug uptake contributing to multidrug resistance in hepatoma cells can be evaluated in vitro
Buscher H-P (1990) Klin Wochenschr 68, 443

Formation of active metabolites of psychotropic drugs, an updated review of their significance
Caccia S & Garattini S (1990) Clin. Pharmacokinet. 18, 434-439

1-Arylpiperazines as active metabolites of (4-substituted ary1-1-piperidinylthyl) halogenoalkyl drugs
Caccia S & Garattini S (1990) Acta Pharmaceut. Jugoslav 40, 441

Chemical and pharmaceutical analysis of the crude aqueous alcoholic extract from Cordyline dracaenoides
Calixto J B & others (1990) Phytother. Res. 4, 167

The use of kinetic-dynamic interactions in the evaluation of drugs
Campbell D B (1990) Psychopharmacology, 100, 433

Idarubicin in the treatment of acute leukemias. An overview of preclinical and clinical studies
Carrella A M, Berman E, Marone M P & Ganzina F (1990) Haematologica, 75, 159

Do humoral factors mediate cancer chemotherapy-induced emesis?
Carl P L, Cubedu L X, Lindley C, Myers R D & Rezvani A H (1989) Drug Metab. Rev. 21, 319

Biochemical and Pharmaceutical Aspects of Thrombic Processes
Carruba M O & others (1990) Thrombosis Res Suppl. 11, 1-69

Multidrug resistance: focus in hematolgy
Carulli G & Petrim M (1990) Haematologica, 75, 363

Symposium on Bioactive Compounds from Plants, Bangkok, Thailand, February 20-22, 1990
Chudwick D J & Matsui J, eds (1990) CIBA Fdn Symp. 154, 242 pp.

Pharmacotoxicological aspects in the use of cycloedetrins as drug vehicles (a review)
In Russian
Chaika L A, Khadzhai Y I & Libina V V (1990) Khim Farm Zh. SSSR, 24, 19

Effects of calcium channel blockers on renal function
Chan L & Schrier R W (1990) Annu. Rev Med. 41, 299

Serotonin-specific drugs for anxiety and depressive disorders
Charney D S, Krystal J H, Delgado P L & Heninger G R (1990) Annu. Rev Med 41, 437

Phospholipase inhibitors as cardiotoxins
In Russian
Chekman I S & Grinevich A I (1990) Khim Farm Zh. SSSR, 24, No. 12, 13

Therapeutic drug monitoring of anticonvulsants: state of the art
Choonara I A & Rane A (1990) Clin. Pharmacokinet. 18, 318-328

Action of pinaverium bromide, a calcium-antagonist, on gastrointestinal motility disorders [Minireview]
Christen M O (1990) Gen. Pharmacol, 21, 821

Potential inhibitors of de novo pyrimidine and purine biosynthesis as chemotherapeutic agents
Christopherson R I & Lyons S D (1990) Med. Res Rev 10, 505

Anticonvulsant actions of phencyclidine receptor ligands: correlation with N-methylaspartate antagonist in vivo [Minireview]
Church J & Lodge D (1990) Gen. Pharmacol. 21, 165

Melatonin in humans, neuroendocrinological and pharmacological aspects [Plenary lecture]
Claustrat B, Bras J & Chazot G (1990) Nucl Med Biol. Int J. Rad Appl. Instrum. Pt. B, 17, 625

Targets and strategies for the antiviral chemotherapy of AIDS
Clercq E de (1990) Trends Pharmacol. Sci. 11, 198

New macrofilaricidal lead from plants?
Comley J C W (1990) Trop. Med Parasitol 41, 1

Antibody-directed enzyme prodrug therapy
Connors T A (1990) Cancer Cell Mon Rev 2, 56

Adenosine — physiological and pharmacological actions [In Spanish; English abstract]
Contreras E (1990) Arch. Biol. Med Exp. 23, 1

Review — 5-hydroxytryptamine — new receptors and novel drugs for gastrointestinal motor disorders
Costall B & Naylor R J (1990) Scand J Gastroeneterol. 25, 769

Plasmid-mediated 4-quinolone resistance: a real or apparent absence? [Minireview]
Courvalin P (1990) Antimicrob. Agents Chemother. 34, 681-684

Symposium on Protein and Pharmaceutical Engineering, Park City, UT, 17-22 January, 1989
Craik C S, Fletterick R, Matthews C R & Wells J, eds. (1990) Proc Nat. Acad. Sci. USA, 110, 184 pp.

Drug reactions and interactions [In French; English abstract]
Darcy P F (1990) J. Pharm Belg. 45, 25

Gamma-linoleic acid, arachidonic acid, and eicosapentaenoic acid as potential anticancer drugs
Das U N (1990) Nutrition. 0, 429

Human immunodeficiency virus protease — a target for AIDS therapy [Current trends review]
Dobosz C & Metcalf B W (1990) Drug Dev Rev. 21, 1

Fencamfamine [Minireview]
DeLuca R & Planeta C S (1990) Gen Pharmacol 21, 161

LDL-mediated drug targeting
Dosmpt P C & Van Berk S T J C (1990) Crit. Rev. Ther Drug Carr. 7, 90
Analytical methodologies for the quantitation of platinum anticancer drugs and related compounds in biological media

Dewal W A J, Maessen F J M J & Kraak J C (1990) J. Pharmaceut. Bioanal. Anal. 8, 1

Structure-activity relationships (SAR) and structure-metabolism relationships (SMR) affecting the teratogenicity of carboxylic acids

Diarco F J (1990) Drug Metab. Rev. 22, 411

Heterocyclic antidepressant, monoamine oxidase inhibitor and neuroleptic withdrawal phenomena

Dilsaver S C (1990) Progr. Neuro-Psychopharmacol. Biol. Psychiat. 14, 137

Sensitivity of parasites to free radical damage by antiparasitic drugs

Duxcep R (1990) Chem-Biol. Inter. 73, 1

The metabolism and mode of action of gentian violet

Docampo R & Moreno S N J (1990) Drug Metab. Rev. 22, 161

An immunopharmacological approach for prevention of retrovirus-associated disease in human pathology

Donofrio C & Bonmassar E (1990) PharmacoL Rev. 22, 645

Chemistry and pharmacology of hydrazine acetic acid

Dörre R, Horn H & Unverferth K (1990) Pharmazie, 45, 1

Minireview: D-2 dopamine autoreceptor selective drugs: do they really exist?

Drukarch B & Stoof J C (1990) Life Sci. 47, 361

Physiological disposition of HMG-CoA-reductase inhibitors

Duggan D E & Vickers S (1990) Drug Metab. Rev. 22, 333

Hepatic drug metabolism and aging

Durnas C. Lotte M & Cusack C J (1990) J. Chromatogr. 13, 371

Activation of programmed cell death by anticancer agents: cisplatin as a model system

Eastman A (1990) Cancer Cells, 2, 275

The pharmacology, metabolism, analysis, and applications of coumarin and coumarin-related compounds

Egan D & others (1990) Drug Metab. Rev. 22, 503

Pharmacokinetics and metabolism of mitoxantrone: a review

Ehninger G. Schuler U, Proksch B, Zeller K-P & Blanz J (1990) Clin Pharmacokin. 19, 350

Neurochemical and psychopharmacologic aspects of aggressive behavior

Eichelman B S (1990) Annu. Rev Med. 41, 149

Animal models of drug withdrawal symptoms

Emmett-Oglesby M W, Mathis D A, Moon R T Y & Lal H (1990) Psychopharmacology. 101, 292

Drug-induced DNA damage and tumor chemosensitivity

Epstein R J (1990) J. Clin Oncol. 8, 2062

Liquid chromatographic analysis of antiepileptic drugs — an overview

Fazio A, Perucca E & Psani F (1990) J. Lab. Chromatogr. 13, 3711

Biochemical pharmacology and therapeutic aspects of thrombolytic agents

Fears R (1990) Pharmacol. Rev. 42, 201

1989 Douglas Lea Memorial Lecture. the cell dose concept: potential application in radiation protection

Feinendgen L E (1990) Phys. Med. Biol. 35, 597

Frameshift mutagenesis by acridines and other reversibly-binding DNA ligands

Ferguson L R & Denny W A (1990) Mutagenesis, 5, 529

Drug-induced and disease-induced regulation of voltage-dependent calcium channels

Ferrante J & Triggle D J (1990) Pharmacol. Rev. 42, 70

Neisseria meningitidis outer membrane proteins — prospects of their use in the development of preparations for immunoprophylaxis [In Russian; English abstract]

Filarova T N (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No. 2, 86

The history of benzodiazepine dependence: a review of animal studies

File S E (1990) Neurosci. Biobehav. Rev. 14, 135

Peter Harris Award Lecture. History and prospects in calcium antagonist research

Fleckenstein A (1990) J. Mol. Cell Cardiol. 22, 241

Pharmacology and therapeutic applications of cocaine

Fleming J A, Byck R & Barash P G (1990) Anesthesiology, 73, 518

Pharmacology of drugs that alter multidrug resistance in cancer

Ford J M & Hait W N (1990) Pharmacol. Rev. 42, 155

The rational design and synthesis of haptons having specific activity as full agonists or full antagonists at the benzodiazepine receptor

[Minireview]

Fryer R J & Gu Z-Q (1990) Life Sci. 47, 833

The pharmacokinetics of tricyclic antidepressant drugs in the elderly

Gambelan M & Benetello P (1990) Pharmacol. Rev. 22, 15

Interspecies metabolism and pharmacokinetic scaling of theophylline disposition

Gaspari F & Bonati M (1990) Drug Metab. Rev. 22, 179

Benzodiazepines and human memory: a review

Ghoneim M M & Mewalld S P (1990) Anesthesiology, 72, 926

Animal models for intranasal drug delivery studies

Gizurarson S (1990) Acta Pharmacut. Nordica, 2, 105

Evolution of the P450-gene superfamily — animal-plant warfare, molecular drive and human genetic differences in drug oxidation

Gonzalez F J & Nebert D W (1990) Trends Genet. 6, 187

Superoxide dismutase and catalase as therapeutic agents for human diseases. a critical review

Greenwald R A (1990) Free Radical Biol. Med. 8, 201

Basic mechanisms of action of drugs used in the treatment of essential hypertension

Guan X-M & Peroutka S J (1990) Clin Neuropharmacol. 13, 210

Separation of drug enantiomers by HPLC using chiral stationary phases — a selective review

Gubitz G (1990) Chromatographia, 30, 555

The inhibitors of the HIV-1 pol-protease [In French; English abstract]

Gued J R, Condom R, Ayi A I & Tran T T (1990) M/S Med. Sci. 6, 552

The characterization of immunotheerapeutic agents

Hadden J W, Renoux G & Charigos M (1990) Immunopharmacol. Rev. 1, 1

Novel anxiolytics that act as partial agonists at benzodiazepine receptors

Hassely W, Martin J R & Seehoch P (1990) Trends Pharmacol. Sci. 11, 452

Pharmacology of β-blockers — classical aspects and recent developments

Haeusler G (1990) J Cardiovasc. Pharmacol. 16, Suppl. 5, S1

Preclinical and clinical pharmacology of platelet-activating factor receptor antagonists

Handic A D (1990) Med. Res. Rev. 10, 351

Calcium antagonists: Hypertension, atherosclerosis, and stroke — Proceedings of an International Symposium to the Fourth European Meeting on Hypertension — Milan, Italy, June 18, 1989

Hanssen L & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 1, S1
Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr. Biochem. 1, 396

Antimutagens and anticarcinogens: a survey of putative intercetor molecules
Hartman P E & Shankel D M (1990) Envr. Mol. Mutagen 15, 145

Non-steroidal anti-inflammatory drugs and peptic ulcers
Hawkey C J (1990) Br. Med. J. 300, 278

Molecular mechanisms of drug resistance
Hayes J D & Wolf C R (1990) Biochem. J. 272, 281

EAA pharmacology: excitatory amino acids and synaptic transmission: the evidence for a physiological function
Headley P M & Grillner S (1990) Trends Pharmacol. Sci. 11, 205

Red blood cells as carrier systems for drugs [In German; English abstract]
Hellwig U (1990) Pharmazie, 45, 824

Indirect spectrophotometric detection in reversed-phase HPLC - abstract
Herait P (1990) J Pharm. Belg. 45, 151

KT-362 related effects on intracellular calcium release and associated clinical potential — arrhythmias, myocardial ischemia, and hypertension
Hester R K & Shibata S (1990) Cardiovasc. Drugs Ther. 4, 1345

Platelet-activating factor (PAF) and PAF antagonists in asthma
Hosford D, Menclaiahuer A M & Braquet P (1990) Crit. Rev. Ther. Drug Curr. Sys. 7, 261

The cannabinoid receptor: biochemical, anatomical and behavioral characterization
Hewlett A C & others (1990) Trends Neurosci. 13, 420

Physiological and neuropharmacological aspects of the central respiratory mechanisms
Hukuhara T r (1990) Folia Pharmacol Jap. 95, 279

Site of action of analgesics: the peripheral site of action of these drugs
Inoki R (1990) Folja Pharmacol. Jap. 95, 139

Mechanisms of action of 5-aminosalicylic acid and its derivatives [Editorial review]
Ireland A & Jewell D P (1990) Clin. Sci. 78, 119 125

Neuropharmacological profile of V-9-M, a putative neuropeptide derived from procholecystokinin
Itoh S & Takashima A (1990) Clm. Pharmacokmet. 18, 177-196

Finnogenus benzodiazepine modulation of memory processes
Izquierdo I, Cunha C & Medina J H (1990) Neurosci. Biobehav. Rev. 14, 419

Pharmacokinetics of antimicrobial agents in organ function impairment. A review
Janknegt R (1990) Pharmaceut. Weekbl. Sci. Ed. 12, 121

Effects of mainstream and environmental tobacco smoke on the immune system in animals and humans: a review
Johnson J D, Houchens D P, Kluwe W M, Craig D K & Fisher G L (1990) Crit. Rev. Toxicol. 20, 369

Neuropharmacology of phencyclidine: basic mechanisms and therapeutic potential
Johnson K M & Jones S M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 707-750

ACE Inhibitors and the Kidney — Proceedings of a Satellite Symposium held in Conjunction with the International Society of Hypertension, Kyoto, Japan, May 21, 1988
Johnston C I & others (1990) Nephron. 55, Suppl. 1, 1

The search for chelate antagonists for chronic cadmium intoxication
Jones M M & Cherian M G (1990) Toxicology, 62, 1

Endocrine pharmacology of antiestrogens as antitumor agents
Jordan V C & Murphy C S (1990) Endocr. Rev. 11, 578

Photosensitized processes in vivo: proposed phototherapeutic applications
Jori G (1990) Photochem. Photobiol. 52, 439

Methods for checking up the integrity of membraneous filters for sterile filtration of liquids in the production of injectable drugs [In Russian]
Kagan A Y, Moisenko L A & Sinitsyn M A (1990) Khim Farm Zh. SSSR. 24, No. 2, 166

The risks of handling cytotoxic drugs. 1. Methods of testing exposure
Kaiser G P. Underberg W J M & Beijnen J H (1990) Pharmaceut. Weekbl. Sci Ed. 12, 217

The risks of handling cytotoxic drugs. 2. Recommendations for working with cytotoxic drugs
Kaiser G P, Underberg W J M & Beijnen J H (1990) Pharmaceut. Weekbl. Sci. Ed. 12, 228

Genetic basis of multidrug resistance of tumor cells [Mini-review]
Kane S E, Pastan I & Gottesman M M (1990) J. Bioenerget. Biomembr 22, 593

Drug metabolism and drug interactions
Kapetanovic I M (1990) Acta Pharmac. Jugoslav. 40, 351

Pyrimidine derivatives — psychotropic properties and molecular mechanisms of central action [In Russian; English abstract]
Karkishchenko N N, Maklyakov Y S & Stradomsksy B V (1990) Farmakol. Toksikol. 53, 67

Synthesis and pharmacological activity of 1,4-dihydropyridines (a review) [In Russian]
Kastron V V, Vitolin R O & Dubar G Y (1990) Khim. Farm Zh. SSSR. 24, 14

Mechanisms of nitrate tolerance: a review
Katz R J (1990) Cardiovasc. Drugs Ther. 4, 247

Clinical pharmacokinetics of the new ACE inhibitors. a review
Kelly J G & O'Malley K (1990) Clin Pharmacokinet. 17, 177-196

Drugs and receptors — an overview of the current state of knowledge
Kenakin T (1990) Drugs. 40, 666

A review of calcium antagonists and atherosclerosis
Keogh A M & Schroder J S (1990) J Cardiovasc. Pharmacol. 16, Suppl. 6, S28

Prevention of malaria
Keystone J S (1990) Drugs, 39, 337-354

The effect of neuroleptics on cognitive and psychomotor function
King D J (1990) Br. J. Psychiat. 157, 799

Cationic amphiphilic drugs and phospholipid storage disorder
Kodavanti U P & Mehendale H M (1990) Pharmacol. Rev. 42, 327

Neuropeptide-mediated transmission of nociceptive information and its regulation — novel mechanisms of analgesics [In Japanese; English abstract]
Kuraishi Y (1990) Yakugaku Zasshi, 110, 711

Drug interactions in hypertensive patients: pharmacokinetic, pharmacodynamic and genetic considerations
Lam Y W F & Shepherd A M M (1990) Clin Pharmacokinet. 18, 293-317

Potential of monoclonal antibodies as pharmacological agents
Larrick J W (1989) Pharmacol. Rev. 41, 539
Glutathione S-transferases and drug resistance
Morrow C S & Cowan K H (1990) Cancer Cells, 2, 15

Muclaginous plants and their use in medicine
Morton J F (1990) J. Ethnopharmacol. 29, 245

Kinins And Converting Enzyme Inhibitors Workshop held in
Königstein, FRG. June 7-9, 1989
Müller-Esterl W & others (1990) J Cardiovasc. Pharmacol. 15, Suppl 6, S1-S00

Absorption enhancers
Muramishi S (1990) Crit Rev Ther Drug Carrying Syst. 7, 1

Selectivity in the inhibition of mammalian cytochromes P-450 by
chemical agents
Murray M & Reidy G F (1990) Pharmacol Rev. 42, 85

Immunochromic assays for narcotic agents (a review) [In Russian]
Myagkova M A & Lushnikova M V (1990) Khim. Farm Zh SSSR, 24, 76

Development and plasticity of the Locus coerulescens: a review of recent
physiological and pharmacological experimentation
Nakamura S & Sakaguchi T (1990) Progr. Neurobiol 34, 505

Anabolic steroids — a review of the clinical toxicology and diagnostic
screening
Narducci W A, Wagner J C, Hendrickson T P & Jeffrey T P (1990) J. Toxicol. Clin Toxicol 28, 287

The dihydropyridine-sensitive calcium channel of the skeletal muscle —
biomechanics and structure [MiniReview]
Nastainczyk W, Ludwig A & Hofmann F (1990) Gen. Physiol. Biophys. 9, 321

Pharmacokinetic drug interaction with phenytoin (Part I)
Nation R L, Evans A M & Milne R W (1990) Clin Pharmacokinet 18, 37-60

The discovery and development of buspirone: a new approach to the
treatment of anxiety
New J S (1990) Med Rev 19, 283

Pharmacology of nootropics and metabolically active compounds in
relation to their use in demencia
Nicholson C D (1990) Psychopharmacology 101, 147

Transdermal absorption and skin metabolism of viprostol, a synthetic
prostaglandin E2 analogue
Nicolaus G & Yacobi A (1990) Drug Metab Rev 21, 401

Light microscopy and morphometry of vinblastine in vivo cytotoxicity
in the different developmental stages of rat incisor ameloblast epithelium
Nielsen H W (1990) APMIS, 98, Suppl 11, 5-56

Plasma protein binding of drugs in pregnancy and in neonates
Notaranni L J (1990) Clin Pharmacokinetic 18, 20-36

Basis for the application of calcium antagonists in neurology
Nueten J M van & others (1990) Eur Neurol, 30, Suppl.2, 1

Nonsteroidal antiinflammatory drugs: acute effects on the kidney
Oberle G P & Stahl R A K (1990) Disch. Med. Wochnschr 115, 309

Effects of drugs on glucose tolerance in non-insulin-dependent
diabetes (Part I)
O’Byrne S & Feely J (1990) Drugs, 40, 6-18

Effects of drugs on glucose tolerance in non-insulin-dependent
diabetes (Part II)
O’Byrne S & Feely J (1990) Drugs, 40, 203-219

Degradation of thyrotropin-releasing hormone and luteinizing
hormone-releasing hormone by enzymes of brain tissue [Short review]
O’Cumm G, O’Connor B & Elmore M (1990) J Neurochem 54, 1

Synthesis and antitumour activity of new derivatives of anthracycline
antibiotics modified in the aglycon moiety [In Russian; English
abstract]
Obstufyeva E N (1990) Bioorg. Khim 16, 1443

The pharmacology of the gut of the desert locust Schistocerca gregaria
and other insects [MiniReview]
Osborne R H, Banner S E & Wood S J (1990) Comp. Biochem Physiol Pt C 96, 1

The maintenance of cytochrome P-450 in rat hepatocyte culture: some
applications of liver cell cultures to the study of drug metabolism,
toxicity and the induction of the P-450 system
Paine A J (1990) Chem-Biol. Inter. 74, 1

Drug-protein conjugation and its immunological consequences
Park B K & Kittingham N R (1990) Drug Metab. Rev. 22, 87

Schelle Lecture 1989. Drug metabolism in the design and safety
evaluation of new drugs
Parke D V (1990) Acta Pharmaceut Nordica, 2, 231

Human placental xenobiotic and steroid biotransformations catalyzed
by cytochrome P-450, epoxide hydrolase, and glutathione
S-transferase activities and their relationships to maternal cigarette
smoking
Pasanen M & Pelkonen O (1990) Drug Metab. Rev. 21, 427

Molecular mechanisms of action of rhivabin
Patterson J I. & Fernandezlarsson R (1990) Rev. Infect. Dis. 12, 1139

A review of the clinical pharmacokinetics and metabolism of the
alpha-1-adrenoreceptor antagonist indomethorin
Pierce D M (1990) Xenobiotica, 20, 1357

Drug induced agranulocytosis peripheral destruction of
polymorphonuclear leukocytes and their marrow precursors
Picciotta A V (1990) Blood Rev 4, 226

The controlled parenteral delivery of polyptides and proteins
Pirt C G (1990) Int J Pharmaceut 59, 173

New trends in photobiology. The possible role of ionic species in
selective biodistribution of photochemothterapeutic agents toward
neoplastic tissue
Pottor R & Kennedy J C (1990) J Photochem Photobiol. B-Biol 8, 1

Amoeboed locomotion of Naegleria gruberi. The effect of
cytoskeleton-B on cell—substratum interactions and motile behaviour
Preston T M, Cooper L G & King C A (1990) J. Protozool. 37, Suppl, S6

The metabolic effects of diuretics and other antihypertensive drugs —
a perspective as of 1989
Raftery E B (1990) Int. J. Cardiol. 28, 143

Clinical significance of pharmacological modulation of homocysteine
metabolism
Refsum H & Ueland P M (1990) Trends Pharmacol Sci 11, 411

Neurokinin A. A pharmacological study
Regoli D & others (1990) Pharmacol. Rev. 22, 1

In vitro testing of drugs and chemicals for stable and reactive
metabolites
Rendic S, Weber P & Ullrich V (1990) Acta Pharmaceut. Jugoslav 40, 409

Species variations of receptor-effector parameters: a solvable problem of
drug research?
Repeke K R H, Schönfeld W, Schönfeld R & Menke K-H (1990)
Pharmazie, 45, 237

Aspects of the medicinal chemistry of fluoroorganic compounds. 2
Resnati G (1990) Farmaco. 45, 1137
Antidepressants and brain neurochemistry
Richelson E (1990) Mayo Clin. Proc. 65, 1227

Cardiovascular and biological effects of K+ channel openers, a class of drugs with vasorelaxant and cardioprotective properties [Minireview]
Richter C & others (1990) Life Sci. 47, 1693

Clinical update on Calcitrol — a Symposium presented by the University of Wisconsin Department of Biochemistry at Seattle, Washington
Riggs B L & others (1990) Metabolism, 39, No. 4, Suppl. 1, 1

Suramin: prototype of a new generation of antitumor compounds
Rocca R V, Stein C A & Myers C E (1990) Cancer Cells, 2, 106

Antiepileptic drugs — pharmacological mechanisms and clinical efficacy with consideration of promising developmental stage compounds
Rogawski M A & Porter R J (1990) Pharmacol. Rev. 42, 223

Oral contraceptives and breast cancer — review and meta-analysis
Romieu I, Berlin J A & Colditz G (1990) Cancer, 66, 2253

Neutral endopeptidase-24.11 inhibitors: from analogues to antihypertensives
Roques B P & Beaumont A (1990) Trends Pharmacol. Sci. 11, 250

Drug-induced Parkinsonism and other movement disorders
Ross R T (1990) Can. J. Neurol. Sci., 17, 155

Fragmin: The New Generation Antithrombotic Agent
Sakuragawa N & others (1990) Seminars Thrombosis Hemostasis, 16, Suppl. U1, 171

Inter-alpha-trypsin inhibitor — emergence of a family within the Kunitz-type protease inhibitor superfamily
Salier J P (1990) Trends Biochem. Sci., 15, 435

Differential gene expression in human cancer cells resistant to cisplatin [Basic science review]
Scanlon K J, Kashani-Sabet M & Miyachi H (1989) Cancer Invest., 7, 381

Role of pharmacokinetics in safety evaluation and regulatory considerations
Scheuplein R J, Shoaf S E & Brown R N (1990) Annu. Rev. Pharmacol. Toxicol. 30, 197-218

Pharmacological and functional characteristics of metabotropic excitatory amino acid receptors
Schoepp D, Bockaert J & Sladecek F (1990) Trends Pharmacol. Sci., 11, 508

Platelet reactivity and arachidonic acid metabolism in type II hyperlipoproteinaemia and its modification by cholesterol-lowering agents
Schroer K (1990) Eicosanoids, 3, 67

Enkephalinase (EC 3.4.24.11) inhibitors: protection of endogenous ANF against inactivation and potential therapeutic applications [Minireview]
Schwartz J-C, Gros C, Lecomte J-M & Bralet J (1990) Life Sci., 47, 1279

Activation of prodrugs by antibody–enzyme conjugates: a new approach to cancer therapy
Senter P D (1990) FASEB J., 4, 188

Biologically active derivatives of polypropyleneacids and their related compounds [In Russian]
Serebryakov E P & Nigmatov A G (1990) Khim. Farm. Zh., SSSR, 24, No. 2, 104

Cellular mechanisms in hypertension and therapeutic implications in blacks
Shulman N B & others (1990) Cardiovasc. Drugs Ther, 4, Suppl. 2, 315

Immunotropic activity of azole derivatives and their condensed heterocyclic systems (a review) [In Russian]
Sibiryak S V, Strokin Y V, Sadykov R F & Dianov V M (1990) Khim. Farm. Zh., SSSR, 24, No. II, 19

Free radicals and anticancer drug resistance — oxygen free radicals in the mechanisms of drug cytotoxicity and resistance by certain tumors
Sinha B K & Minnaugh E G (1990) Free Radical Biol. Med., 8, 567

Pharmacology and mechanism of action of the new HMG-CoA reductase inhibitors
Sirtori C R (1990) Pharmacol. Rev., 42, 215

Metabolism of thioamide antithyroid drugs
Siiaar D S (1990) Drug Metab. Rev., 22, 477

New insights on the mechanisms of action of ganglionic blocking agents
SkoV V I (1990) News Physiol. Sci., 5, 168

DNA topoisomerase dysfunction: a new goal for antitumor chemotherapy
Smith P J (1990) BioEssays, 12, 167

The third-dopamine receptor — a new target for neuroleptics [In French; English abstract] [Minireview]
Sokoloff P, Giros B, Martres M P & Schwartz J C (1990) M/S Med. Sci., 6, 800

Effect of exercise on disposition and pharmacokinetics of drugs [Current trends review]
Somani S M, Gupta S K, Frank S & Corder C N (1990) Drug Dev. Res., 20, 251

Drug transport in the central nervous system: role of carriers [Minireview]
Spector R (1990) Pharmacol. Rev., 40, 1

Chlorins as photosensitizers in biology and medicine
Spikes J D (1990) J. Photochem. Photobiol. B-Biol., 6, 259

Chitin metabolism: a target for drugs against parasites
Spindler K-D, Spindler-Barth M & Londershausen M (1990) Parasitol. Res., 76, 283

Caffeine metabolism — a problem in extrapolating results from animal studies to humans
Stavric B & Gilbert S G (1990) Acta Pharmaceut. Jugoslav, 40, 475

Synthetic immunomodulating agents
St.Georgiev V (1990) Med. Res. Rev., 10, 371

5th National Clinical Pharmacology Conference, Gens, France, September 28–30, 1988

Synthetic immunomodulating agents
St.Georgiev V (1990) Med. Res. Rev., 10, 371

Drug transport in the central nervous system: role of carriers [Minireview]
Spector R (1990) Pharmacol. Rev., 40, 1

Chlorins as photosensitizers in biology and medicine
Spikes J D (1990) J. Photochem. Photobiol. B-Biol., 6, 259

Chitin metabolism: a target for drugs against parasites
Spindler K-D, Spindler-Barth M & Londershausen M (1990) Parasitol. Res., 76, 283

Caffeine metabolism — a problem in extrapolating results from animal studies to humans
Stavric B & Gilbert S G (1990) Acta Pharmaceut. Jugoslav, 40, 475

Synthetic immunomodulating agents
St.Georgiev V (1990) Med. Res. Rev., 10, 371

5th National Clinical Pharmacology Conference, Gens, France, September 28–30, 1988

Drug transport in the central nervous system: role of carriers [Minireview]
Spector R (1990) Pharmacol. Rev., 40, 1

Chlorins as photosensitizers in biology and medicine
Spikes J D (1990) J. Photochem. Photobiol. B-Biol., 6, 259

Chitin metabolism: a target for drugs against parasites
Spindler K-D, Spindler-Barth M & Londershausen M (1990) Parasitol. Res., 76, 283

Caffeine metabolism — a problem in extrapolating results from animal studies to humans
Stavric B & Gilbert S G (1990) Acta Pharmaceut. Jugoslav, 40, 475

Synthetic immunomodulating agents
St.Georgiev V (1990) Med. Res. Rev., 10, 371
Pharmacodynamics: Changes in homeostatic mechanisms, receptor and target organ sensitivity in the elderly
Swift C G (1990) Br. Med. Bull. 46, 36–52

The future of liposomal drug delivery
Szego F C (1990) Biotechnol. Appl. Biochem. 12, 496

Drug delivery systems for antitumor activation of macrophages
Tabata Y & Ikada Y (1990) Crit. Rev. Ther. Drug Carri. Syst. 7, 121

The effect of respiratory disorders on clinical pharmacokinetic variables
Tahuret A M, Toller C & Richard C (1990) Clin. Pharmacokinet 19, 462

Modification of behavioral effects of drugs after repeated administration; in particular, the reverse tolerance to amphetamines
Tadokoro S & Kuribara H (1990) Folia Pharmacol. Jap. 95, 229

Physiological and pharmacological actions of a neuroactive dipeptide, kyotorphin, and its precursor, L-arginine, and clinical application
Tokagi H (1990) Folia Pharmacol. Jap. 96, 85

Hormonal regulation of sociosexual behavior in female mammals
Takahashi L K (1990) Neurosci. Biobehav. Rev. 14, 403

Pharmacological properties of newly synthesized derivatives of (−)-6β-acetylthionormorphine and their interactions with opioid receptors
Minireview
Takayanagi I, Kolke K & Suzuki T (1990) Gen. Pharmacol. 21, 605

Potent and specific inhibitors of protein kinase C of microbial origin
Taniyuki S & Nakano H (1990) Bio/Technology, 6, 732

1st International Interface of Clinical and Laboratory Responses to Anticancer Drugs, Villejuif, France, March 13–15, 1989
Tapiero H, Robert J & Lampidis T J, eds

Immuno- and biological therapy of cancer — current clinical status and future prospects
Taylor C W & Hersh E M (1990) Immunopharmacol. Rev 1, 89

Drug metabolism and pharmacokinetics — implications for drug design
Testa B & Mayer J M (1990) Acta Pharmaceut Jugoslav. 40, 315

In vitro techniques for metabolism studies during drug development
Thenot J P, Durand A & Morselli P L (1990) Acta Pharmaceut Jugoslav. 40, 395

Midazolam and flumazenil: the agonist–antagonist concept for sedation and anaesthesia — International Symposium Proceedings — Sardinia, April 1989
Thomson D & others (1990) Acta Anaesthesiol Scand. 34, Suppl 62, 5

Biochemical aspects of drug-induced Parkinson’s disease [Royal Irish Academy Lecture]
Tipton K F (1990) Biochem. Soc. Trans. 18, 129

New strategy for discovery of enzyme inhibitors — screening with intact mammalian cells or intact microorganisms having special functions
Tomoda H & Omura S (1990) J. Antibiot. 43, 1207

Biokinetik of peptidaminobenzophenones precursors of benzodiazepines [In Russian]
Totrova M Y, Golovenko N Y, Rudenko O P & Zinkovsky V G (1990) Khim. Farnn. Zh. SSSR, 24, No. 12, 9

Pharmacokinetics in old age
Tregaskis B F & Stevenson I H (1990) Br. Med. Bull. 46, 9

Tiazofurin: biological effects and clinical uses [Concise review]
Tricot G, Jayaram H N, Weber G & Hoffman R (1990) Int. J Cell Cloning, 8, 161

Fibroblast growth factor in the eye and prospects for its therapeutic use
Tripathi R C, Kolli S P & Tripathi B J (1990) Drug Dev. Res. 19, 225

Drug metabolism by leukocytes and its role in drug-induced lupus and other idiosyncratic drug reactions
Uetrecht J (1990) Crit. Rev. Toxicol. 20, 213

RU 486
Ulmann A, Teutsch G & Philibert D (1990) Sci. Am. 262, No. 6, 42–48

Regional pharmacokinetics. 1. Physiological and physicochemical basis
Upton R N (1990) Biopharm. Drug Dispos 11, 647

Schizophrenia, affective psychoses, and other disorders treated with neuroleptic drugs — the enigma of tardive dyskinesia, its neurobiological determinants, and the conflict of paradigms
Waddington J L (1989) Int. Rev. Neurobiol. 31, 297

Antineoplastic activity of the combination of interferon and cytotoxic agents against experimental and human malignancies — a review
Wadler S & Schwartz E L (1990) Cancer Res. 50, 3473

Drug release from microdisperses systems — a critical review
Washington C (1989) Int. J. Pharmaceut. 55, 1

Pharmacology of α-fluoromethylhistidine, a specific inhibitor of histidine decarboxylase
Watanabe T, Yamatodani A, Maeyama K & Wada H (1990) Trends Pharmacol. Sci. 11, 365

EAA pharmacology: Structure-activity relationships in the development of excitatory amino acid receptor agonists and competitive antagonists
Watkins J C, Kroghgaard-Larsen P & Honoré T (1990) Trends Pharmacol. Sci. 11, 25

Immunomodulation by cocaine — a neuroendocrine mediated response [Minireview]
Watel B & Watson R R (1990) Life Sci. 46, 1319

Glutathione S-transferases — role in alkylating agent resistance and possible target for modulation chemotherapy
Waxman D J (1990) Cancer Res. 50, 6449

Mechanisms of cardiovascular drugs as antioxidants
Weglicki W B, Mak I T & Simic M G (1990) J. Mol. Cell Cardiol. 22, 1199

The behavioral pharmacology of NMDA receptor antagonists
Willette J, Balster R L & Leander I D (1990) Trends Pharmacol. Sci. 11, 423

Pharmacokinetics of immunomodulators
Williams J F (1990) Immunopharmacol. Rev. 1, 65

How surface-bound drugs inhibit thrombus formation [Current trends review]
Wilson J E (1990) Drug Dev. Res. 21, 79

Liquid chromatographic methods validation for pharmaceutical products
Wilson T D (1990) J. Pharmaceut. Biomed. Anal. 8, 389

Human recombinant interleukin-2 as an experimental therapeutic
Winkelhake H J & Ganny S S (1990) Pharmacol. Rev. 42, 1

Artemisia annua L — a source of novel antimalarial drugs
Woerdenbag H J, Luet C B & Pras N (1990) Pharmaceut Weekbl Sci Ed. 12, 169
The Renin–Angiotensin System as a Therapeutic Target: Proceedings of an International Symposium held in Basel, Switzerland, October 29–30, 1989

Wood J M & others (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 4, S1–S76

The potential use of thalidomide in the therapy of graft versus host disease — a review of clinical and laboratory information

Wood P M D & Proctor S J (1990) Leukemia Res. 14, 395

Hepatic drug metabolism and ageing

Woodhouse K W & James O F W (1990) Br. Med. Bull. 46, 22

Oxicams — metabolic disposition in man and animals

Woolf T F & Radulovic L L (1989) Drug Metab Rev. 21, 255

Natural products and the development of selective antiprotozoal drugs

Wright C W & Phillipson J D (1990) Phytoster. Res. 4, 127

The biological basis of an antidepressant response to sleep deprivation and relapse — review and hypothesis

Wu J C & Bunney W E (1990) Am. J. Psychiatry. 147, 14

FK 106, a new immunosuppressive agent: a review

Yoshimura N & Oka T (1990) EOS-Riv Immunol. Immunofarmacol. 10, 32

Neurotransmitters and hypertension: Urapidil, a new antihypertensive drug, Symposium, January 13, 1989, Paris [In Franch, English abstract]

Zanchetti A & others (1990) Thérapie. 45, Suppl. 2, 169

Widening potential for Ca2⁺ antagonist self non-L-type-Ca2⁺ channel interaction

Zernig G (1990) Trends Pharmacol. Sci. 11, 38

Impact of physiological body’s status on mutagenic activity of drugs and other xenobiotics [In Russian]

Zolotareva G N, Kudchenko L U, Loginova N S & Faddeeva I N (1990) Khim. Farm. Zh. SSSR, 24, No. 12, 4

5-HT₃-realted drugs and human experimental anxiety

Zuardi A W (1990) Neurosci. Biobehav Rev. 14, 507

EICOSANOIDS

See: PROSTATGLANDINS

ENDOCYTOSIS

See: TRANSPORT

ENZYMES AND ENZYME REGULATION

See also: ISOENZYMES

PROTEIN PHOSPHORYLATION, PROTEIN KINASE AND PROTEIN PHOSPHATASE

Enzyme inhibition by fluoro compounds [Minireview]

Ables R H & Alston T A (1990) J. Biol. Chem. 265, 16705

The structure and mechanism of iron-hydrogenases

Adams M W W (1990) Biochim. Biophys. Acta. 1020, 115

Heme production in animal tissues: the regulation of biogenesis of δ-aminolevulinate synthase [Minireview]

Ades I Z (1990) Int. J. Biochem. 22, 565

Cellular and secreted lipoprotein lipase revisited [Plenary lecture]

Ahlhaldn G (1990) Clin. Biochem. 23, 343

The use of microbial and enzymatic function in organic synthesis — usual synthesis of the aglycone of venturicidin-A and venturicidin-B

[A Japanese; English abstract]

Akitu H (1990) Yakugaku Zasshi, 110, 789

Nobel Lecture: Enzymatic cleavage of RNA by RNA (reprinted)

Altman S (1990) Biosci. Rep. 10, 317

Ribonuclease-P — postscript [Minireview]

Altman S (1990) J. Biol. Chem. 265, 20053

Energy coupling in bacterial periplasmic permeases [Minireview]

Ames G F-L & Joshi A K (1990) J. Bact. 172, 4133–4137

Bacterial periplasmic permeases belong to a family of transport proteins operating from Escherichia coli to human: traffic ATPases

Ames G F L, Mimura C S & Shymala V (1990) FEMS Microbiol. Rev. 75, 479

Plasminogen activator inhibitors: hormonally regulated serpins

Andreasen P A, Georg B, Lund L R, Riccio A & Stacey S N (1990) Mol. Cell. Endocrinol. 65, 1–19

The acid-active hemolysin of Trypanosoma cruzi [Minireview]

Andrews N W (1990) Exp. Parasitol. 71, 241

Thudichum Lecture: Receptor-mediated activation of phospholipase-A₂ and arachidonic acid release in signal transduction

Axelrod J (1990) Biochem. Soc. Trans. 18, 503

Cobalammain-dependent methionine synthase

Banerjee R V & Matthews R G (1990) FASEB J. 4, 1450

Myl-1 reverse transcriptase: structure predictions for the polymerase domain [Minireview]

Barber A M, Hizi A, Maizel J V Jr & Hughes S H (1990) AIDS Res. Hum. Retrovirus, 6, 1061

In vitro assays used to measure the activity of topoisomerases [Minireview]

Barrett J F, Sutcliffe J A & Gootz T D (1990) Antimicrob. Agents Chemother. 34, 1–7

Minireview: The function of protein carboxymethyltransferase in eukaryotic cells

Barten D M & O’Dea R F (1990) Life Sci. 47, 181

“APUD” cells: fact and fiction [Brief review]

Baylin S B (1990) Trends Endocrinol. Metab. 1, 198–204

Recognition of DNA by type-II restriction enzymes

Bennett S P & Haford S E (1989) Curr. Top. Cell. Regul 30, 57

New trends in mammalian non-pancreatic phospholipase-A₂ research

Béréziat G, Etienne J, Kokkinidis M, Olivier J L & Pemas P (1990) J. Lipid Mediators, 2, 159

Proteinase inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Minireview]

Björkä L (1990) Mol. Microbiol. 4, 1439

The 3-D structure of HIV-1 proteinase and the design of antiviral agents for the treatment of AIDS

Blundell T L & others (1990) Trends Biochem. Sci. 15, 425

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]

Boeke J D (1990) Cell, 61, 193–195

Alterations of the CAMP-adenylate cyclase system in the failing human heart. Consequences for therapy with positive inotropic agents

Brock K W, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Review — Induction of drug-metabolizing enzymes by xenobiotics

Bock W K, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]

Boeke J D (1990) Cell, 61, 193–195

Recognition of DNA by type-II restriction enzymes

Bennett S P & Haford S E (1989) Curr. Top. Cell. Regul 30, 57

New trends in mammalian non-pancreatic phospholipase-A₂ research

Béréziat G, Etienne J, Kokkinidis M, Olivier J L & Pemas P (1990) J. Lipid Mediators, 2, 159

Proteinase inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Minireview]

Björkä L (1990) Mol. Microbiol. 4, 1439

The 3-D structure of HIV-1 proteinase and the design of antiviral agents for the treatment of AIDS

Blundell T L & others (1990) Trends Biochem. Sci. 15, 425

Review — Induction of drug-metabolizing enzymes by xenobiotics

Bock W K, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]

Boeke J D (1990) Cell, 61, 193–195

Alterations of the CAMP-adenylate cyclase system in the failing human heart. Consequences for therapy with positive inotropic agents

Brock K W, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Review — Induction of drug-metabolizing enzymes by xenobiotics

Bock W K, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]

Boeke J D (1990) Cell, 61, 193–195

Recognition of DNA by type-II restriction enzymes

Bennett S P & Haford S E (1989) Curr. Top. Cell. Regul 30, 57

New trends in mammalian non-pancreatic phospholipase-A₂ research

Béréziat G, Etienne J, Kokkinidis M, Olivier J L & Pemas P (1990) J. Lipid Mediators, 2, 159

Proteinase inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Minireview]

Björkä L (1990) Mol. Microbiol. 4, 1439

The 3-D structure of HIV-1 proteinase and the design of antiviral agents for the treatment of AIDS

Blundell T L & others (1990) Trends Biochem. Sci. 15, 425

Review — Induction of drug-metabolizing enzymes by xenobiotics

Bock W K, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Reverse transcriptase, the end of the chromosome and the end of life [Minireview]

Boeke J D (1990) Cell, 61, 193–195

Alterations of the CAMP-adenylate cyclase system in the failing human heart. Consequences for therapy with positive inotropic agents

In German; English abstract

In Japanese; English abstract
The plasma membrane H+-ATPase of higher plant cells: biochemistry and transport function
Briskin D P (1990) Biochim Biophys Acta, 1019, 95

Ca-2+-translocating ATPase of the plant plasma membrane
Briskin D P (1990) Plant Physiol. 94, 397

β-Lactamase as a probe of membrane protein assembly and protein export [Microreview]
Broome-Smith J K, Tadayyon M & Zhang Y (1990) Mol. Microbiol. 4, 1637

Glutathione transferase in helminths
Brophy P M & Barrett J (1990) Parasitology, 100, 345

Molecular pathology of glucose-6-phosphatase
Burchell A (1990) FASEB J 4, 2978

Nitrate reductase — a target for molecular and cellular studies in higher plants
Caboclo M & Rouze P (1990) Trends Genet. 6, 187

Functional domains of assimilatory nitrate reductases and nitrite reductases
Campbell W H & Kinghorn J R (1990) Trends Biochem Sci. 15, 315

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Angew. Chem. 29, 759

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Biocoi Rep. 10, 239

Structure and mechanism of action of a multifunctional enzyme — fatty acid synthase
Chang S I & Hammes G G (1990) Acc. Chem. Res. 23, 363

Applications of graph theory to enzyme kinetics and protein folding
Cooper C E (1990) Trends Biochem Sci. 15, 315

Conclusions and trends in the future of FOF/ATPases and synthases
Cote G L & Tao B Y (1990) Bioconjugate J. 7, 115
Heterogeneous intrahepatic distribution of glutamine synthetase [Robert Feulgen Prize Laureates]

Gebhardt R (1990) Acta Histochem. Suppl. 40, 23

Subunit assembly and functional maturation of Na,K-ATPase [Topical review]

Goering K (1990) J Membr. Biol. 115, 109

Retroviral reverse transcriptase: synthesis, structure, and function

Goff S P (1990) J Acq Immun Defic Syndrome, 3, 817

Inhibitory effects of quinolone antibacterial agents on eucaryotic topoisomerases and related test systems

Goetz T D, Barrett J F & Sutcliffe J A (1990) Antimicrob. Agents Chemother. 34, 8-12

Acyl beta-glucosidase -- enzymology and molecular biology of

Gaucher disease

Grabowski G A, Gatti S & Horowitz M (1990) Crit. Rev. Biochem. Mol. Biol. 25, 385

Phylogenetic distribution of superoxide dismutase supports an endosymbiotic origin for chloroplasts and mitochondrion [Minireview]

Grace S C (1990) Life Sci 47, 1875

Superoxide dismutase and catalase as therapeutic agents for human diseases: a critical review

Greenwald R A (1990) Free Radical Biol. Med. 8, 201

Molecular detection and correction of ornithine transcarbamylase

Group M, Jones S N & Caskey C T (1990) Trends Gene. 6, 335

Different specificities of ribonucelease-II and polynucleotide phosphorylase in 3'messenger RNA decay -- a review

Guerneres G & Portier C (1990) Biochimie, 72, 771

The inhibitors of the HIV-1 pol-protease [In French, English abstract]

Guengertch F P (1990) Biochimie, 72, 552

Characterization of roles of human cytochrome P-450 enzymes in carcinogen metabolism

Guengertch F P (1990) Asl Asia Pacific J. Pharmacol. 5, 327

Mechanisms of cytochrome P-450 catalysis

Guengertch F P & Macdonald T L (1990) FASEB J. 4, 2453

Limitations of the primary events of CO2 fixation in photosynthetic organisms: the structure and mechanism of rubisco

Gutteridge S (1990) Biochim. Biophys. Acta, 1015, 1

Enzymatic oxidation of xenobiotic chemicals

Guengertch F P (1990) Crit. Rev. Biochem. Mol. Biol. 25, 97

The mammalian diphtholate reductase locus

Hamlin J L & Chi M (1990) Biochim. Biophys. Acta, 1087, 107

Lingual and gastric lipases

Hamosh M (1990) Nutrition, 6, 421

Regulatory proteins of F1F0-ATPase: role of ATPase inhibitor [Minireview]

Hashimoto T, Yoshida Y & Tagawa K (1990) J. Bioenerget. Biomembr. 22, 27

Enzyme heterogeneity in the porphyrias [Plenary lecture]

Hindmarsh J T (1990) Clin Biochem. 23, 371

Biological importance of residual leukemic cells after BMT for CML -- does the polymerase chain reaction help?

Hughes T P & Goldman J M (1990) Bone Marrow Transplant. 5, 3

The tryptophan synthase multienzyme complex — exploring structure–function relationships with X-ray crystallography and mutagenesis

Hyde C C & Miles E W (1990) Bio/Technology, 8, 27

Activation of 3,3'-dichlorobenzidine — enzymic basis and toxicological consequences

Iba M M (1990) Drug Metab. Rev. 21, 377

Structure of transglutaminases [Minireview]

Ichinose A, Bottenus R E & Davie E W (1990) J. Biol. Chem. 265, 13411

Haem-dependent activation of guanylate cyclase and cyclic GMP formation by endogenous nitric oxide: a unique transduction mechanism for transcellular signaling [Minireview]

Ignarro L J (1990) Pharmacol. Toxicol. 67, 1

Coupling of catalytic and channel function in the Ca2+ transport ATPase [Topical review]

Inesi G & Kirtley M E (1990) J. Membr. Biol. 116, 1

Relationships of molecular structure and function in Ca2+-transport ATPase

Inesi G, Sumbilla C & Kirtley M E (1990) Physiol. Rev. 70, 749

Association of acetylcholinesterase with the cell surface [Topical review]

Inestrosa N C & Perelman A (1990) J. Membr. Biol. 118, 1

Thymidylate synthase-dihydrofolate reductase in protozoa

Ivanetich K M & Santi D V (1990) Exp. Parasitol. 70, 367

Bifunctional thymidylate synthase-dihydrofolate reductase in protozoa

Ivanetich K M & Santi D V (1990) FASEB J. 4, 1591

The polymerase chain reaction in transfusion medicine

Jackson J B (1990) Transfusion, 30, 51

The enzymes of detoxification [Minireview]

Jakoby W B & Ziegler D M (1990) J. Biol. Chem. 265, 20715

Ubiquitin-conjugating enzymes: novel regulators of eukaryotic cells

Jentsch S, Seufert W, Sommer T & Reins H-A (1990) Trends Biochem. Sci. 15, 195

Calpains (intracellular calcium-activated cisteine proteinases): structure–activity relationships and involvement in normal and abnormal cellular metabolism

Johnston P (1990) Int. J. Biochem. 22, 811

ACE inhibitors and the kidney Proceedings of a Satellite Symposium held in Conjunction with the International Society of Hypertension, Kyoto, Japan, May 21, 1988

Johnston C I & others (1990) Nephron, 55, Suppl. 1, 1

β-Galactoside transport in E. coli: a functional dissection of lac permease

Kaback H R, Bibi E & Roepe P D (1990) Trends Biochem. Sci. 15, 309

Phospholipases in biology and medicine [Plenary lecture]

Kaiser E, Chiba P & Zaky K (1990) Clin Biochem. 23, 349

Escherichia coli aspartate transcarbamoylase — the molecular basis for a concerted allosteric transition

Kantrowitz E R & Lipscomb W N (1990) Trends Biochem. Sci. 15, 53

Nuclear magnetic resonance relaxation methodology. application to enzyme systems [Minireview]

Kasturi S R, Jarodi G K, Iyer S R & Kenkare H I W (1990) Indian J. Biochem. Biophys. 27, 187

Viral proteinases: weakness in strength

Kay J & Dunn B M (1990) Biochim. Biophys. Acta, 1048, 1

Specificity of restriction endonucleases and DNA modification methyltransferases — a review

Kessler C & Manta V (1990) Gene, 92, 1-248
A radical-chemical route to acetyl-CoA: the anaerobically induced pyruvate formate-lyase system of Escherichia coli
Knappe J & Sawers G (1990) FEMS Microbiol. Rev. 75, 383

Lyosomal enzyme targeting [Sixth Jubilee Lecture]
Kornfeld S (1990) Biochem. Soc. Trans. 18, 367

Placental-like alkaline phosphatase in seminoma
Koshida K & Wahren B (1990) Urol. Res. 18, 87

On the structure and activity of irreversible monoamine oxidase inhibitors (a review) [In Russian]
Kovelman I P, Trochilkin A I & Gorkin V Z (1990) Khim. Farm. Zh. SSSR, 24, 4

Processing of precursors by dipetidylaminopeptidases — a case of molecular ticketing
Kreil G (1990) Trends Biochem. Sci 15, 23

Protease-catalyzed syntheses of peptides in biphasic aqueous–organic systems
Kuhl P & Jakubke H-D (1990) Pharmazie, 45, 393

Involvement of aminoacyl-transfer RNA synthetases and other proteins in group I and group II intron splicing
Lambowitz A M & Perlman P S (1990) Trends Biochem. Sci. 15, 440

Cholinesterases preceding major tracts in vertebrate neurogenesis
Layer P G (1990) BioEssays, 12, 415

Commitment and activation at Pol II promoters: a tail of protein–protein interactions
Lewin B (1990) Cell, 61, 1161–1164

Mechanisms of disease: leukotrienes and other products of the S-lipoxygenase pathway — biochemistry and relation to pathobiology in human diseases
Lewis R A, Austen K F & Soberman R J (1990) New Engl. J. Med. 323, 645

The Role of Cellular Proteases and Their Inhibitors in Invasion and Metastasis
Luoita L A & others (1990) Cancer Metast. Rev. 9, 285–381

Determination of amniotic fluid acetylcholinesterase activity in the antenatal diagnosis of foetal malformations — the first ten years
Loft A G R (1990) J. Clin. Chem. Clin. Biochem. 28, 893

Aminogluthethimide enzyme induction: pharmacological and endocrinological implications
L'evennou P E (1990) Cancer Chemother. Pharmacol. 26, 241

Regulation of nitrogenase activity by reversible ADP ribosylation
Ludden P W & Roberts G P (1989) Curr. Top. Cell. Regul. 30, 23

The polymerase chain reaction: current and future applications
Lynch J R & Brown J M (1990) J. Med. Genet. 27, 2

Angiotensin converting enzyme inhibitors and moderate hypertension
McAreeeay D & Robertson J I S (1990) Drugs, 40, 326–345

Ontogeny of fetal adenylyl cyclase: mechanisms for regulation of beta adrenergic receptors
Maser J A, Roberts J M & Jacobs M M (1989) J. Dev. Physiol. 12, 249–261

Alkaline phosphatase fusions: sensors of subcellular location
Manoil C, Mekalanos J J & Beckwith J (1990) J. Bact. 172, 515–518

Phospholipases: old enzymes with new meaning
Mansbach C M II (1990) Gastroenterology, 98, No. 5, Pt I, 1369

Emerging views on the structure and dynamics in the Ca2+–ATPase is sarcoplasmic reticulum [Minireview]
Martonosi A N & others (1990) FEBs Lett. 268, 365–370

Aldose reductase inhibitors in the treatment of diabetic neuropathy: a review of the rationale and clinical evidence
Masson E A & Boulton A J M (1990) Drugs, 30, 190–202

Metalloproteinases and their inhibitors in matrix remodeling
Matrisian L M (1990) Trends Genet. 6, 121

Physiological functions of (Na+ K+)-adenosinetriphosphatase (ATPase) isozymes [In Japanese; English abstract]
Matsuda T (1990) Yakagaku Zasshi, 110, 235

Methionyl-transfer RNA synthetase from E. coli — a review
Meinnel T & others (1990) Biochimie, 72, 625

An update of the enzymology and regulation of sphingomyelin metabolism
Merrill A H jr & Jones D D (1990) Biochim. Biophys. Acta, 1044, 1

Polyammonium macrocycles as catalysts for phosphoryl transfer — the evolution of an enzyme mimic
Mertes M P & Mertes K B (1990) Acc. Chem. Res. 23, 413

Genetic polymorphisms of drug metabolizing enzymes — molecular mechanisms
Meyer U A (1990) Acta Pharmaceut. Jugoslav. 40, 491

Lp(a): an interloper into the fibrinolytic system?
Miles L A & Ploow E F (1990) Thromb. Haemost. 63, 331

Organonemercural lyase and mercuric ion reductase: nature's mercury detoxification catalysts
Moore M J, Distefano M D, Zydowsky L D, Cummings R T & Walsh C T (1990) Acc. Chem. Res. 23, 301

The ras-1 kinase as a transducer of mitogenic signals
Morris D K (1990) Cancer Cell Mon Rev 2, 377

Glutathione S-transferases and drug resistance
Morrow C S & Cowan K H (1990) Cancer Cells, 2, 15

Role of the cell wall hydrolysable polysaccharides in the physicochemical behaviour of the flax fibres — application to an enzymatic rating — review [In French; English abstract]
Morvan C, Jaunean A, Voreux H, Morvan O & Demarty M (1990) C. R. SOC. Biol. 184, 18

The genetics of RNA polymerases in yeasts [Minireview]
Moscin C & Thuriaux P (1990) Curr Genet. 17, 367

Kinins And Converting Enzyme Inhibitors Workshop held in Königstein, FRG, June 7–9, 1989
Müller-Esterl W & others (1990) J. Cardiovasc. Pharmacol. Suppl 6, S1–S99

Fibrinolytic properties of single chain urokinase type plasminogen activator (Pro-urokinase)
Munk G A W de & Rijken D C (1990) Fibrinolysis, 4, 1

Adenosine deaminase and purmergic neuroregulation
Nagy J I, Geiger J D & Staines W A (1990) Neurochem Int 16, 211

Metabolism, enzymology and possible roles of 4-aminobutyrate in higher plants
Narayan V S & Nair P M (1990) Phytochemistry, 29, 367

Surface-dependent reactions of the Vitamin-K-dependent enzyme complex
Nesheim M E, Church W R, Haley P & Krishnaswamy S (1990) Blood, 76, 1

Ribulose bisphosphate carboxylase in algae — synthesis, enzymology and evolution [Minireview]
Newman S M & Cattolico R A (1990) Photosynthesis Res. 20, 69

Inter-α-trypsin inhibitor: a plasma proteinase inhibitor with a unique chemical structure [Minireview]
Ödum L (1990) Int. J. Biochem. 22, 925

Phosphorylation of cytochrome-P450 isozymes in intact hepatocytes and its importance for their function in metabolic processes
Oeschbartlomowicz B & Oesch F (1990) Arch. Toxicol. 64, 257
Kinetic salting effect as a promising tool in the investigation of enzyme molecule changes upon reaction: deacylation of acyl-chymotrypsins
Paberit M (1990) Bioorg. Chem. 18, 228

Ribonuclease P: function and variation [Minireview]
Pace N R & Smith D (1990) J. Biol. Chem. 265, 3587

Unraveling the complexities of transcription by RNA polymerase III
Palmer J M & Folk W R (1990) Trends Biochem. Sci. 15, 300

K-Nase-M of human leukemic cells — a new biological parameter in the study of human leukemias
Papaphilis A D & others (1990) Anticancer Res 10, No 5A, 1201

Human placental xenobiotic and steroid biotransformations catalyzed by cytochrome p450, epoxide hydrolase, and glutathione S-transferase activities and their relationships to maternal cigarette smoking
Pasanen M & Pelkonen O (1990) Drug Metab. Rev. 21, 427

Molecular biology and biochemistry of pyruvate dehydrogenase complexes
Patel M S & Roche T E (1990) FASEB J. 4, 3224

Hormonal regulation of cytochrome P450 enzymes, cholesterol side-chain cleavage and 17α-hydroxylation in Leydig cells [Minireview]
Payne A (1990) Biol Reprod. 42, 399

Lipoxygenase metabolites of arachidonic acid in neuronal transmembrane signalling
Piouelle D & Oggiegard P (1990) Trends Pharmacol. Sci. 11, 367

Rubisco activase
Portis A R jr (1990) Biochim. Biophys. Acta, 1015, 15

Alpha-L-adrenergic and beta-adrenergic receptors in brown adipose tissue and the adrenergic regulation of thyroxine 5' -deiodinase
Rausmaja A (1990) Acta Physiol. Scand. 139, Suppl 590, 7-61

The mechanism and structure of the gastric H.K-ATPase
Rabon E C & Reuben M A (1990) Annu. Rev. Physiol. 52, 321

Structure-function relationships in dihydrolipoamide acyltransferases [Minireview]
Reed L J & Hackert M L (1990) J Biol. Chem. 265, 8971

Focus on Angiotensin-converting Enzyme Inhibition: Satellite Meeting at the 23rd Annual Scientific Meeting of the European Society for Clinical Investigation, Athens, April 19 22, 1989
Reid J L & others (1990) Clin. Physiol. Biochem. 8, Suppl. 1, 1-44

Application of the polymerase chain reaction to the diagnosis of human genetic disease
Reiss J & Cooper D N (1990) Hum. Genet. 85, 1

Enzymic reaction selectivity by negative catalysis or how do enzymes deal with highly reactive intermediates?
Reicy J (1990) Angew. Chem. Int. Ed 29, 355

Inosine monophosphate dehydrogenase inhibitors — probes for investigations of the functions of guanine nucleotide binding proteins in intact cells [Minireview]
Rizzo M T & others (1990) Cell. Signal. 2, 509

Control of glycogen synthase by hierarchical protein phosphorylation
Roach P J (1990) FASEB J. 4, 2961

Cathepsin-D in breast cancer — from molecular and cellular biology to clinical applications
Rochefort H, Capony F & Garcia M (1990) Cancer Cell. Mon. Rev. 2, 383

Neutral endopeptidase-24.11 inhibitors: from analogues to antihypertensives?
Roques B P & Beaumont A (1990) Trends Pharmacol Sci. 11, 250

Ca2+-Binding to citrate cycle dehydrogenases [Minireview]
Rutter G A (1990) Int. J. Biochem. 22, 1081

Inter-alpha-trypsin inhibitor — emergence of a family within the Kunitz-type protease inhibitor superfamly
Saller J P (1990) Trends Biochem. Sci. 15, 435

Structural features of cytochrome oxidase
Saraste M (1990) Q. Rev. Biophys. 23, 331

Regulation of the genes for heme pathway enzymes in erythroid and in non-erythroid cells [Concise review]
Sassa S (1990) Int. J. Cell. Cloning. 8, 10

Enkephalins (EC 3.4.24.11) inhibitors: protection of endogenous ANF against inactivation and potential therapeutic applications [Minireview]
Schwartz J-C, Gros C, Lecomte J-M & Braet J (1990) Life Sci. 47, 1279

Dihydrofolate reductase as a therapeutic target
Schweitzer B I, Dicker A P & Bertino J R (1990) FASEB J. 4, 2441

Metabolism of 2-carboxyaraibinitol-1-phosphate and regulation of ribulose-1,5-bisphosphate carboxylase activity [Minireview]
Seemann J R, Kobza J & Moore B D (1990) Photosynthesis Res. 23, 119

The proton-transporting ATPase in Escherichia coli
Senior A E (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 7

Activation of prodrugs by antibody-enzyme conjugates: a new approach to cancer therapy
Senter P D (1990) FASEB J. 4, 188

Inhibition of ribulose 1,5-bisphosphate carboxylase/oxygenase by 2-carboxyaraibinitol 1-phosphate
Sereval J C (1990) Plant Physiol. 92, 867

Comparison of active sites of some microbial ribonucleases: structural basis for guanylic specificity
Serev J, Sanishvili R G, Pavlovsky A G & Polyakov K M (1990) Trends Biochem. Sci. 15, 158

Arylsulfatase A (ASA) defect and psychiatric illness — a review
Shah S N (1990) Mol. Chem. Neuropath. 12, 121

Catalytic antibodies
Shokat K M & Schulz P G (1990) Annu. Rev. Immunol. 8, 335

Catalytic antibodies — a new class of transition-state analogues used to elicit hydrolytic antibodies
Shokat K M & others (1990) Angew. Chem. 29, 1296

Hepatic lipase [In French; English abstract]
Simard G & Perret B (1990) Ann. Biol. Clin. Paris, 48, 61

Pharmacology and mechanism of action of the new HMG-CoA reductase inhibitors
Sirtori C R (1990) Pharmacol. Res. 22, 555

Decreased activity of the platelet Na+,K+-adenosine triphosphatase enzyme in allergic subjects
Skoner D P, Gentile D & Evans R (1990) J. Lab. Clin. Med. 115, 535

DNA topoisomerase dysfunction: a new goal for antitumor chemotherapy
Smith P J (1990) BioEssays, 12, 167

Phylogenetic distribution and function of arylalkylamine N-acetyltransferase
Smith T J (1990) BioEssays, 12, 30

Assimilatory nitrate reductase: functional properties and regulation
Solomonson L P & Barbrer M J (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 225-253

Relationship between the regulation of membrane enzyme activities by gangliosides and a possible ganglioside segregation in membrane microdomains [Minireview]
Sonnino S & others (1990) Int J. Biochem. Biophys. 27, 355
Amplification of butyrylcholinesterase and acetylcholinesterase genes in normal and tumor tissues: putative relationship to organophosphorous poisoning
Soreq H & Zakut H (1990) Pharmaceut. Res. 7, 1

Sequences supplement — RNA, cloned human DNA and E.coli sequences, codon usage and restriction enzyme recognition sequences
Specht T & others (1990) Nucleic Acids Res. 18, Suppl. 2215

Enzyme—enzyme interactions and their metabolic role [Minireview]
Sreer P A & Ovadi J (1990) FEBS Lett. 268, 360–364

Histochernistry of ATPases
Stahl W L & Baskin D G (1990) J. Histochem. Cytochem. 38, 1099

Energetics and the design principles of the NA/K-ATPase [Minireview]
Stein W D (1990) J. Theoret. Biol. 147, 145

Specificity of the mineralocorticoid receptor: crucial role of 11β-hydroxysteroid dehydrogenase [Brief review]
Stewart P M & Edwards C R W (1990) Trends Endocrinol. Metab 1, 225

Ribonucleotide reductases, amazing and confusing [Minireview]
Stubbe J (1990) J. Biol. Chem. 265, 5329

Macro enzymes — prevalence, composition, detection and clinical relevance
Sturk A & Sanders G T B (1990) J Clin. Chem Clin. Biochem 28, 65

A review: Thermostable fungal β-glucosidases
Stutzingerber F (1990) Lett. Appl. Microbiol. 11, 173

Model studies of carboxypeptidase A
Sub J (1990) Bioorg Chem 18, 345

Free radicals, antioxidant enzymes, and carcinogenesis
Sun Y (1990) Free Radical Biol. Med. 8, 583

Calcium activated neutral protease — structure—function relationship and functional implications [Minireview]
Suzuki K & Ohno S (1990) Cell Struct. Funct. 15, 1

DNA polymerase epsilon — the last member in the family of mammalian DNA polymerases
Svejgaard J E (1990) BioEssays. 12, 533

Enzymes inactivating aminoglycosides — current status [In Russian; English abstract]
Taturov A S (1990) Antibiot. Khimioterap. 35, No.6, 51

Molecular cloning and molecular biological studies of human thymidylate synthase gene [In Japanese; English abstract]
Takeishi K (1990) Yakugaku Zasshi, 110, 891

Proteasomes (multicatalytic proteinase complexes) in eukaryotic cells
Tanaka K & Ichihara A (1990) Cell Struct. Funct. 15, 127

Isolation and purification of UDP-glucuronosyltransferases
Teply T R (1990) Chem. Res. Toxicol. 3, 509

UDP-glucuronosyltransferases: a family of detoxifying enzymes
Teply T R & Burchell B (1990) Trends Pharmacol. Sci. 11, 276

Eukaryotic DNA helicases [Minireview]
Thommes P & Hübscher U (1990) FEBS Lett. 268, 325–328

Eukaryotic DNA replication — enzymes and proteins acting at the fork
Thommes P & Hübscher U (1990) Eur J. Biochem. 194, 699

The glyoxalase system: new developments towards functional characterization of a metabolic pathway fundamental to biological life
Thornalley P J (1990) Biochem J. 269, 1–11

New strategy for discovery of enzyme inhibitors — screening with intact mammalian cells or intact microorganisms having special functions
Timmola H & Omura S (1990) J. Antibiot. 43, 1207

Action of inhibitors on brain glutamate decarboxylase [Minireview]
Tunnichill G (1990) Int. J. Biochem. 22, 1235

Chromosomal translocations in lymphoid neoplasia — a reappraisal of the recombinase model
Tycck B & Sklar J (1990) Cancer Cells, 2, 1

One motor, many tails: an expanding repertoire of force-generating enzymes [Minireview]
Vale R D & Goldstein L S B (1990) Cell, 60, 883–885

Erythroenzymopathies and hemolytic anemia: the many faces of inherited variant enzymes
Valewite W N & Paglia D E (1990) J Lab. Clin. Med. 115, 12

Effects of metals on enzyme activity in plants: commissioned review
Van Assele F & Clijsters H (1990) Plant Cell Environ. 13, 195

Bochinger Mannheim Award Lecture: Phosphatidylcholine metabolism — macoehetic enzymology, metabolic regulation, and lipoprotein assembly
Vance D E (1990) Biochem. Cell Biol 68, 1151

Comparative structure, function and regulation of isocitrate lyase, an important assimilatory enzyme
Vann P, Giachetti E, Pinza ST & McFadden B A (1990) Comp Biochem Physiol. Pt B, 95, 431

The pyrenoid is the site of ribulose 1,5-bisphosphate carboxylase oxygenase accumulation in the Hornwort (Bryophyta, Anthocerotae) chloroplast
Vaughn K C, Campbell E O, Hasegawa J, Owen H A & Renzaglia K S (1990) Prototplasma, 156, 117

γ-Carboxyglutamate-containing proteins and the vitamin K-dependent carboxylase
Vermeir C. (1990) Biochem J 266, 625–636

Reconstitution of ion—motive transport ATPases in artificial lipid membranes
Villalobo A (1990) Biochem Biophys Acta, 1017, 1

An enzyme with a double identity: purple acid phosphatase and tartrate-resistant acid phosphatase
Vincent J B & Avertta B A (1990) Biochem Biophys Acta, 1017, 1

The role of DNA topoisomerases in recombination and genome stability: a double-edged sword? [Minireview]
Ward O P & Young C S (1990) Nature, 348, 487

Pharmacology of a-fluoromethylhistidine, a specific inhibitor of histidine decarboxylase
Watanabe T, Yamatodani A, Maeyama K & Wada H (1990) Trends Pharmacol Sci 11, 363
Complexity of steroid hydroxylase gene expression in the adrenal cortex: a microcosm of regulated transcription [Brief review]
Waterman M R, Lund J & Simpson E R (1989) Trends Endocrinol. Metab. 1, 99

Glutathione S-transferases — role in alkylating agent resistance and possible target for modulation chemotherapy
Waxman D J (1990) Cancer Res. 50, 6449

Enzyme nomenclature. Recommendations 1984 — Supplement 3: Corrections and additions. Nomenclature Committee of the International Union of Biochemistry (NC-IUB)
Webb E C (1990) Eur J. Biochem. 187, 263-281

Thyroid peroxidase as an antigen in autoimmune thyroiditis [Editorial review]
Weetman A P (1990) Clin. Exp. Immunol. 80, 1

Molecular evolution and genetic engineering of protein domains involving aspartate transcarbamoylase
Wild J R & Wales M E (1990) Annu. Rev. Microbiol. 44, 193

The Remi–Angiotensin System as a Therapeutic Target: Proceedings of an International Symposium held in Basel, Switzerland, October 29-30, 1989
Wood J M & others (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 4, S1-S76

RNA polymerase II: subunit structure and function
Woychik N A & Young R A (1990) Trends Biochem. Sci. 15, 347

The polymerase chain reaction — miracle or mirage? — A critical review of its uses and limitations in diagnosis and research
Wright P A & Woodward D (1990) J. Path. 162, 99

Energy contributions of volatile fatty acids from the gastrointestinal tract in various species
Bergman E N (1990) Physiol. Rev. 70, 567

Oxidation of polyunsaturated fatty acids — mechanisms, products, and inhibition with emphasis on fish
Hsieh R J & Kinsella J E (1989) Advan. Food Nutr. Res. 33, 233

Dietary unsaturated fatty acids — interactions and possible needs in relation to eicosanoid synthesis
Kinsella J E, Broughton K S & Whelan J W (1990) J. Nutr. Biochem. 1, 123
Dietary n-3-polyunsaturated fatty acids and amelioration of cardiovascular disease: possible mechanisms
Kinsella J E, Lokesh B & Stone R A (1990) Am. J. Clin. Nutr. 52, 1

Intracellular fatty acid trafficking and the role of cytosolic lipid binding proteins
Matarese V, Stone R L, Waggoner D W & Bernlohr D A (1989) Progr Lipid Res. 28, 245

Interferons, interleukins, virus-host interaction — relation to leukotrienes and other lipoxygenase derivatives of the arachidonic acid
Mayer M (1990) Acta Virol. 34, 99

Dietary fatty acids and membrane protein function
Murphy M G (1990) J. Nutr. Biochem. 1, 68

Arachidonate Related Lipid Mediators
Murphy R C & Fitzpatrick F A, eds (1990) Methods Enzymol. 187, 683 pp.

Effects of n-3 fatty acids on lipid metabolism
Nestel P J (1990) Annu. Rev. Nutr. 10, 149

Historic overview of studies on fatty acid-binding proteins
Ockner R K (1990) Mol. Cell. Biochem 98, 3

Platelet-activating factor (PAF) and its relation to prostaglandins, leukotrienes and other aspect of arachidonate metabolism
Pepiow P V & Mikhailidis D P (1990) Prostagland Leuk. Essent. Fatty Acids, 41, 71

Lipoxygenase metabolites of arachidonic acid in neuronal transmembrane signalling
Piomelli D & Greengard P (1990) Trends Pharmacol. Sci. 11, 367

Omega-3 fatty acids — potential clinical use
Schacke C von (1990) Disch Med Wochenschr 115, 224

Platelet reactivity and arachidonic acid metabolism in type II hyperlipoproteinaemia and its modification by cholesterol-lowering agents
Schroer K (1990) Eicosanoids. 3, 67

Cyclical fatty acids: natural sources, formation during heat treatment, synthesis and biological properties
Sebedo J L & Grandzirard A (1989) Progr Lipid Res. 28, 303

Sensitivity to endotoxin is induced by increased membrane fatty-acid unsaturation and oxidative stress
Stark J M & Jackson S K (1990) J. Med Microbiol. 32, 217

n-3 Fatty acids and human disease [Plenary lecture]
Weber P C (1990) Scand. J. Clin. Lab. Invest. 50, Suppl. 202, 14

Essential fatty acids and the skin
Wright S (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 223

Essential fatty acids and polyunsaturated fatty acids: significance in cutaneous biology
Ziboh V A & Miller C C (1990) Annu. Rev. Nutr. 10, 433

FERMENTATION

A review: Recent developments in tempe research
Nout M J R & Rombout F M (1990) J. Appl. Bact. 69, 609

Monitoring of the anaerobic methane fermentation process
Swittenbaum M S, Giraldo-Gomez E & Hickey R F (1990) Enzyme Microb. Technol. 12, 722

FLUORIDES AND FLUORO COMPOUNDS

Enzyme inhibition by fluoro compounds [Mini review]
Ables R H & Abston T A (1990) J. Biol. Chem 265, 16703

Toxicology of fluorine-containing monomers
Kennedy G L (1990) Crit. Rev. Toxcol. 21, 149

Fluorine-19 nuclear magnetic resonance spectroscopy — a privileged tool for metabolism and pharmacokinetic studies of fluoropyrimidines
[In French; English abstract]
Maletmartino M C, Martino R & Armand J P (1990) Bull. Cancer, 77, 1223

Aspects of the medicinal chemistry of fluoroorganic compounds
1 Resnati G (1990) Farmaco, 45, 1043

Aspects of the medicinal chemistry of fluoroorganic compounds
2 Resnati G (1990) Farmaco, 45, 1137

FREE RADICALS

Reactive oxygen species and airway inflammation
Barnes P J (1990) Free Radical Biol. Med. 9, 235

Effects of free radicals on the electrophysiological function of cardiac membranes
Barrington P L (1990) Free Radical Biol. Med. 9, 355

Biochemical aspects of free radicals
Basaga H S (1990) Biochem. Cell Biol. 68, 989-998

The participation of coenzyme-Q in free radical production and antioxidation
Beyers R E (1990) Free Radical Biol. Med. 8, 545

Molecular mechanisms of oxygen radical carcinogenesis and mutagenesis: the role of DNA base damage
Bremer L H (1990) Mol. Carcinogen. 3, 188

A new cellular function for peroxisomes related to oxygen free radicals
Deliri L A, Sandalco L M & Palma J M (1990) Experiencia, 46, 989

Sensitivity of parasites to free radical damage by antiparasitic drugs
Docampo R (1990) Chem-Biol. Inter 73, 1

Free radicals and their involvement during long-term myocardial ischemia and reperfusion
Donay M J (1990) Annu. Rev. Physiol. 52, 487

A review of recent studies on the metabolism of exogenous and endogenous malondialdehyde
Draper H H & Hadley M (1990) Xenobiotica, 20, 901

Role of oxygen free radicals in carcinogenesis and brain ischemia
Floyd R A (1990) FASEB J. 4, 7587

The molecular basis of brain injury and brain edema: the role of oxygen free radicals
Ikeda Y & Long D M (1990) Neurosurgery, 27, 1

Free radical generation by redox cycling of estrogens
Ltehr J G & Roy D (1990) Free Radical Biol. Med. 8, 415

Free radicals — their involvement in disease processes
Lunec J (1990) Annu. Clin. Biochem. 27, 173

Radical reactions in vivo — an overview. Paper presented at a meeting on DNA Repair Network — Molecular Radiation Biology, München-Neuherberg, March 21-23, 1990
Saran M & Bors W (1990) Radiat. Environ. Biophys. 29, 249

Oxygen radicals in intestinal ischemia and reperfusion
Schoenbr M H & Beger H G (1990) Chem-Biol. Inter. 76, 141
Free radicals and anticancer drug resistance — oxygen free radicals in the mechanisms of drug cytotoxicity and resistance by certain tumors
Sioulia B K & Minaunagh E G (1990) Free Radical Biol. Med. 8, 567

Bacterial defenses against oxidative stress
Storz G, Tartaglia L A, Farr S B & Ames B N (1990) Trends Genet. 6, 363

Free radicals, antioxidant enzymes, and carcinogenesis
Sun Y (1990) Free Radical Biol. Med. 8, 583

Involvement of free radicals in dementia of the Alzheimer type: a hypothesis
Volier L & Crino P B (1990) Neurobiol. Aging. 11, 567

The measurement of oxygen-derived free radicals and related substances in medicine
Weber G F (1990) J. Clin. Chem. Clin. Biochem. 28, 569

Free radicals and ischemic tissue injury
Werne S W & Lucchesi B R (1990) Trends Pharmacol. Sci. 11, 161

Fungi

Antigens and immune responses in \textit{Candida albicans} infection
Ashman R B, Papadimitriou J M, Ott A K & Warmington J R (1990) Immunol. Cell Biol. 68, 1

Fluconazole: A novel advance in therapy for systemic fungal infections [Symposium]
Benett J E (1990) Rev. Infect. Dis. 12, Suppl. 3, 5263

An appraisal of bioassay methods for the detection of mycotoxins — a review
Buckle A E & Sanders M F (1990) Lett. Appl. Microbiol. 10, 155

Conference on Developmental Biology, Tamarron, CO, March 12-19, 1989/Symposium on Molecular and Cellular Biology of Yeasts and Filamentous Fungi, Steamboat Spring, CO, April 3-9, 1989
Davidson E H, Ruderman J V & Posakony J W, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 125, 388 pp.

Immunological aspects of fungal pathogenesis
Deepe G S & Bullock W E (1990) Eur. J. Clin. Microbiol. Infect. Dis. 9, 567

Molecular genetics of pathogenic fungi: some recent developments and perspectives
Ernst J F (1990) Mycoses, 33, 225

Review — Pathogenicity determinants of \textit{Candida}
Ghannoum M A & Abuelteen K H (1990) Mycoses, 33, 265

Laboratory diagnosis of invasive candidiasis
Jones J M (1990) Clin. Microbiol. Rev. 5, 32-45

Lipids of dermatophytes
Khalil G K & SanaUi S (1989) Advan. Lipid Res. 23, 65

The fungal vacuole: composition, function, and biogenesis
Klonowski D J, Herman P K & Emr S D (1990) Microbiol. Rev. 54, 266-292

Recent advances in the molecular genetics of \textit{Dictyostelium}
Knecht D A & Kessin R H (1990) Dev. Genet. 11, 388

Circadian rhythms in \textit{Neurospora crassa} — biochemistry and genetics
Lakinthomas P L, Cote G G & Brody S (1990) Crit. Rev. Microbiol. 17, 365

Specificity of attachment of fungal parasites to their hosts
Mawocha M S & Chen Y (1990) Can. J. Microbiol. 36, 69-76

Linear plasmids among eukaryotes: fundamentals and applications [Minireview]
Meinhardt F, Kempenk F, Kämpfe J & Esser K (1990) Curr. Genet. 17, 89-95

\textit{Candida albicans} strain delineation
Merz W G (1990) Clin. Microbiol. Rev. 3, 321

Glutamine metabolism and cycling in \textit{Neurospora crassa}
Mora I (1990) Microbiol. Rev. 54, 293-304

A review: Recent developments in tempe research
Nout M J R & Rombouts F M (1990) J. Appl. Bact. 69, 609

Molecular analysis of aging processes in fungi
Osiewacz H D (1990) Mutat Res. 237, 1

Melanin as a virulence factor in pathogenic fungi
Polak A (1990) Mycoses, 33, 215

Kinetical modeling of plant and fungal membrane transport systems
Sanders D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 77-107

Genetics of \textit{Candida albicans}
Scherer S & Magee P T (1990) Microbiol. Rev. 54, 226-241

Premeiotic instability of repeated sequences in \textit{Neurospora crassa}
Selker E U (1990) Annu. Rev. Genet. 24, 579

Cell—cell adhesion molecules in \textit{Dictyostelium}
Sna C-H (1990) BioEssays, 12, 357

Application of DNA typing methods to \textit{Candida albicans} epidemiology and correlations with phenotype
Stevens D A, Odds F C & Scherer S (1990) Rev. Infect. Dis. 12, 258

A review: Thermostable fungal \(\beta\)-glucosidas
e
Stutzenberger F (1990) Lett. Appl. Microbiol. 11, 173

Molecular genetics of Aspergillus development
Timberlake W E (1990) Annu. Rev. Genet. 24, 5

Structure and function of sterols in fungi
Weete J D (1989) Advan. Lipid Res. 23, 115

Gastrointestinal Tract

Intestinal amino acid transport: an overview [Minireview]
Argiles J M & López-Soriano F J (1990) Int. J. Biochem. 22, 931

Review — Progastrin in pancreas and the Zollinger-Ellison syndrome
Bardram L (1990) Annu. Rev. Genet. 24, 579

Energy contributions of volatile fatty acids from the gastrointestinal tract in various species
Bergman E N (1990) Physiol. Rev. 70, 567

Absorption, transport and distribution of vitamin E
Björneboe A, Björneboe G-E A & Drevon C A (1990) J. Nutr. 120, 233

Intestinal malabsorption syndromes
Brasier T A & Siritin M D (1990) Annu. Rev. Med. 41, 339

Intestinal protozoa and epithelial cell kinetics, structure and function
Buret A, Gall D G, Nation P N & Olson M E (1990) Parasitol. Today, 6, 375

Ultrastructural changes in gastric epithelium caused by bile salt
Bushnell L, Bjorkman D & McGreevy J (1990) J. Surg. Res. 49, 280
Action of pinaverium bromide, a calcium-antagonist, on gastrointestinal motility disorders [Minireview]
Christen M O (1990) *Gen. Pharmacol.* 21, 821

The significance of induced forestomach tumors
Clayson D B, Iverson F, Nera E A & Lok E (1990) *Annu. Rev. Pharmacol. Toxicol.* 30, 441-463

Review — 5-hydroxytryptamine — new receptors and novel drugs for gastrointestinal motor disorders
Costall B & Naylor R J (1990) *Scand. J. Gastroenterol.* 25, 769

Gastro-intestinal circulation of ascorbic acid [Minireview]
Dabrowski K (1990) *Comp. Biochem. Physiol. Pt A,* 95, 481

The gut as an endocrine organ
Del Valle J & Yamada T (1990) *Annu. Rev. Med.* 41, 447

Digestion and absorption of dietary protein
Erickson R H & Kim Y S (1990) *Annu. Rev. Med.* 41, 133

A genetic model for colorectal tumorigenesis
Fearon E R & Vogelstein B (1990) *Cell,* 61, 759-767

Regulation of cholesterol metabolism in the intestine
Field F J, Kam N T P & Mathur S N (1990) *Gastroenterology,* 99, 539

Dopamine in gastrointestinal disease
Glavin G B & Szabo S (1990) *Digest. Dis. Sci.* 35, 1153

Campylobacters associated with human diarrheal disease
Griffiths P L & Park R W A (1990) *J. Appl. Bact.* 69, 281

Linguin and gastric lipases
Hamosh M (1990) *Nutrition,* 6, 421

Immuno modulation with gastrointestinal neuropeptides [In German; English abstract]
Hart R, Lersch Ch, Wagner F, Rothdauscher G & Classen M (1990) *Dtsch. Med. Wochenschr.* 115, 944

Non-steroidal anti-inflammatory drugs and peptic ulcers
Hawkey C J (1990) *Br. Med J.* 300, 278

Intestinal glutamine metabolism during critical illness: a surgical perspective
Herskowitz K & Souba W W (1990) *Nutrition,* 6, 199

Membrane potentials and the mechanism of intestinal Na+-dependent sugar transport
Kimich G A (1990) *J. Membr. Biol.* 114, 1

Three-dimensional structure of the rat intestinal wall (mucosa and submucosa)
Komuro T & Hashimoto Y (1990) *Arch. Histol. Cytol.* 53, 1

Peptide YY and neuropeptide Y in the gut: availability, biological actions, and receptors [Brief review]
Laburthe M (1990) *Trends Endocrinol Metab* 1, 168

*Helicobacter pylori* in gastroduodenal disease
Loffeld R J F (1990) *Pharmaceut. Weekbl. Sci. Ed.* 12, 46

The amphotropic character of azapropazone and its relevance to the gastric mucosa
McCormack K & Brune K (1990) *Arch. Toxicol.* 64, 1

The role of activated T lymphocytes in gastrointestinal disease
MacDonald T T (1990) *Clin. Exp. Allergy,* 20, 247

From Proton to the proton pump — a history of the science of gastric acid secretion and the surgery of peptic ulcer
Modlin I M (1990) *Surg. Gynecol. Obstet.* 170, 81

Appetite regulation by gut peptides
Morley J E (1990) *Annu. Rev. Nutr.* 10, 383

Gut microbiota and tissue protein turnover in vivo in animals [Minireview]
Muramatsu T (1990) *Int. J Biochem.* 22, 793

*In vitro* model systems for the evaluation of the absorption from the gastrointestinal tract
Neubert R (1990) *Pharmazie,* 45, 233

Determinants and consequences of colonic luminal pH — implications for colon cancer
Newmark H L & Lupton J R (1990) *Nutr. Cancer,* 14, 161

Abnormal intestinal permeability in Crohn’s disease. A possible pathogenic factor
Olaison G, Østdahl R & Tagesson C (1990) *Scand. J. Gastroenterol.* 25, 321

The pharmacology of the gut of the desert locust *Schistocerca gregaria* and other insects [Minireview]
Osborne R H, Banner S E & Wood S J (1990) *Comp. Biochem. Physiol. Pt C,* 96, 1

Central neurotransmitters and regulation of gastric acid secretion [In Japanese; English abstract]
Osumi Y (1990) *Folia Pharmacol. Jap.* 96, 205

Colorectal carcinogenesis — sequential steps in the *in vitro* immortalization and transformation of human colonic epithelial cells
Paraskeva C & others (1990) *Anticancer Res.* 10, No 5 A, 1189

The mechanism and structure of the gastric H,K-ATPase
Raben E C & Reuben M A (1990) *Annu. Rev. Physiol.* 52, 321

Intestinal and Pancreatic Adaptation: Adaptational Response and Repair Mechanisms in the Entero-Pancreatic System — Proceedings of 4th International Conference held in Berlin, October 25-29, 1989
Riecken E O & others (1990) *Digestion,* 46, Suppl 2, 1-472

Role of the extracellular matrix in carcinogenesis of the intestinal tract [In German; English abstract]
Sto I I n a c h A, Schuppan D & Riecken E O (1990) *Dtsch. Med. Wochenschr,* 115, 457

The role of vitamin D in bone and intestinal cell differentiation
Suda T, Shinki T & Takahashi N (1990) *Annu. Rev Nutr.* 10, 195

Immuno cytotoxic chemical localization of the intracellular sites of sialylation in rat hepatocytes and colonic epithelial cells [Robert Feulgen Prize Laureates]
Taatjes D J (1990) *Acta Histochem Suppl.* 40, 9

A membrane anti-oncoprotein implied in colorectal cancer [Minireview]
Thomas G (1990) *M/S Med. Sci.* 6, 292

Brain-gut peptides, renal function and cell growth [Editorial review]
Unwin R J, Ganz M D & Sterzel R B (1990) *Kidney Int.* 37, 1031

Mutual inhibition of sugars and amino acid intestinal absorption [Minireview]
Vinardell M P (1990) *Comp. Biochem. Physiol. Pt A,* 95, 17

Intestinal barriers to bacteria and their toxins
Walker R I & Owen R L (1990) *Annu. Rev Med.* 41, 393

Lipid mediators of inflammation in gastric ulcer [Editorial review]
Wallace J L (1990) *Am. J. Physiol.* 258, No 1, Pt 1, G1

Mesenchymal-epithelial interactions in the organogenesis of digestive tract
Yasugi S & Mizuno T (1990) *Zool. Sci.* 7, 159

A mechanistic hypothesis for meat enhancement of nonheme iron absorption — stimulation of gastric secretions and iron chelation
Zhang D J, Carpenter C E & Mahoney A W (1990) *Nutr. Res.* 10, 929

GENE EXPRESSION
See PROTEINS, SYNTHESIS
See also RNA, SYNTHESIS
GENES
See: DNA

GENETIC AND METABOLIC DISEASES
See also: GENETICS

Muscular dysgenesis in mice: a model system for studying excitation-contraction coupling
Adams B A & Beam K G (1990) FASEB J. 4, 2809

Hereditary dwarfism—recent advances in molecular genetics of the growth hormone receptor [In French; English abstract]
Amselem S & Goossens M (1990) Presse Med. 19, 1699

Pathophysiology of hemolysis in glucose-16-phosphate-dehydrogenase deficiency
Aicme P & Flura A de (1990) Seminars Hematol. 27, 1

PCR analysis of DNA sequences in single cells—single sperm gene mapping and genetic disease diagnosis [Review]
Arnheim N, Li H H & Cui X F (1990) Genomics. 8, 415

Hunt for the dominant autosomal polycystic kidney disease gene [Minireview] [In French; English abstract]
Bachner L (1990) M/S Med. Sci. 6, 904

Disorders of the inhibitory glycine receptor, the spastic mouse
Becker C M (1990) FASEB J. 4, 2767

The laboratory diagnosis of inborn errors of mitochondrial fatty acid oxidation
Bennett M J (1990) Ann. Clin. Biochem. 27, 319

The quinolinic acid hypothesis in Huntington's chorea
Bragg R P M & Stoof J C (1990) J. Neurol. Sci. 95, 29

Molecular pathology of glucose-6-phosphatase
Burchell A (1990) FASEB J. 4, 2078

Brittle bones—fragile molecules: disorders of collagen gene structure and expression
Byers P H (1990) Trends Genet. 6, 293

Symposium on Biotechnology and Human Genetic Pre-disposition to Disease, Steamboat Springs, CO, March 27–April 3, 1989
Cantor C R, Omenn G S, Caskey C T, Hood L E & Kamely D, eds (1990) UCLA Symp Mol. Cell. Biol. NS, 126, 241 pp.

Hereditary fructose intolerance [Minireview]
Cros N C P & Cou T M (1990) Int. J. Biochem. 22, 685

Congenital adrenal hyperplasia due to 21-hydroxylase deficiency
Cutler G B, Rosen H, Blanksegal M, Majcouj B & Laue L (1990) New Engl. J. Med. 323, 1806

Erythrocyte skeleton and the genetic diseases of the red cell shape [In French; English abstract]
Delaunay J & Dhermy D (1990) M/S Med. Sci. 6, 562

Metabolic bone disease in primary biliary cirrhosis
Diamond T H (1990) J Gastroenterol. Hepatol. 5, 66

The immunogenetics of insulin-dependent (type I) diabetes [Brief review]
Fletcher J A & Barnett A H (1989) Trends Endocrinol. Metab. 1, 44

The genetics of idiopathic torsion dystonia
Ttkettets N A (1990) J. Med. Genet. 27, 409

Recent progress in the molecular genetic analysis of erythrocytoencephalopathy
Fujii H & Miwa S (1990) Am. J. Hum. Genet. 34, 301

Acid beta-glucosidase—enzymology and molecular biology of Gaucher disease
Grabowski G A, Gatt S & Horowitz M (1990) Crit. Rev. Biochem. Mol. Biol. 25, 385

Disorder of the inhibitory glycine receptor: inherited myoclonus in Poll Hereford calves
Gundlach A L (1990) FASEB J. 4, 2761

Genomic imprinting: review and relevance to human diseases
Hall J G (1990) Am. J. Hum. Genet. 46, 857

The cystic fibrosis defect approached from different angles—new perspectives on the gene, the chloride channel, diagnosis and therapy
Halley D J J & others (1990) Eur. J. Pediat. 149, 670

Tissue plasminogen activator: the biochemistry and pharmacology of variants produced by mutagenesis
Higgins D L & Bennett W F (1990) Annu. Rev. Pharmacol. Toxicol. 30, 91–121

The LDL receptor locus in familial hypercholesterolemia—mutational analysis of a membrane protein
Hobbs H H, Rossell D W, Brown M S & Goldstein J I (1980) Annu. Rev. Genet. 24, 133

Galactose disorders—an overview
Horan J B (1990) J. Inher. Metab. Dis. 13, 476

Retinitis pigmentosa: genetic mapping in X-linked and autosomal forms of the disease
Humphries P, Farrar G J, Kenna P & McWilliam P (1990) Clin. Genet. 38, 1

Familial defective apolipoprotein B-100: a mutation of apolipoprotein B that causes hypercholesterolemia
Inzerarity T L & others (1990) J. Lipid Res. 31, 1337

Spiroilean containing solanum species and induction of congenital craniofacial malformations—review article
Keeler R F, Baker D C & Gaflfield W (1990) Toxicol. 28, 873

Cationic amphiphilic drugs and phospholipid storage disorder
Kovaldvanti U P & Mehendale H M (1990) Pharmacol. Rev. 42, 327

Mitochondrial diseases: gene mapping and gene therapy [Minireview]
Lander E S & Lodish H (1990) Cell, 61, 925–926

Primary hyperoxaluria type I
Latta K & Brodell J (1990) Eur. J. Pediat. 149, 518

Perspectives on methylmalonic acidemia resulting from molecular cloning of methylmalonyl CoA mutase
Ledley F D (1990) BioEssays, 12, 335

α-Thalassemia
Laahbahir S A (1989) Hemoglobin, 13, 685

Determination of amniotic fluid acetylcholinesterase activity in the antenatal diagnosis of foetal malformations—the first ten years
Lej A G R (1990) J. Clin. Chem. Clin. Biochem. 28, 893

Recent advances in the molecular analysis of inherited disease
Malcolm S (1990) Eur. J. Biochem. 194, 317

S100 protein and Down syndrome
Marks A & Affore R (1990) BioEssays, 12, 381

Familial, multiple endocrine neoplasia type 1: mutation of a tumor suppressor gene [Brief review]
Marx S J (1989) Trends Endocrinol. Metab. 1, 76

β2-microglobulin amyloidosis. A systemic amyloid disease affecting primarily synovium and bone in long-term dialysis patients
Maury C P J (1990) Rheumatol Int. 10, 1

Twenty-Seventh Colworth Lecture: The use of gene targeting to develop animal models for human genetic diseases
Melton D W (1990) Biochem. Soc. Trans. 18, 1035

77
Molecular basis of congenital adrenal hyperplasia
Mornet E & Boue A (1990) M/S Méd. Sci 6, 378

The genetics of primary torsion dystonia
Müller U & Kupke K G (1990) Hum Genet 84, 107

Trismus 21 — Down Syndrome
Neri G & others (1990) Am. J. Med Genet. Suppl. 7, 5–322

Molecular Genetics of Chromosome 21 and Down Syndrome: Sixth Annual Symposium of the National Down Syndrome Society, New York, NY, December 7–9, 1989

Adhesins of enterotoxigenic E. coli — their role in the pathogenesis of diarrhea and genetic control [In Russian; English abstract]
Petrovskaya V G & Bondarenko B M (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No 5, 110

Inherited predisposition to cancer
Ponder B A J (1990) Trends Genet 6, 213

Muscular dysgenesis: a model system for studying skeletal muscle development
Powell J A (1990) FASEB J. 4, 2798

Biological relevance of the protein C system and laboratory diagnosis of protein C and protein S deficiencies [Editorial review]
Preissner K T (1990) Clin. Sci. 78, 351–364

Cystic fibrosis: a disease in electrolyte transport
Quinton P M (1990) FASEB J 4, 2709

Application of the polymerase chain reaction to the diagnosis of human genetic disease
Reiss J & Cooper D N (1990) Hum Genet 85, 1

Inherited disorders of vitamin B12 utilization
Rosenblatt D S & Cooper B A (1990) BioEssays, 12, 331

The heredity of human alcohol abuse: myths and facts
Rinnhammer F (1988) Arch. Biol. Med. Exp. 32, 355

Lipoprotein(a): a genetically determined cardiovascular pathogen in search of a function
Scapu A M (1990) J. Lab. Clin. Med. 116, 142

The genetic dyslipoproteinemias — nosology update 1990
Schonfeld G (1990) Atherosclerosis, 81, 81

The role of nutrition in neural tube defects
Scott J M, Kirke P N & Weir D G (1990) Annu. Rev. Nutr 10, 277

Arylsulfatase A (ASA) defect and psychiatric illness — a review
Shah S N (1990) Mol. Genet. 162, 7

Oxidative denaturation in congenital hemolytic anemias: the unstable hemoglobins
Winterbourn C C (1990) Seminars Hematol. 27, 41

Molecular biology of human apolipoprotein-B and apolipoprotein-E and associated diseases of lipoprotein metabolism
Zannis V I (1989) Advan. Lipid Res. 23, 1

GENETIC CODE
See: GENETICS

GENETIC ENGINEERING
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GENETICS
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GENETIC AND METABOLIC DISEASES
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The problem of the adaptive norm in human populations
Altukhov Y P & Kurbatova O L (1990) Genetika, 26, 583

Codon preferences in free-living microorganisms
Andersson S G E & Kurland C G (1990) Genetics, 121

Bryozoan secondary metabolites: a chemotaxonomical challenge
Andersson S G E & Kurland C G (1990) Microbiol. Rev 54, 198–210

Bryozoan secondary metabolites: a chemotaxonomical challenge
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Codon preferences in free-living microorganisms
Andersson S G E & Kurland C G (1990) Microbiol. Rev 54, 198–210

Bryozoan secondary metabolites: a chemotaxonomical challenge
[Mini-review]
Breast cancer: genetic alterations and prognostic factors
Biéche I, Champmèm M H & Lidereau R (1990) Path. Biol. 38, 727

The genetics of protein secretion of E. coli
Bicker K L & Silhavy T J (1990) Trends Genet. 6, 329

Genetics and molecular biology of alternative nitrogen fixation
Bishop P E & Joerger R D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 109–125

Retinoblastoma — from genetic epidemiology to molecular biology
[In French; English abstract]
Bonaiti-Pellien C (1990) M/S Méd. Sci. 6, 972

Molecular and genetic approaches to the study of regulation of the function of suppressor T-cells specific for epitopes of the histocompatibility molecule
Brondz B D, Chervonskii A V & Zaitseva M B (1990) Mol. Biol. Engl. Tr. 24, No. 2, Pt 1, 244

Colorectal cancer: evidence for distinct genetic categories based on proximal or distal tumor location
Buill J A (1990) Ann. Int. Med. 113, 779

Genetics of early neurogenesis in Drosophila melanogaster
Camposortega J A & Knust E (1990) Annu. Rev. Genet. 24, 387

Zebra patterns in fly embryos: activation of stripes or repression of interstripes
Castillo S B (1990) Cell, 60, 9–16

Symposium on Human Genetic Information: Science, Law and Ethics
Haus Univ., Bern, Switzerland, June 20–22, 1989
Chadwick D, Bock G & Whelan J, eds (1990) CUBA Fdn Symp 149, 211 pp.

The genetics of human alcohol metabolism [Minireview]
Chambers G K (1990) Gen. Pharmacol. 21, 267

Host genetic control of spontaneous and induced immunity to Friend murine retrovirus infection
Chesbro B, Miyazawa M & Britt W J (1990) Annu. Rev. Immunol. 8, 477

The thyroglobulin gene: evolutionary and regulatory issues [Brief review]
Christophe D & Vassart G (1990) Trends Endocrinol. Metab. 1, 351

Colloquium on Molecular Evolution, Lake Tahoe, CA, February 27–March 6, 1989
Clegg M T & O’Mear S J, eds (1990) UCLA Symp Mol. Cell. Biol. NS, 122, 322 pp.

Evolution of Simuliformes and the phylogeny of human chromosomes
Clemente I C, Ponsa M, Garcia M & Egozcue J (1990) Hum. Genet. 84, 493

Spectroscopic analysis of genetically modified photosynthetic reaction centers
Coleman W J & Youvan D C (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 333

Molecular evolution of ubiquitous β-lactamases towards extended-spectrum enzymes active against newer β-lactam antibiotics [Minireview]
Collatz E, Labia R & Gutmann L (1990) Mol. Microbiol. 4, 1615

Genetic susceptibility to the development of spontaneous insulin-dependent diabetes mellitus in the rat [Short analytical review]
Colle E (1990) Clin. Immunol. Immunopath. 57, 1

Transgenic animals as bioreactors for pharmaceutical products
Costa P, Sassano M, Righi M & Castagnoli P R (1990) Pharmacol. Res. 22, 75

Cellular and genetic aspects of antigenic variation in trypanosomes
Cross G A M (1990) Annu. Rev. Immunol. 8, 83

Gene duplication as a means for altering H+/ATP ratios during the evolution of FOF1ATPases and synthases
Cross R L & Taiz L (1990) FEBS Lett. 259, 227–229

Nature of the genetic contribution to psychotic illness — a continuum viewpoint
Crow T J (1990) Acta Psychiat. Scand. 81, 401

Molecular evolution: computer analysis of protein and nucleic acid sequences
Doolittle R F, ed. (1990) Methods Enzymol. 183, 736 pp.

Mycoplasma genetics
Dybvig K (1990) Annu. Rev. Microbiol. 44, 81

Molecular genetics of pathogenic fungi: some recent developments and perspectives
Ernst J F (1990) Mycoses, 33, 225

The evolution of αβ barrel enzymes
Farber G K & Petsko G A (1990) Trends Biochem. Sci. 15, 228

A genetic model for colorectal tumorigenesis
Fearon E R & Vogelstein B (1990) Cell, 61, 759–767

Class II Mhc genes in rodent evolution
Figueras F, Gutknecht J, Tichy H & Klein J (1990) Immunol. Rev. 113, 27

Immunogenetics of the Q and TL regions of the mouse
Flaherty L, Elliott E, Tine J A, Walsh A C & Waters J B (1990) Crit. Rev. Immunol. 10, 131

Genetic approaches to myofibril form and function in Drosophila
Fyberg E & Bell C (1990) Trends Genet. 6, 126

The structure of the homeodomain and its functional implications
Gehring W J & others (1990) Trends Genet. 6, 323

The phylogenetic odyssey of the erythrocyte. 2. The early or intervertebrate prototypes
Giomiński C A & Tampurini J (1990) Histol. Histopath. 5, 513

Evolution of the P450-gene superfamily — animal-plant warfare, molecular drive and human genetic differences in drug oxidation
Gonzalez F J & Nebert D W (1990) Trends Genet. 6, 182

The new metabolism: molecular genetics in the analysis of metabolic regulation
Goodridge A G (1990) FASEB J. 4, 309

Molecular assembly and evolution of multi-subunit extracellular annelid hemoglobins
Gotoh T & Suzuki T (1990) 2001. Sci. 7, 1

Evolutionary analysis of mammalian cell differentiation
Gourdeau H & Fournier R E K (1990) Annu. Rev. Cell Biol. 6, 69

Phylogenetic distribution of superoxide dismutase supports an endosymbiotic origin for chloroplasts and mitochondria [Minireview]
Grace S C (1990) Life Sci. 47, 1875

Genetics of circadian rhythms
Hall J C (1990) Annu. Rev. Genet. 24, 659

Genomic imprinting: review and relevance to human diseases
Hall J G (1990) Am. J. Hum. Genet. 46, 857

Transgenic mouse models of self-tolerance and autoreactivity by the immune system
Hausaud D (1990) Annu. Rev. Cell Biol. 6, 493

Genetic aspects of nervous system development
Hardy P A (1990) J. Neurogenet. 6, 115

Symposium on Genetic Mechanisms in Carcinogenesis and Tumor Progression Symposium on Growth Regulation of Cancer
Keyence, CO, January 1989
Harris C C & Littota L A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 114, 235 pp.
Phylogeny and molecular evolution of primates
Hasegawa M (1990) Jap. J. Genet. 65, 243

Molecular genetics of polyamine synthesis in eukaryotic cells
Heby O & Persson L (1990) Trends Biochem. Sci. 15, 153

Position-effect variegation after 60 years
Henikoff S (1990) Trends Genet. 6, 422

The molecular genetics of the α globin gene family
Higgs D R (1990) Eur. J. Clin. Invest 20, 340

Sex determination compared in Drosophila and Caenorhabditis
Hodgkin J (1990) Nature, 344, 721

Molecular genetics of polyketides and its comparison to fatty acid biosynthesis
Hopwood D A (1990) Annu. Rev. Genet. 24, 37

Cellular and genetic responses to mesoderm induction in Xenopus
Hopwood N D (1990) BioEssays, 12, 465

Complex translocations, simple variant translocations and pH-negative cases in chronic myelogenous leukaemia
Huret J L (1990) Hum. Genet 85, 565

Accelerated genetic destabilization and dormancy: two distinct causes of resistance in metastatic cells; clinical magnitude; therapeutic approaches
Israel L (1990) Clin. Exp. Metastasis, 8, 1

Genetic approaches to ciliate pattern formation: from self assembly to morphogenesis
Jerka-Dziadosz M & Beisson J (1990) Trends Genet 6, 41-45

A candidate gene for Wilms’ tumour [In French; English abstract]
Junien C (1990) M/S Méd. Sci. 6, 464

Genetic studies of human apolipoproteins. XV. An overview of IEF immuno blotting methods to screen apolipoprotein polymorphisms
Kambhoj M I & Ferrell R E (1990) Annu. Rev. Genet 24, 105

Genetic basis of multidrug resistance of tumor cells [Mini-review]
Kane S E, Pastan I & Gottesman M M (1990) J. Bioenerget. Biomembr. 22, 593

Evolution of the class II major histocompatibility complex alleles in higher primates
Kasahara M, Klein D, Fan W & Gutkecht J (1990) Immunol. Rev 113, 65

Molecular genetic dissection of myosin heavy chain function [Mini-review]
Kiehart D P (1990) Cell, 60, 347-350

Genetics of response to slow virus (prion) infection
Kingsbury D T (1990) Annu. Rev. Genet 24, 115

Multiple phenotypic consequences of the bg/Myc translocation in B-cell-derived tumors
Klein G (1989) Gene Chromosome Cancer. 1, 3

Mechanism and evolution of the uncoupling protein of brown adipose tissue
Klingenber M (1990) Trends Biochem. Sci. 15, 108

Recent advances in the molecular genetics of Diestoystelium
Knecht D A & Kessin R H (1990) Dev. Genet 11, 388

Genetic variability of hepatitis-B virus and the serological expression of the viral infection
Kremersdorff D & others (1990) M/S Méd. Sci. 6, 108

Molecular genetics of the chicken MHC: current status and evolutionary aspects
Kroemer G & others (1990) Immunol. Rev 113, 119

Circadian rhythms in Neurospora crassa — biochemistry and genetics
Lakin-thomas P L, Cote G G & Brody S (1990) Crit. Rev. Microbiol. 17, 365

Drug interactions in hypertensive patients: pharmacokinetic, pharmacodynamic and genetic considerations
Lam Y W F & Shepherd A M M (1990) Clin. Pharmacokinet 18, 293-317

Reverse genetics using transgenic mice
Landel C P, Chen S & Evans G A (1990) Annu. Rev. Physiol. 52, 841

Alzheimer’s disease — proteins, genes and early diagnosis [In French; English abstract]
Laplanché J L, Chatelain J, Launay J M & Dreux C (1990) Ann. Biol. Clin. Paris, 48, 281

Comparison of class I MHC alleles in humans and apes
Lawlor D A, Warren E, Ward F E & Parham P (1990) Immunol. Rev. 113, 147

Evolution of class-I MHC genes and proteins: from natural selection to thymic selection
Lawlor D A, Zemmour J, Ennis P D & Parham P (1990) Annu. Rev. Immunol. 8, 23

Genetic instability and hypervariability in Streptomyces antibioticus: towards an understanding of a mechanism of genome plasticity
Leblond P, Demuyter P, Sumon J M & Decaris B (1990) Mol. Microbiol. 4, 707

Epileptic Syndromes — Genetic, Diagnostic, and Therapeutic Aspects
Leppik I F & others (1990) Epilepsia. 31 Suppl 7, S1-S74

The generation of genetic diversity in malaria parasites
McConkey G A, Waters A P & McCutchan T F (1990) Annu. Rev. Microbiol. 44, 479

Genetic control of cell communication in C. elegans development
Mame E M & Kimble J (1990) BioEssays, 12, 261

The multidrug resistance phenotype-MDR genes and P-gp [In French; English abstract]
Marie J P (1990) M/S Méd. Sci. 6, 443

Evolution of antibody and T-cell receptor V genes — the antibody repertoire might have evolved abruptly
Matsuura T & Tormannen V (1990) Dev. Comp. Immunol. 14, 1

Evolutionary relationships of sea-urchins at the molecular level
Matsuoka N (1990) Comp. Biochem. Physiol. Pt B, 97, 31

Mutation and the Environment, Part C. Somatic and Heritable Mutation, Adduction, and Epidemiology. 5th International Conference on Environmental Mutagens, Case Western Reserve University, Cleveland, OH, July 10–15, 1989
Mendelsohn M L & Albertini R J, eds (1990) Progr. Clin. Biol. Res 340, Pt C, 423 pp.

Drug polymorphisms of drug metabolizing enzymes — molecular mechanisms
Meyer U A (1990) Acta Pharmaceut Jugoslav 40, 491

General microbiology of recA: environmental and evolutionary significance
Miller R V & Kokjohn T A (1990) Annu. Rev Microbiol. 44, 365

The genetics of bacterial spore germination
Moir A & Smith D A (1990) Annu. Rev Microbiol 44, 531

The genetics of RNA polymerases in yeasts [Mini-review]
Moserin C & Thuriaux P (1990) Curr. Genet. 17, 367

Global genetic structure and molecular epidemiology of encapsulated Haemophilus influenzae
Muscar J M & others (1990) Rev Infect. Dis. 12, 75

The comparative radiation genetics of humans and mice
Neel J V & Lewis S E (1990) Annu Rev Genet 24, 327
The search for early genetic events in tumorigenesis: an amplification
paradigm

Molecular genetic studies of manic-depression and schizophrenia

Contrasting modes and tempo of genome evolution in land plant
organelles

The role of introns in evolution [Minireview]

The concept of limiting genetic factors of expression, organization and
evolution [In Russian; English abstract]

The yeast microtubule cytoskeleton: genetic approaches to structure
and function

The critical region on the human Xq

Transmission of signals from T lymphocyte antigen receptor to the
genes responsible for cell proliferation and immune function

Genetic control of autoimmunity in type-I diabetes

At the crossroads of developmental genetics: the cloning of the
classical mouse T locus

The yeast microtubule cytoskeleton: genetic approaches to structure
and function

Lessons learned from molecular biology of insulin-gene mutations

An element of symmetry in yeast TATA-box binding protein
transcription factor-HD — consequence of an ancestral duplication?

An emerging role for macro-RNA in the molecular genetics
of the human Xq

A new approach to the study of the human Xq: a transgenic hamster
model

New insights into the organization and evolution of the human
X chromosome

The phylogenetic analysis of prokaryotic and eukaryotic
ribulose bisphosphate carboxylase genes

The evolution of subterranean mammals at the organismal and
molecular levels, Rome, Italy, August 22-29, 1989

Elevated gentamicin resistance in Escherichia coli

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molecular levels, Rome, Italy, August 22-29, 1989

Genetic analysis of protein export in bacteria: structure, function, and
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and Applications, Wageningen, The Netherlands, 17-21 September
1990

Enterotoxins of enterotoxigenic Escherichia coli — characterization,
mechanism of effect and genetic control [In Russian: English abstract]

Molecular invasion theory — a new strategy for viral evolution and
tumorigenesis

The phylogeny and chemical diversity of quinone-tanned glues and
varnishes

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genes responsible for cell proliferation and immune function

Third Symposium on Lactic Acid Bacteria — Genetics, Metabolism
and Applications, Wageningen, The Netherlands, 17-21 September
1990

Genetic control of autoimmunity in type-I diabetes
The evolution of integration of biological systems — an evolutionary perspective through studies on cells, tissues, and organs [Plenary lecture]
Wake M H (1990) *Am. Zool. 30*, 897

The generation and maintenance of MHC class II gene polymorphism in rodents
Wakeland E K, Boehme S & She J X (1990) *Immunol. Rev. 113*, 207

Norms of reaction: do they include molecular events?
Wallace B (1990) *Perspect. Biol. Med. 33*, 323–334

Molecular evolution and genetic engineering of protein domains involving aspartate transcarbamoylase
Wild J R & Wales M E (1990) *Annu. Rev. Microbiol. 44*, 193

Steel locus defines new multipotent growth factor [Minireview]
Witte O N (1990) *Cell, 63*, 5–6

Interleukin-6: historical background, genetics and biological significance [Minireview]
Wolverson M C J & Marquet R L (1990) *Immunol. Lett. 24*, 1

**GLOBIN**
See: *HAEMOGLOBIN*

**GLUTATHIONE**
See: *PEPTIDES AND POLYPEPTIDES*

**GLYCOLIPIDS**
See: *LIPIDS*

**GLYCOPEPTIDES**
See: *LIPIDS*

**GLYCOPROTEINS**
Biology of multifunctional cytokines: IL-6 and related molecules (IL-1 and TNF)
Akira S, Hirano T, Taga T & Kishimoto T (1990) *FASEB J. 4*, 2860

Integrins and other cell adhesion molecules
Albelda S M & Buck C A (1990) *FASEB J. 4*, 2868

Structure and function of laminin: anatomy of a multidomain glycoprotein
Beck K, Hunter I & Engel J (1990) *FASEB J. 4*, 148

Structure and function of haemolysin B, P-glycoprotein and other members of a novel family of membrane translocators
Blight M A & Holland I B (1990) *Mol. Microbiol. 4*, 873

170 GP expression and resistance to chemotherapy in human cancers
[In French, English abstract]
Bourhis J, Riou G & Benard J (1990) *Bull. Cancer, 77*, 957

What distinguishes tenascin from fibronectin?
Chiquet-Ehrismann R (1990) *FASEB J. 4*, 2598

Integrins and tumor invasion
Dedhar S (1990) *BioEssays, 12*, 583

The biology of transferrin [Critical review]
De Jong G, van Dijk J P & van Etik H G (1990) *Clin. Chim. Acta, 190*, 1

Recent advances in the human physiology of inhibin secretion
De Kretser D M, Robertson D M & Risbridger G P (1990) *J. Endocrinol. Invest. 13*, 611–624

Early events of the immune response mediated by leukocyte integrins
Dransfield I, Buckle A M & Hogg N (1990) *Immunol. Rev. 114*, 20

Glycoconjugate expression during embryogenesis and its biological significance
Fenderson B A, Eddy E M & Hakomori S (1990) *BioEssays, 12*, 173–179

Tumor necrosis factor in the pathophysiology of infection and sepsis [Short analytical review]
Fong Y & Lowry S F (1990) *Clin. Immunol. Immunopath. 55*, 157

Environmental effects on protein glycosylation
Goochee C F & Monica T (1990) *Bio/Technology, 8*, 421

Glycoproteins encoded by Varicella-Zoster virus: biosynthesis, phosphorylation, and intracellular trafficking
Grose C (1990) *Annu. Rev. Microbiol. 44*, 59

The macrostructure of mucus glycoproteins in solution
Harding S E (1989) *Advan. Carbohydr. Chem. Biochem 47*, 345

VLA proteins in the integrin family: structures, functions, and their role on leukocytes
Ishida M E (1990) *Annu. Rev. Immunol. 8*, 365

Structure of the integrin VLA-4 and its cell-cell and cell-matrix adhesion functions
Hemler M E, Elices M J, Parker C & Takada Y (1990) *Immunol. Rev. 114*, 45

Glycated proteins and gestational diabetes-mellitus
Hod M, Orvieto R, Friedman S, Schoenfeld A & Ovadia J (1990) *Israel J. Med. Sci, 26*, 638

Structure and properties of fibronectin [Minireview]
Khun M Y (1990) *Int. J. Biochem. Biophys. 27*, 63

Platelet membrane glycoproteins — functions in cellular interactions
Kieffer N & Phillips D R (1990) *Annu. Rev. Cell Biol. 6*, 329

Glycoconjugates and cell surface interactions in pre-implantation and peri-implantation mammalian embryonic development
Kimber S J (1990) *Int. Rev. Cytol. 120*, 53–167

Proteoglycans in haemopoietic cells
Kolset S O & Gallagher J T (1990) *Biochem. Biophys. Acta, 1032*, 191

Tumour necrosis factor signal transduction [Minireview]
Kro¨nke M & others (1990) *Cell Signal. 2*, 1

Tamm-Horsfall protein — uromodulin (1950-1990) [Editorial review]
Kumar S & Muchmore A (1990) *Kidney Int. 37*, 1395-14-1

Extracellular matrix [Minireview]
Labad-Robert J, Bhattar-Varga M & Robert L (1990) *FEBS Lett. 268*, 386–393

Cytotoxic mechanism of tumor necrosis factor-alpha
Larrick J W & Wright S C (1990) *FASEB J. 4*, 3215

Structure and function of leukocyte integrins
Larson R S & Springer T A (1990) *Immunol. Rev. 114*, 181

Carbohydrate analysis of glycoproteins: a review
Lee K B, Loganathan D, Merchant Z M & Linhardt R J (1990) *Appl. Biochem. Biotechnol. 23*, 53

P-Glycoprotein and progesterone receptor in human breast cancer
McGuire W L (1990) *Cancer Cells, 2*, 27

Mucoins in breast cancer: recent immunological advances
McKenzie I F C & Xing P-X (1990) *Cancer Cells, 2*, 75–78

International Conference on Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, Siena, Italy, October 22–25, 1989
Melli M & Parente L, eds (1990) *Progr. Clin. Biol. Res. 349*, 463 pp.
GLYCOSIDES

C-Glycoside synthesis by palladium-mediated glycal-allyl coupling reactions
Daves G D jr (1990) Acc. Chem. Res. 23, 201

Aminoglycoside-induced ototoxicity [Minireview]
Govaerts P J, Claes J, Heyningen P H van den, Jorens Ph G, Marquet J & De Broe M E (1990) Toxicol. Lett. 52, 227

Pathogenic factors in aminoglycoside-induced nephrotoxicity
[Minireview]
Kacew S & Bergeron M G (1990) Toxicol. Lett. 51, 241

Natural C-glycoside antibiotics and approaches to determining structure of their carbohydrate moiety [In Russian, English abstract]
Murenets N V (1990) Antibiot. Khimioterap. 35, No.6, 47

Enzymes inactivating aminoglycosides — current status [In Russian; English abstract]
Taisova A S (1990) Antibiot. Khimioterap. 35, No.6, 51

GROWTH, GROWTH FACTORS AND DEVELOPMENT

See also: CELLS, CELL ADHESION AND CELL WALLS

Molecular mimicry of growth factors by products of tumor viruses
Aaronson S A & Pierce J H (1990) Cancer Cells, 2, 212

Growth regulation of the vascular system: evidence for a metabolic hypothesis [Editorial review]
Adaiz T II, Gay W J & Montianni J-P (1990) Am. J. Physiol. 259, No 3, Pt 2, R393

Growth control circuitry and the oncogene connection [Meeting review]
Adams J M (1990) Cancer Cells, 2, 190

Sexual differentiation in malaria parasites
Alano P & Carter R (1990) Ann. Rev. Microbiol. 44, 429

Induced differentiation of K562 leukemia cells: a model for studies of gene expression in early megakaryoblasts
Altalato R (1990) Leukemia Res. 14, 501

Specific myogenic regulation factors [In French; English abstract]
Alonso S (1990) M/S Med. Sci. 6, 635

Axial patterning and the establishment of polarity in the frog embryo
Altaba A R I & Melton D A (1990) Trends Genet. 6, 57

Adhesion molecules and animal development
Anderson H (1990) Experientia, 46, 2

Papers Presented at the Sixth International Symposium on Microbial Growth on Cl-Compounds, Götingen, FRG, 20–25 August, 1989
Andersen J R & Bowien B, eds (1990) FEMS Microbiol. Rev. 87, 189–445

Collagen gene expression and tooth development. An overview
Andujar M B & Magloire H (1990) J. Biol. Bucc 18, 117

What is the role of recombinant colony stimulating factors in bone marrow transplantation
Auer I, Ribas A & Gala R P (1990) Bone Marrow Transplant. 6, 79

The role of cell-cell interaction in the development of the Drosophila visual system
Banerjee U & Zipursky S L (1990) Neuron, 4, 177–187

Epidermal growth factor in breast cancer [Minireview]
Barker S & Vinson G P (1990) Int. J. Biochem. 22, 939

The cell biology of transforming growth factor β
Barnard J A, Lyons R M & Moses H L (1990) Biochim. Biophys. Acta, 1032, 79

GLYCOSAMINOGLYCANS
See: POLYSACCHARIDES
The production of alveolar macrophage-derived growth-regulating proteins in response to lung injury [Minireview]

Baas P (1990) *Biol. Rev.* 65, 185

Steroidal control of behavioural, neuroendocrine and brain sexual differentiation: studies in a carnivore, the ferret

Baum M J, Carroll R S, Cherry J A & Tobet S A (1990) *Neuroendocrinol.* 2, 401

Growth hormone-binding proteins [Brief review]

Baumann G (1990) *Trends Endocrinol. Metab.* 1, 342

“APUD” cells: fact and fiction [Brief review]

Baylin S B (1990) *Trends Endocrinol. Metab.* 1, 198–204

A molecular view of the Ultrabithorax homeotic gene of *Drosophila* Beachy P A (1990) *Trends Genet.* 6, 46

The formation of patterns in non-equilibrium growth

Ben-Jacob E & Garik P (1990) *Nature*, 343, 523

Biology of the fibroblast growth factor family

Benharroch D & Birnbaum D (1990) *Israel J. Med. Sci.* 26, 212

Transplacental amino acid transfer and its study using positron emission tomography — a short review based on a doctoral thesis

Berglund L (1990) *Upsala J. Med. Sci.* 95, 95

Control of thyroid cell and follicle growth: recent advances and current controversies [Brief review]

Bidey S P (1990) *Trends Endocrinol. Metab.* 1, 174

The betrayal of homeobox genes in normal development: the link to cancer

Blatt C (1990) *Cancer Cells*, 2, 186

The nature and function of polypeptide growth factor receptors in the human placenta

Blay J & Hollenberg M D (1990) *J. Dev. Physiol.* 12, 237–248

Tumor interactions with the vasculature: angiogenesis and tumor metastasis

Blood C H & Zetter B R (1990) *Biochim. Biophys. Acta*, 1032, 89

Symposium on Proto-Oncogenes in Cell Development, Ciba Foundation, London, England, September 19–21, 1989

Bock G & Marsh J, eds (1990) *CIBA Fdn Symp.* 150, 295 pp.

Developmental biology of T cells in T cell receptor transgenic mice

Boehmer H von (1990) *Annu. Rev. Immunol.* 8, 531

8th Journées on Growth Factors and Oncogenes, Grenoble, France, September 10–11, 1989

Bolha M, Chambaz E M & Vrouros C, eds (1989) *Colloq. INSERM*, 190, 222 pp.

Nerve growth factor (NGF) — involvement in plasticity and functional maintenance of nerve cells [In French; English abstract]

Branchet P (1990) *M/S Med. Sci.*, 6, 854

The production of alveolar macrophage-derived growth-regulating proteins in response to lung injury [Minireview]

Brandea M E & Finkelstein J N (1990) *Toxicol. Lett.* 54, 3

Toward a structural and molecular definition of the kinetochore

Brinkley B R (1990) *Cell Motil. Cytoskel.* 16, 104

8th International Symposium on Growth and Growth Disorders — Proceedings of a Meeting held in Stockholm, Sweden, 15–16 September 1989

Brook C G D & others (1990) *Acta Paediat.* Scand.* Suppl.* 366, 1

Development of visual sensitivity to light and color vision in human infants: a critical review [Minireview]

Brown A M (1990) *Vision Res.* 30, 1159

Influence of growth rate on susceptibility to antimicrobial agents, modification of the cell envelope and batch and continuous culture studies [Minireview]

Brown M R W, Collier P J & Gilbert P (1990) *Antimicrob. Agents Chemother.* 34, 1623–1628

Molecular analysis of a cellular decision during embryonic development of *Drosophila melanogaster*: epidermogenesis or neurogenesis

Campos-Ortega J A & Knust E (1990) *Eur J. Biochem.* 190, 1–10

Thirteenth GIlice Lecture in Neurobiology — Expression and Assembly of a Functional Neuron. Genetic and molecular mechanisms of neurogenesis in *Drosophila-melanogaster*

Campos-Ortega J A & Knust E (1990) *J. Physiol. Para.* 84, 1

Genetics of early neurogenesis in *Drosophila melanogaster*

Campos-Ortega J A & Knust E (1990) *Annu. Rev. Genet.* 24, 387

Oncogenes, antioncogenes, and the regulation of cell growth

Carbone M & Levine A S (1990) *Trends Endocrinol. Metab.* 1, 248

Embryogenic cells in plant tissue cultures: occurrence and behavior

Carman J G (1990) *In Vitro*, 26, 746

Epidermal growth factor [Minireview]

Carpenter G & Cohen S (1990) *J. Biol. Chem.* 265, 7709

Zebra patterns in fly embryos: activation of stripes or repression of interstripes

Carroll S B (1990) *Cell*, 60, 9–16

G2 to M transition substrates of the M-phase specific kinase p34cdc2

[In French, English abstract]

Cavadore J C, Lebouuffant F & Labbe J C (1990) *M/S Med. Sci.*, 6, 895

Manipulations of cellular iron metabolism for modulating normal and malignant cell proliferation — achievements and prospects

Cazzola M, Bergamaschi G, Dezza L & Arosio P (1990) *Blood*, 75, 1903

DNA methylation and development

Cedar H & Razin A (1990) *Biochim. Biophys. Acta*, 1049, 1

Placental Communications: Biochemical, Morphological and Cellular Aspects: 3rd Meeting of the European Placenta Group, Dourdan, France. September 27–30, 1989

Cedar H & Razin A, eds (1990) *Colloq. INSERM*, 199, 301 pp.

Mechanism of homeostatic regulation of tissue growth and reversion of transformed cells to nonmalignancy — a Ying-Yang problem [Minireview]

Chany C (1990) *J. Interferon Res.* 10, 453

Progesterin regulation of cellular proliferation

Clarke C L & Sutherland R L (1990) *Endocr Rev.* 11, 266

Centromeres of budding and fission yeasts

Clarke L (1990) *Trends Genet.* 6, 150

Developmental cell death: morphological diversity and multiple mechanisms

Clarke P G H (1990) *Anat. Embryol.* 181, 195–213

Insulinlike growth factor binding proteins [Brief review]

Clemmons D R (1990) *Trends Endocrinol. Metab.* 1, 412

Antisense strategies in cell and developmental biology

Colman A (1990) *J. Cell Sci.* 97, 399

Patterned activity, synaptic convergence, and the NMDA receptor in developing visual pathways

Constantine-Paton M, Cline H T & Debski E (1990) *Annu. Rev. Neurosci.* 13, 129
Differentiation of the bacterial cell division site
Cook W R, Deboer P A J & Rothfield L I (1989) Int. Rev. Cytol. 118, 1
Measurement of developmental time by cells of early embryos
[Minireview]
Cooke J & Smith J C (1990) Cell, 60, 891–894
Fibroblast growth factor and herpes simplex virus receptors [In French; English abstract]
Courtois Y (1990) M/S Méd. Sci. 6, 674
Expression of adhesion molecules and the establishment of boundaries during embryonic and neural development
Crossin K L, Prieto A L, Hoffman S, Jones F S & Friedlander D R (1990) Exp. Neural. 109, 6
Symposium on Developmental Biology, Tamarron, CO, March 12–19, 1989/Symposium on Molecular and Cellular Biology of Yeasts and Filamentous Fungi, Steamboat Spring, CO, April 3–9, 1989
Davidson E H, Ruderman J V & Posakony J W, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 125, 388 pp.
Ontogeny of the somatosensory system: origins and early development
French; English abstract
Cook W R, Deboer P A J & Rothfield L I (1989) Int. Rev. Cytol. 118, 1
Bacterial cell division
Deboer P A J, Cook W R & Rothfield L I (1990) Annu. Rev. Genet. 24, 249
Insulin and insulin-like growth factor-I in early development – peptides, receptors and biological events
Depablo F, Scott L A & Roth J (1990) Endocr. Rev. 11, 558
Role of mineral ions in the control of plant morphogenesis: example of the inhibition of the growth of the hypocotyl of Bidens pilosa L [In French; English abstract]
Desbiez M O, Frachisse J M & Thellier M (1989) C. R. Soc. Biol. 183, 493
Haemopoietic growth factors
Devereux S & Linch D (1990) Q. J. Med. 75, 537
Structure-activity relationships (SAR) and structure–metabolism relationships (SMR) affecting the teratogenicity of carboxylic acids
Diciaro F J (1990) Drug Metab. Rev. 22, 411
Regulation of proliferation, invasion and growth factor synthesis in breast cancer by steroids [Plenary Lecture]
Dickson R B, Thompson E W & Lippman M E (1990) J. Steroid Biochem. Mol. Biol. 37, 305
The cellular and molecular events of central nervous system myelination
Dubois-Dalcq M & Aumount R (1990) BioEssays, 12, 369
Functions of maternal mRNA in early development
Dworkin M B & Dworkin-Bastl E (1990) Mol. Reprod. Dev. 26, 261
Sexual differentiation in fishion yeast
Egel R, Nielsen O & Weilguny D (1990) Trends Genet. 6, 369
Ontogenic maturation of the immune system in reptiles
Fleisch O S & Saud A H M (1990) Dev. Comp. Immunol. 14, 151
The initiation of development at fertilization
Epel D (1990) Cell Differentiation Dev. 29, 1
Human leucocyte differentiation antigens: review of the CD nomenclature
Erber W N (1990) Pathology, 22, 61
The role of growth factors in the pituitary
Ezzat S & Melmed S (1990) J. Endocrinol. Invest. 13, 691
Peripheral nerve regeneration
Fawcett J W & Keynes R J (1990) Annu. Rev. Neurosci. 13, 43
Glycoconjugate expression during embryogenesis and its biological significance
Fenderson B A, Eddy E M & Hakomori S (1990) BioEssays, 12, 173–179
Growth factor receptor-mediated assembly of signal transfer particles [In French; English abstract]
Filhol O & Cochet C (1990) M/S Méd. Sci. 6, 980
Hormone epidermal growth factor interactions in development [Plenary lecture]
Fisher D A (1990) Horm. Res. 33, 69
Metabolism and effects of epidermal growth factor and related growth factors in mammals
Fisher D A & Lakshmanan J (1990) Endocr. Rev. 11, 418
Endothelial Cells and Angiogenic Growth Factors in Cancer Growth and Metastasis
Folkman J & others (1990) Cancer Metast. Rev. 9, 171–267
Pulling the trigger: the mechanism of bacterial spore germination [Microreview]
Foster S J & Johnstone K (1990) Mol. Microbiol. 4, 137
Evaluation of the teratogenic potential of chemicals in the rat
Fritz H & Giese K (1990) Pharmacology. 41, Suppl. 1, 1–28
Therapeutic potential of insulinlike growth factor-I
Froesch E R, Guler H-P, Schmid C, Binz K & Zapf J (1990) Trends Endocrinol Metab. 1, 254
Epidermal differentiation – the bare essentials [Minireview]
Fuchs E (1990) J. Cell Biol. 111, 2807
Non-kinetochore transport phenomena, microtubule-chromosome associations, and force transmission in nuclear division
Fuge H (1990) Protoplasma. 158, 1
Cell fate in early mammalian development [In French]
Gardner R L (1990) Recherche. 21, 1476
Determination of bacterial growth and activity at solid-liquid interfaces
Geuze H J & others (1990) Annu. Rev. Microbiol. 44, 579
Insulin-like growth factors and thecal-granulosa-cell function
Geisthovel E, Moretti-Rojas L, Rojas F J & Asch R H (1990) Hum. Reprod. 5, 785
Influence of growth rate on susceptibility to antimicrobial agents: biofilms, cell cycle, dormancy, and stringent response [Minireview]
Gilbert P, Collier P J & Brown M R W (1990) Antimicrob Agents Chemother. 34, 1865–1868
Determinants of nerve cell patterns during development: a review
Goffinet A M (1990) Eur. J. Morphol. 26, 149
Clinical Perspectives on Colony-Stimulating Factors; proceedings from a symposium held December 1, 1989, Atlanta, Georgia, with the 31st Annual Meeting of the American Society of Hematology
Golde D W & others (1990) Seminars Hematol. 27, No 3, Suppl. 3, 1–25
Proceedings of the Second International Conference on Blood Cell Growth Factors: their Biology and Clinical Applications
Golde D W & others (1990) Int. J. Cell Cloning, 8, Suppl. 1, 4
Genetic analysis of mammalian cell differentiation
Gourdeau H & Fournier R E K (1990) Annu. Rev. Cell Biol. 6, 69
Cell fates in C. elegans – in medias ras [Minireview]
Greenwald I & Broach J R (1990) Cell, 63, 1113–1116
Regulation of fetal lung maturation
Gross I (1990) Am J. Physiol. 259, No 6, Pt 1, L337

85
Platelet-derived growth factor - a growth factor with an expanding role in health and disease
Habenicht A J R, Salbach P & Schettler G (1990) Klin. Wochenschr 68, 33

Nonimmunological aspects of MHC function in the regulation of cell proliferation and the malignant phenotype
Haltiwai T, Carlow D A & Elliott B E (1990) Cancer Cells, 2, 86–90

Assessment of cell proliferation in histological material
Hall P A & Levison D A (1990) J Clin. Path. 43, 184

Immunohistochemical markers of cellular proliferation — achievements, problems and prospects
Hall P A & Woods A L (1990) Cell Tissue Kinet. 23, 505

The S. Kuffler Lecture. The rise of experimental neuroembryology. A personal reassessment
Hamburger V (1990) Int. J. Dev. Neurosci. 8, 121

Genetic aspects of nervous system development
Hardy P A (1990) J. Neurogenetics. 6, 115

To shape a cell — an inquiry into the causes of morphogenesis of microorganisms
Harold F M (1990) Microbiol. Rev. 54, 381

Symposium on Genetic Mechanisms in Carcinogenesis and Tumor Progression/Symposium on Growth Regulation of Cancer 2, Keystone, CO, January 1989
Harriss C C & Liotta L A, eds (1990) UCLa Symp. Mol. Cell. Biol. NS, 114, 235 pp.

Early events in the embryogenesis of the vertebrate visual system: cellular determination and pathfinding
Harris W A & Holt C E (1990) Annu. Rev. Neurosci. 13, 155

Plant growth and development in molecular perspective
Hatway D E (1990) Biol. Rev. Cambridge Phil. Soc. 65, 473

Riding the glial monorail: a common mechanism for glial-guided neuronal migration in different regions of the developing mammalian brain
Hatten M E (1990) Trends Neurosci. 13, 179

Platelet-derived growth factor: mechanism of action and possible in vivo function
Heldin C-H & Westmark B (1989) Cell Regul. 1, 555–566

Colloquium on Early Embryo Development and Paracrine Relationships, Taos, NM, February 3–8, 1989
Heyner S & Wiley L M, eds (1990) UCLa Symp. Mol. Cell. Biol. NS, 117, 176 pp.

Developmental neurobiology of salt taste sensation
Hill D L & Mistretta C M (1990) Trends Neurosci. 13, 188

Workshop on Current Trends in Growth Related Research — Proceedings of a meeting held in Haifa, Israel, 24–27 October, 1989
Hochberg Z & others (1990) Arto Paediat. Scand. Suppl. 367, 1–177

Glycated proteins and gestational diabetes-mellitus
Hod M, Orvieto R, Friedman S, Schoenfeld A & Ovadia J (1990) Israel J. Med. Sci. 26, 638

Unbalanced transmethylation and the perturbation of the differentiated state leading to cancer
Hoffman R M (1990) BioEssays, 12, 163

Antiparallel microtubule interactions: spindle formation and anaphase B
Hogan C J & Cande W Z (1990) Cell Motil. Cytoskel. 16, 99

Mechanisms for the control of gene activity during development
Holliday R (1990) Biol. Rev. Cambridge Phil. Soc 65, 431

Cellular and genetic responses to mesoderm induction in Xenopus Hopwood N D (1990) BioEssays, 12, 465

Insulin-like growth factors I and II
Humble R E (1990) Eur. J. Biochem. 191, 445–462

Evasive strategies of trophoblast cells: selective expression of membrane antigens
Hunt J S & Hsi B-L (1990) Am J. Reprod. Immunol. 23, 57

Nerve regeneration through allogeneic nerve grafts, with special reference to the role of the Schwann cell basal lamina
Ide C, Osawa T & Tohyama K (1990) Progr. Neurobiol. 34, 1

Growth and differentiation of limb bud cells in vitro: implications for limb pattern formation
Ide H (1990) Dev. Growth Differentiation. 32, 1

Regulation of mammary epithelial cell growth in mice and rats
Imagawa W, Bandyopadhyay G K & Nandi S (1990) Endocr. Rev 11, 494

A family of POU-domain and PIT-1 tissue-specific transcription factors in pituitary and neuroendocrine development
Ingram H A & others (1990) Annu. Rev. Physiol. 52, 773

Genes required for specifying cell fates in Drosophila embryonic sensory nervous system
Jan Y N & Jan L Y (1990) Trends Neurosci. 13, 493

The perinatal reorganization of the innervation of skeletal muscle in mammals
Jansen J K S & Fladby T (1990) Progr. Neurobiol. 34, 39

Metabolic growth rate control in Escherichia coli may be a consequence of subsaturation of the macromolecular biosynthetic apparatus with substrates and catalytic components
Jensen K F & Pedersen S (1990) Microbiol. Rev. 54, 89–100

Genetic approaches to ciliate pattern formation: from self assembly to morphogenesis
Jerka-Dziadosz M & Benson J (1990) Trends Genet. 6, 41–45

Cyclosporine: an immunosuppressant affecting epithelial cell proliferation
Kantakis J & Thrivog J (1990) Arch. Dermatol. 126, 369

Growth hormone gene regulation — a paradigm for cell-type-specific gene activation
Karin M, Castrillo J L & Theill L E (1990) Trends Genet. 6, 92

Effects of visible radiation on cultured cells
Karu T I (1990) Photochem. Photobiol. 52, 1089

Cell-cell repulsion: clues from the growth cone? [Minireview] Keynes R & Cook G (1990) Cell. 62, 609–610

Glycoconjugates and cell surface interactions in pre-implantation and peri-implantation mammalian embryonic development
Kilbinger S J (1990) Int. Rev. Cytol. 120, 53–167

The fungal vacuole: composition, function, and biogenesis
Klionsky D J. Herman P K & Emr S D (1990) Microbiol. Rev. 54, 206–292

Mitogens and hepatocyte growth control in vivo and in vitro
Koski K S & others (1990) In Vitro Cell. Dev. Biol. 26, 2011

Cell growth and abrupt doubling of membrane proteins in Escherichia coli during the division cycle
Kubitschek H E (1990) J. Gen. Microbiol. 136, 599

The role of protein growth factors in the regulation of bone growth [In German]
Kukoschke K G & Mayer H (1990) Deutsch. Med. Wochenschr 115, 1921

Axonal outgrowth by identified neurons in the spinal cord of zebrafish embryos
Kuwada J Y & Bernhardt R R (1990) Exp Neurol 109, 29
Perinatal switch of hemoglobin gene expression [Minireview] [In French; English abstract]
Labie D (1990) M/S Méd. Sci. 6, 572

p53-Oncogene or anti-oncogene?
Lane D P & Benchimol S (1990) Genes Dev. 4, 1

Autocrine growth factors and tumourigenic transformation
Lang R A & Burgess A W (1990) Immunol. Today, 11, 244

Symposium on Adipose Tissue Development
Lau D C W & others (1990) Int. J. Obesity, 14, Suppl 3, 153–193

The epidermal growth factor. A review of structural and functional relationships in the normal organism and in cancer cells
Laurence D J R & Gusterson B A (1990) Tumor Biol. 11, 229

Cholinesterases preceding major tracts in vertebrate neurogenesis
Layer P G (1990) BioEssays, 12, 415

Regulation of cell division
Lepeuch C (1990) M/S Méd. Sci. 6, 10

Recruitment: the ins and outs of spindle cell formation
Leslie R J (1990) Cell Motil. Cytoskel. 16, 225

Segmentation and segmental differentiation in the development of the central nervous systems of leeches and flies
Levine M & Masagu E (1990) Annu. Rev. Neurosci. 13, 195

Differentiation signals in the CNS: type-2 astrocyte development in vitro as a model system
Lillien L E & Raff M C (1990) Neuron, 5, 111–119

The relationship between metabolite production and the growth efficiency of the producing organism
Linton J D (1990) FEMS Microbiol. Rev. 75, 1

2nd Symposium on Growth Regulation of Cancer/Symposium on Genetic Mechanisms in Carcinogenesis and Tumor Progression, Keyston, CO, January 21–27, 1989
Lippman M E & Dickson R B, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 165, 202 pp.

Diet and metabolic development
Little M T E & Hahn P (1990) FASEB J 4, 2605

Regulation of free calmodulin levels by neuromodulin — neuron growth and regeneration
Liu Y C & Storm D R (1990) Trends Pharmacol. Sci. 11, 107

Determination of cell fate in sea urchin embryos
Livingston B I & Witt P H (1990) BioEssays, 12, 115

Biochemical pharmacology of isolated neuronal growth cones — implications for synaptogenesis
Lockerie R O (1990) Brain Res. Rev. 15, 145

The role of fibroblast growth factors in the central nervous system [Brief review]
Logan A (1990) Trends Endocrinol. Metab. 1, 149

The initiation of meiotic chromosome pairing — the cytological view
Loidl J (1990) Genome, 33, 759

Homegene in mammalian development and the evolution of the cranium and central nervous system
Lonai P & Orr-Urtreger A (1990) FASEB J 4, 1436

The cellular basis of segmentation in the developing hindbrain
Luu-The A (1990) Trends Neurosci. 13, 329

Regulation of cell division in E. coli
Lutkenhaus J (1990) Trends Genet. 6, 22

Transforming growth factors and the regulation of cell proliferation
Lyons R M & Moses H L (1990) Eur. J. Biochem. 187, 467–473

Surface-induced swarmer cell differentiation of Vibrio parahaemolyticus [MicroReview]
McCarter L & Silverman M (1990) Mol. Microbiol. 4, 1057

Physiological and pathophysiological roles of excitatory amino acids during central nervous system development
McDonald J W & Johnston M V (1990) Brain Res. Rev. 15, 41

Genetic control of cell communication in C. elegans development
Maine E M & Kimble J (1990) BioEssays, 12, 261

Dual regulation of meiosis in yeast [Minireview]
Malone R E (1990) Cell, 61, 375–378

Gene activity during pollen development
Massareanu J P (1990) Annu. Rev. Plant Physiol Plant Mol. Biol. 41, 317–338

The transforming growth factor-beta family
Massague J (1990) Annu. Rev. Cell Biol. 6, 597

Transforming growth factor-alpha — a model for membrane-anchored growth factors [Minireview]
Massague J (1990) J. Biol. Chem. 265, 21393

Glutaminolysis and glycolysis interactions in proliferant cells [Minireview]
Medina M A & Castro I N de (1990) Int. J. Biochem. 22, 681

International Conference on Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, Siena, Italy, October 22–25, 1989
Meli M & Parente L, eds (1990) Progr. Clin. Biol. Res. 349, 463 pp.

The role of pulmonary surfactant protein synthesis in fetal lung: a major role of glucocorticoids and cyclic AMP [Brief review]
Mendelson C R & Boggaram V (1990) Trends Endocrinol. Metab. 1, 20

Structure-function relationships in identified afferent neurons
Mense S (1990) Anat. Embryol. 181, 1–17

Terminally differentiating epithelial tissues in primary explant culture: a model of growth and development
Merchant D J (1990) In Vitro, 26, 543

Hematopoietic growth factors in bone marrow transplantation
Mertelsmann R, Herrmann F, Hecht T & Schulz G (1990) Bone Marrow Transplant. 6, 73

Liver regeneration: molecular mechanisms of growth control
Michalopoulos G K (1990) FASEB J. 4, 176

The biology of hematopoietic growth factors — studies in vitro under serum-deprived conditions [Minireview]
Migliaecio G, Migliaecio A R & Adamson J W (1990) Exp. Hematol. 18, 1049

The regulation of DNA repair during development
Mitchell D L & Hartman P S (1990) BioEssays, 12, 74

Tubulin flux in the mitotic spindle: where does it come from, where is it going?
Mitchison T J & Salmon K E (1990) Cell Motil. Cytoskel. 16, 93

Susceptibility of epithelia to directive influences of mesenchymes during organogenesis — uncoupling of morphogenesis and cytodifferentiation
Mizuno T & Yasugi S (1990) Cell Differentiation Dev 31, 151

The genetics of bacterial spore germination
Moir A & Smith D A (1990) Annu. Rev. Microbiol. 44, 531

Genomic imprinting — Papers presented at the British Society for Developmental Biology Meeting held at University of Manchester, April 1990
Monk M & others (1990) Development, Suppl. 1990 1–141

Granulocyte-macrophage colony-stimulating factor: more than a hemopoietin [Short analytical review]
Monroy R L, Davis T A & MacVitie T J (1990) Clin. Immunol. Immunopath. 54, 333

87
Substrates for p34^*^: _in vivo_ veritas?
Moreno S & Nurse P (1990) _Cell_. 61, 549-551

Molecular basis of congenital adrenal hyperplasia
Morner E & Boue A (1990) _M./S Med. Sci_. 6, 378

Epidermal cell kinetics of the pig: a review
Morris G M & Hopewell J W (1990) _Cell Tissue Kinet_. 23, 271

TGF-β stimulation and inhibition of cell proliferation: new mechanistic insights [Mini review]
Moses H L, Yang E Y & Pietenpol J A (1990) _Cell_. 63, 245-247

Cell-cycle aspects of growth and maturation of mammalian oocytes
Motlik J & Kubelka M (1990) _Mol. Reprod. Dev_. 27, 366

Growth factors and their receptors in differentiation and early murine development
Mummery C L, Van den Eijnden-van Raarj A J M (1990) _Cell Differentiation_ Dev 30, 1

Cellular and biochemical aspects of muscle differentiation
Muntz L (1990) _Comp. Biochem. Physiol. Pt B_. 97, 215

Uterine insulin-like growth factor-1 — regulation of expression and its role in estrogen-induced uterine proliferation
Murphy L J & Ghahary A (1990) _Endocr. Rev_. 11, 443

Development and plasticity of the _Locus coeruleus_: a review of recent physiological and pharmacological experimentation
Nakamura S & Sakaguchi T (1990) _Prgr Neurobiol_. 34, 505

FAR-reaching discoveries about the regulation of START
Nasmuth K A (1990) _Cell_. 63, 1117-1120

Regulation of the cell division cycle and differentiation in bacteria
Newton A & Ohta N (1990) _Annu Rev Microbiol_. 44, 689

Studies on the relationship between boron and magnesium which possibly affects the formation and maintenance of bones [Mini review]
Nielsen F H (1990) _Magnesium Trace Elem_. 9, 61

Light microscopy and morphometry of vinblastine _in vitro_ cytotoxicity in the different developmental stages of rat incisor ameloblast epithelium
Nielsen H W (1990) _APMIS_. 98, Suppl 11, 5-56

Interleukin production by human colorectal cells after _in vitro_ mitogen stimulation — review
Nikolova E & others (1990) _Am. J. Reprod. Immunol_. 23, 104

Plasma protein binding of drugs in pregnancy and in neonates
Notarianni L J (1990) _Clin. Pharmacokinet_. 18, 20-36

The 1990 Marjory Stephenson Prze Lecture: On fission
Nurse P (1990) _J. Gen. Microbiol_. 136, 1921-1925

Mammalian cranial neural crest cells and facial development
Osumyamashita N & Eto K (1990) _Dev. Growth Differentiation_. 32, 451

Factor-dependent human leukemia cell lines — new models for regulation of acute non-lymphocytic leukemia cell growth and differentiation
Oval J & Taetle R (1990) _Blood Rev_. 4, 270

Transfer of phytohormone genes to induce morphogenesis in plants
Owens I. D & Smigocki A C (1989) _Advanc. Cell Culture_. 7, 183

Endocrinization of the early embryo: an emerging role for hormones and hormone-like factors
Pablo F de & Roth J (1990) _Trends Biochem. Sci_. 15, 339

Making stripes in the _Drosophila_ embryo
Pankrutz M J & Jickle H (1990) _Trends Genet_. 6, 287

Platelet-derived growth factor and its receptor in blood cell differentiation and neoplasia
Pantazis P, Goustin A S & Nixon J (1990) _Eur. J. Haematol_. 45, 127

Human placental xenobiotic and steroid biotransformations catalyzed by cytochrome P450, epoxide hydrolase, and glutathione S-transferase activities and their relationships to maternal cigarette smoking
Pasanen M & Petekonen O (1990) _Drug Metab. Rev_. 21, 427

Control of cell fate in a vertebrate neurogenic lineage [Mini review]
Patterson P H (1990) _Cell_. 62, 1035-1038

Receptor tyrosine kinases — genetic evidence for their role in _Drosophila_ and mouse development
Pawson T & Bernsten A (1990) _Trends Genet_. 6, 350

Regulation of the primate fetal adrenal cortex
Pepc G J & Albrecht E D (1990) _Endocr. Rev_. 11, 151

Platelet-activating factor (PAF) and its relation to prostaglandins, leukotrienes and other aspects of arachidonate metabolism
Peplow P V & Mikhashilis D P (1990) _Prostagland. Leuk. Essent. Fatty Acids_. 41, 73

Active vitamin-D metabolites as regulators of monocytic macrophage cell proliferation and differentiation [In Russian, English abstract]
Pletsky K D (1990) _Vopr. Med. Khim_. 36, 3

Mucosal dysgenesis: a model system for studying skeletal muscle development
Powell J A (1990) _FASEB J_. 4, 2798

Nuclear transfer in mammalian embryos
Prathet R S & First N L (1990) _Int. Rev. Cytol_. 126, 169

Platelet-activating factor [Mini review]
Prescott S M, Zimmerman G A & McIntyre T M (1990) _J. Biol. Chem_. 265, 17381

Development and regulation of growth and differentiated function in human and subhuman primate fetal gonads
Rabinovici J & Jaffe R B (1990) _Endocr. Rev_. 11, 532

Positional cues and differential gene expression in somatic embryos of higher plants
Racusen R H & Schiavone F M (1990) _Cell Differentiation_ Dev 30, 139

Gas fluxes in avian eggs. driving forces and the pathway for exchange [Mini review]
Rahn H & Paganelli C V (1990) _Comp. Biochem. Physiol. Pt A_. 95, 1

Progress in protozoology
Raikov I B & others (1990) _Zool. Sci_. 7, Suppl 5

Growth-related protein kinases
Ralph R K, Darkin-Rattray S & Schofield P (1990) _BioEssays_. 12, 121

Stem cell potential of ductular and periductular cells in the adult rat pancreas
Rao M S, Yeldandi A V & Reddy J K (1990) _Cell Differentiation_. 29, 155

Special issue: Growth and Differentiating Factors in Hematology
Reizenstein P & others (1990) _Leukemia Res_. 14, 673-731

Development of the blood-brain barrier
Risau W & Wolburg H (1990) _Trends Neurosci_. 13, 173

Growth hormone treatment of short stature — State-of-the-art in 1989. Proceedings of a Meeting held in Stockholm, October 19, 20, 1989
Ritzén E M & others (1989) _Acta Paediatr. Scand_. Suppl. 362, 5

Hematopoietic growth factors — overview and clinical applications. 1
Robinson B E & Quesenberry P J (1990) _Am. J. Med. Sci_. 300, 163

Hematopoietic growth factors — overview and clinical applications. 2
Robinson B E & Quesenberry P J (1990) _Am. J. Med. Sci_. 300, 237
Volume 298. Supplement

Hematopoietic growth factors — overview and clinical applications.
Robinson B E & Quesenberry P J (1990) Am. J. Med. Sci. 300, 311

Chromosome synapsis and genetic recombination — their roles in meiotic chromosome segregation
Roeder G S (1990) Trends Genet. 6, 385

The role of growth factors in the control of neurogenesis
Rohrer H (1990) Eur. J. Neurosci. 2, 1005

Epidermal growth factor and transforming growth factor-β differently modulate the acute phase response elicited by interleukin-6 in cultured liver cells from man, rat and mouse [Minireview]
Rokita H, Bereta J, Koj A, Gordon A H & Gauldie J (1990) Comp Biochem. Physiol. Pt A, 95, 41

Regulation of the epidermal growth factor receptor by growth-modulating agents
Rosner M R (1990) Biotechnol. Appl. Biochem. 12, 473

Ultrastructure of myofibers and cells synthesizing DNA in the developing and regenerating lymph-heart muscles
Rumyantsev P P & Krylova M I (1990) Int. Rev. Cytol. 120, 1

Insulin-like growth factors and their binding proteins [Minireview]
Rutanen E M & Pekonen F (1990) Acta Endocrinol. 122, 7

Transforming growth factor-α — an oncodevelopmental growth factor
Salomon D S, Kim N, Sueki T & Clardiello F (1990) Cancer Cell Mon. Rev. 2, 389

Insulin-like growth factors and their binding proteins
Sara V R & Hall K (1990) Physiol. Rev. 70, 591

17th Nobel Conference of the Karolinska Institute — Growth Factors: From genes to Clinical Application, Stockholm, Sweden, September 7-8, 1989
Sara V R, Hall K & Low H, eds (1990) Karolinska Inst. Nobel Conf. Ser. 17, 265 pp.

The role(s) of gangliosides in neural differentiation and repair: a perspective
Schenkendorf C-L (1990) Brain Res. Bull. 24, 131

Myelin-associated inhibitors of neurite growth
Schwab M E (1990) Exp. Neurol. 109, 2

Myelin-associated inhibitors of neurite growth and regeneration in the CNS
Schwab M E (1990) Trends Neurosci 13, 452

Growth hormone and the microvascular complications of diabetes [Brief review]
Sharp P S & Johnston D G (1990) Trends Endocrinol. Metab 1, 315

Regulation of cell-type-specific transcription and differentiation of the pituitary
Sharp Z D & Cao Z (1990) BioEssays, 12, 80

Impulse activity and the patterning of connections during CNS development
Shatz C J (1990) Neuron, 5, 745

Colony-stimulating factor-1 receptor
Sherr C J (1990) Blood, 75, 1

Social and developmental biology of the myxobacteria
Shimkets L J (1990) Microbiol. Rev. 54, 415

Precartilage condensation during skeletal pattern formation
Shimizu T & Kinata K (1990) Dev. Growth Differentiation, 32, 243

Biology and clinical aspects of the hematopoietic growth factors
Steff C A (1990) Annu. Rev. Med. 41, 483

At the crossroads of developmental genetics: the cloning of the classical mouse T locus
Silver L M (1990) BioEssays, 12, 377

Mouse T-locus cloning — a known developmental mutation enters the age of molecular biology [Minireview] [In French; English abstract]
Silver L M & Babinet C (1990) M/S Med. Sci. 6, 574

International Symposium on Developmental Endocrinology, Geneva, Switzerland, October 23-24, 1989
Sizonenko P C & Aubert M L, eds (1990) Serono Symp. Publ. 67, 252 pp.

Development and evolutionary origins of vertebrate skeletogenic and odontogenic tissues
Smith M M & Hall B K (1990) Biol. Rev. 65, 277

Oxidative stress as a causal factor in differentiation and aging — a unifying hypothesis
Sohal R S & Allen R G (1990) Exp. Gerontol. 25, 499

Hematopoietic Growth Factors in Transfusion Medicine. 20th Annual Scientific Symposium of the American Red Cross, Bethesda, MD, May 10-11, 1989
Spvák J, Drohan W & Dooley D, eds (1990) Progr. Clin. Biol. Res. 338, 182 pp.

1α,β- hydroxylase — problems and prospects [Minireview]
Sporn M B & Roberts A B (1989) Cell Regul. 1, 875

Relationship of cell growth to the regulation of tissue-specific gene expression during osteoblast differentiation
Stein G S, Lian J B & Owen T A (1990) FASEB J. 4, 3111

Cellular immortalization — an essential step or merely a risk factor in DNA virus-induced transformation
Strauss M & Griffin B E (1990) Cancer Cells, 2, 360

Remodeling of the vascular tree in hypertension: drug effects
Struyker Boudier H A J, Bordes L M A B van & De Mey J G R (1990) Trends Pharmacol. Sci. 11, 240

Target recognition and dynamics of axonal growth in the retinotectal system of fish. — From Proceedings of the 15th Seiriken Conference on the Molecular and Cellular Mechanisms of Neural Development and Reorganization — Okazaki, Japan, February 7-10, 1990
Stuewer C A O (1990) Neurosci. Res. Suppl 13, 1-171

The role of vitamin D in bone and intestinal cell differentiation
Suda T, Shink T & Takahasht N (1990) Annu. Rev Nutr. 10, 195

Retinoic acid, a developmental signalling molecule
Summerbell D & Maden M (1990) Trends Neurosci. 13, 142

Transition from maternal to embryonic control in early mammalian development: a comparison of several species
Telford N A, Watson A J & Schultz G A (1990) Mol. Reprod. Dev. 26, 90

Molecular genetics of neuronal development in the Drosophila embryo
Thomas J B & Crews S T (1990) FASEB J. 4, 2476

Growth factors and oncoproteins in prostate cancer
Thompson T C (1990) Cancer Cells, 2, 345

Regulation of differentiated properties and proliferation of arterial smooth muscle cells
Thyberg J, Hedlin U, Sjolund M, Palmberg L & Bottger B A (1990) Atherosclerosis, 10, 966

Cellular and molecular aspects of embryonic induction
Tindall L M & Schults G A (1990) Mol. Reprod. Dev. 26, 90

Oncogenes in growth and development
Travali S, Koniecki J, Petralia S & Baserga R (1990) FASEB J. 4, 3209
Fibroblast growth factor in the eye and prospects for its therapeutic use  
Tripathi R C, Kolli S P & Tripathi B J (1990) Drug Dev. Res. 19, 223

The undercoat of adherens junctions: a key specialized structure in organogenesis and carcinogenesis [Mini-review]  
Tsukita Sh, Tsukita Sa & Nagafuchi A (1990) Cell Struct. Funct. 15, 7

The roles of microtubule-associated proteins in brain morphogenesis — a review  
Tucker R P (1990) Brain Res. Rev. 15, 101

Regulation of human B-cell ontogeny  
Uckun F M (1990) Blood, 70, 1006

Brain-gut peptides, renal function and cell growth [Editorial review]  
Unwin R J, Gunz M D & Sieradzki R B (1990) Kidney Int. 37, 1031

Growth-hormone-releasing hormone  
Vance M L (1990) Clin. Chem. 36, 415

Ontogeny of the rat immune system — an immunohistochemical approach  
Vannees E P, Dijkstra C D & Sminia T (1990) Dev. Comp. Immunol. 14, 9

Structure, function and transforming potential of the epidermal growth factor receptor  
Vetel I J (1990) Mol. Cell. Endocrinol. 70, 205

Colony-stimulating factors  
Wakefield P E, James W D, Samlaska C P & Melber M S (1990) J. Am. Acad. Dermatol. 23, No 5, Pt I, 903

Pulmonary Epithelial Growth and Repair — from the Fifth Pulmonary Epithelial Growth and Repair Symposium  
Wanner A & others (1990) Am. Rev. Resp. Dis. 142, No 5, Pt 1, E601

Cell polarity and development of the first epithelium  
Wiley L M, Kidder G M & Watson A J (1990) BioEssays, 12, 67

Molecular approaches to the segmentation of the hindbrain  
Wilkinson D G & Krumlauf R (1990) Trends Neurosci. 13, 335

Embryonic stem cells as targets for gene transfer — a new approach to molecular manipulation of the murine hematopoietic system  
Williams D A (1990) Bone Marrow Transplant. 5, 141

Seventh Sir Frederick Gowland Hopkins Memorial Medal Lecture: The mineral elements in homeostasis and morphogenesis  
Williams R J P (1990) Biochem. Soc. Trans. 18, 689

Steel locus defines new multipotent growth factor [Mini-review]  
Witte O N (1990) Cell, 63, 5–6

Serum alpha-fetoprotein and its lectin reactivity in liver diseases. a review  
Wu J T (1990) Ann. Clin. Lab. Sci. 20, 48

Cellular mechanisms of tumor rejection in rats  
Yamaki T, Uede T & Kikuchi K (1990) Natur Immun. Cell Growth Regul. 9, 1

Mesenchymal–epithelial interactions in the organogenesis of digestive tract  
Yasugi S & Mizuno T (1990) Zool. Sci. 7, 159

Biochemistry and cell biology of amphibian metamorphosis with a special emphasis on the mechanism of removal of larval organs  
Yoshizato K (1989) Int. Rev. Cytol. 119, 97

Proto-oncogenes in cell differentiation  
Zebedik P S (1988) BioEssays. 12, 54

44-2C Cells: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]  
Zeytin F N (1989) Trends Endocrinol. Metab 1, 107

Regulation of hemopoiesis by cytokines that restrict options for growth and differentiation  
Zipori D (1990) Cancer Cells, 2, 205

GUANOSINE MONOPHOSPHATE AND POLYPHOSPHATES  
Modification of low molecular weight GTP-binding proteins and of actin by clostridial toxins [Mini-review]  
Aktories K (1990) Med. Microbiol. Immunol. 179, 123

Small GTP-binding proteins in vesicular transport  
Balch W E (1990) Trends Biochem. Sci. 15, 473

Signal transducing GTP-binding proteins in olfaction [Mini-review]  
Bruch R C (1990) Comp. Biochem. Physiol. Pt A, 95, 27

The ras superfamily of small GTP-binding proteins  
Downward J (1990) Trends Biochem. Sci. 15, 469

Cyclic GMP and the second messenger hypothesis [Brief review]  
Garbers D L (1990) Trends Endocrinol. Metab 1, 64

GE: a GTP-binding protein mediating exocytosis  
Gomperts B D (1990) Annu. Rev. Physiol. 52, 591

Exocytosis: the role of Ca++, GTP and ATP as regulators and modulators in the rat mast cell model  
Gomperts B D (1990) J Exp. Path. 71, 423
Ethanol and guanine nucleotide binding proteins: a selective interaction
Hofmann P L & Tabakoff B (1990) FASEB J. 4, 2612

Haem-dependent activation of guanulate cyclase and cyclic GMP formation by endogenous nitric oxide: a unique transduction mechanism for transcellular signaling [Minireview]
Ignarro L J (1990) Pharmacol. Toxicol. 67, 1

Cyclic GMP and photoreceptor function
Lolley R N & Lee R H (1990) FASEB J. 4, 3001

Cyclic GMP and calcium — the internal messengers of excitation and adaptation in vertebrate photoreceptors [Minireview]
Pugh E N & Lamb T D (1990) Vision Res. 30, 1923

6-aminolevulinate synthase [Minireview]
Agati G & Fusi F (1990) In: La Borras, P (Ed.) Haemochromatosis. Progress in Hematology, 4, 131-141

Enzyme heterogeneity in the porphyrias [Plenary lecture]
Elder G H, Smith S G & Smyth S J (1990) J. Lab. Clin. Med. 115, 1

Haemochromatosis
Cox T M (1990) Blood Rev. 4, 75

Laboratory investigation of the porphyrias
Elder G H, Smith S G & Smyth S J (1990) Ann. Clin. Biochem. 27, 395

Hematin: effects on hemostasis
Green D & Ts'uo C-H (1990) J. Lab. Clin. Med. 115, 144

Enzyme heterogeneity in the porphyrias [Plenary lecture]
Hindmarsh J T (1990) Clin. Biochem. 23, 371

Determination of porphyrins in physiological samples
Ho J W (1990) J. Liq. Chromatogr. 13, 3741

Haem-dependent activation of guanulate cyclase and cyclic GMP formation by endogenous nitric oxide: a unique transduction mechanism for transcellular signaling [Minireview]
Ignarro L J (1990) Pharmacol. Toxicol. 67, 1

The cytochrome-P450-I gene family of microsomal hemoproteins and their role in the metabolic activation of chemicals
Ioannides C & Parke D V (1990) Drug Metab. Rev. 22, 1

Cyclic GMP and photoreceptor function
Lolley R N & Lee R H (1990) FASEB J. 4, 3001

Cyclic GMP and calcium — the internal messengers of excitation and adaptation in vertebrate photoreceptors [Minireview]
Pugh E N & Lamb T D (1990) Vision Res. 30, 1923

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Agati G & Fusi F (1990) In: La Borras, P (Ed.) Haemochromatosis. Progress in Hematology, 4, 131-141

Enzyme heterogeneity in the porphyrias [Plenary lecture]
Elder G H, Smith S G & Smyth S J (1990) J. Lab. Clin. Med. 115, 1

Haemochromatosis
Cox T M (1990) Blood Rev. 4, 75

Laboratory investigation of the porphyrias
Elder G H, Smith S G & Smyth S J (1990) Ann. Clin. Biochem. 27, 395

Hematin: effects on hemostasis
Green D & Ts'uo C-H (1990) J. Lab. Clin. Med. 115, 144

Enzyme heterogeneity in the porphyrias [Plenary lecture]
Hindmarsh J T (1990) Clin. Biochem. 23, 371

Determination of porphyrins in physiological samples
Ho J W (1990) J. Liq. Chromatogr. 13, 3741

Haem-dependent activation of guanulate cyclase and cyclic GMP formation by endogenous nitric oxide: a unique transduction mechanism for transcellular signaling [Minireview]
Ignarro L J (1990) Pharmacol. Toxicol. 67, 1

The cytochrome-P450-I gene family of microsomal hemoproteins and their role in the metabolic activation of chemicals
Ioannides C & Parke D V (1990) Drug Metab. Rev. 22, 1

Effect of cis-platinum on heme, drug, and steroid metabolism pathways: possible involvement in nephrotoxicity and infertility
Maines M S (1990) Crit. Rev. Toxicol. 21, 1

Bactericidal effects of photoactivated porphyrins — an alternative approach to antimicrobial drugs
Malik Z, Hanania J & Nitzan Y (1990) J. Photochem. Photobiol. B-Biol. 5, 281

Liver in disorders of porphyrin metabolism
Rank J M, Straka J G & Bloomer J R (1990) J. Gastroenterol. Hepatol. 5, 573

AllostERIC linkage-induced distortions of the prosthetic group in haem proteins as derived by the theoretical interpretation of the depolarization ratio in resonance Raman scattering
Schwetzter Renner K (1989) Q. Rev. Biophys. 22, 381-479

Autoxidation of oxymyoglobin — a meeting point of the stabilization and the activation of molecular oxygen
Shikama K (1990) Biol. Rev. Cambridge Phil. Soc. 65, 517

Chlorins as photosensitizers in biology and medicine
Spikes J D (1990) J. Photochem. Photobiol. B-Biol. 6, 259

Porphyria and porphyrin metabolism
Straka J G, Rank J M & Bloomer J R (1990) Annu. Rev. Med. 41, 457

Tetapyrrole assembly and modification into the ligands of biologically functional cofactors
Warren M J & Scott A I (1990) Trends Biochem. Sci. 15, 430

Mechanisms of cytoplasmic hemoglobin and myoglobin function
Wittenberg J B & Wittenberg B A (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 217

HAEMOGLOBIN
First Sicilian International Symposium on Thalassemia, Hemoglobinopathies and Hemophilia Catania — Taormina, 1–3 June 1989

Cacciali E & others (1990) Haematologica, 75, Suppl. 5, 1–207

Allosteric regulators of reversible haemoglobin oxygenation [in Russian; English abstract]
Chuvilin A N, Serebrennikova G A & Evstigneeva R P (1990) Bioorg. Khim. 16, 1157

Control of globin gene transcription
Evans T, Felsenfeld G & Reitman M (1990) Annu. Rev. Cell Biol. 6, 95

Molecular assembly and evolution of multi-subunit extracellular annelid hemoglobinics
Gotobh T & Suzuki T (1990) Zool. Sci. 7, 1

5-HT3 receptors
Kilpatrick G J, Bunce K T & Tyers M P (1990) J. Photochem. Photobiol. B-Biol. 5, 513

Perinatal switch of hemoglobin gene expression [Minireview] [In French; English abstract]
Labie D (1990) M/S Méd. Sci. 6, 572

Unstable hemoglobinics
Obha Y (1990) Hemoglobin, 14, 353

Central neurotransmitters and regulation of gastric acid secretion [In Japanese; English abstract]
Osumi Y (1990) Folia Pharmacol. Jap, 96, 205

Mechanisms regulating the reactions of human hemoglobin with oxygen and carbon monoxide
Perutz M F (1990) Annu. Rev. Physiol. 52, 1

Phosphatidylinositol-linked proteins and paroxysmal nocturnal hemoglobinuria
Rosse W F (1990) Blood, 75, 1595
Effects of antioxidants on hemoglobin oxidation in the presence of phospholipid dispersions [In Russian]
Sabrina M A & others (1990) Khim. Farm. Zh. SSSR. 24. No 12. 7

Human globin gene activation region (LAR): role in temporal control
Tawnes T M & Dehanger R (1990) Trends Genet. 6. 219

Oxidative denaturation in congenital hemolytic anemias: the unstable hemoglobins
Winterbourn C C (1990) Seminars Hematol. 27. 47

Mechanisms of cytoplasmic hemoglobin and myoglobin function
Wittenberg J B & Wittenberg B A (1990) Annu. Rev. Biochem. Biophys. Chem. 19. 217

HEARING
See: SENSORY SYSTEMS

HEART

Effects of antianginal drugs on myocardial energy metabolism in coronary artery disease
Bagger J P (1990) Pharmacol. Toxicol. 66. Suppl. 4. 6-25

Effects of free radicals on the electrophysiological function of cardiac membranes
Barrington P L (1990) Free Radical Biol. Med. 9. 355

Function of myocardial alpha-adrenoceptors [Minireview]
Benfey G B G (1990) Life Sci. 46. 743

Central role for vasopressin in cardiovascular regulation and the pathogenesis of hypertension [Brief review]
Berecek K H & Swords B H (1990) Hypertension. 16. 213

Mechanisms responsible for the cardiotoxic effects of cocaine
Billman G E (1990) FASEB J. 4. 2469

Alterations of the cAMP-adenylate cyclase system in the failing human heart. Consequences for therapy with positive inotropic agents
[In German: English abstract]
Böhm M. Schwinger R H G & Erdmann E (1990) Klin Wochenschr. 68. 887

Cytochemical markers of ischaemia in the heart and brain [Editorial review]
Borgers M. Vandeplassche G & Van Reempts J (1990) Histochem. J. 22. 125

Structure activity in the atrial natriuretic peptide (ANP) family
Bovy P R (1990) Med Res Rev 10. 115

Diverse biological actions of atrial natriuretic peptide
Brenner B M. Ballermann B J. Gunning M E & Zeidel M I. (1990) Physiol. Rev. 70. 665

Walter B. Cannon Lecture: Introduction — Regulation of heart rate by G-protein-coupled ion channels
Brown A M (1990) Am. J. Physiol. 259. No 6. F1. 2. H1621

A new dimension in hypertension: Role of insulin resistance — Proceedings of an International Symposium
Bühler F R. & others (1990) J. Cardiovasc. Pharmacol. 15. Suppl. 5. S1

Vitamin-C and blood pressure [Editorial review]
Bulpitt C J (1990) J. Hypertension. 8. 1071

Phosphodiesterase inhibitors as cardiotonics [In Russian]
Chekman I S & Grinevich A I (1990) Khim. Farm. Zh. SSSR. 24. No 12. 13

Is the endogenous digitalis-like factor the link between hypertension and metabolic disorders as diabetes mellitus, obesity and acromegaly?
Clérico A & Giampietro O (1990) Clin. Physiol. Biochem. 8. 153

Atrial natriuretic factor in edematous disorders
Cody R J (1990) Annu. Rev. Med. 41. 377

Renal effects of atrial natriuretic factor
Cogan M G (1990) Annu. Rev. Physiol. 52. 699

Coronary thrombolysis — streptokinase or recombinant tissue-type plasminogen activator?
Collen D (1990) Annu. Int. Med. 112. 570

Fibrinogen as a major risk factor in cardiovascular disease
Cook N S & Ubben D (1990) Trends Pharmacol. Sci. 11. 444

Regional distribution of body fat, plasma lipoproteins, and cardiovascular disease
Després J P & others (1990) Arterioscler. 10. 497

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part I [Editorial review]
De Wardener H E (1990) Clin. Sci. 79. 193-200

Endothelial, platelet and leukocyte interactions in ischaemic heart disease — insights into potential mechanisms and their clinical relevance
Dinerman J L & Mehta J L (1990) J. Am. Coll. Cardiol. 16. 207

Cardiovascular responses in ageing — a review
Docherty J R (1990) Pharmacol. Rev. 42. 103

Free radicals and their involvement during long-term myocardial ischemia and reperfusion
Downey J M (1990) Annu. Rev. Physiol. 52. 487

Biochemical events associated with rapid cellular damage during the oxygen–paradoxes and calcium—paradoxes of the mammalian heart
[Minireview]
Duncan C J (1990) Experientia. 46. 41

Wellcome Prize Lecture: Intracellular sodium in cardiac muscle. effects on contraction
Enser D A (1990) Exp. Physiol. 75. 437

An emerging role for a cardiac peptide hormone in fish osmoregulation
Evans D H (1990) Annu. Rev. Physiol. 52. 43

Stress and hypertension — a critical review
Freeman Z S (1990) Med. J. Aust. 153. 621

The 1989 Ulf von Euler Lecture: Studies on endothelium-dependent vasodilation and the endothelium-derived relaxing factor
Furchgott R F (1990) Acta Physiol. Scand. 139. 257

Degradation and clearance of atrial natriuretic factors (ANF) [Minireview]
Gerbes A L & Vollmar A M (1990) J. Exp. Med. 47. 1173

Cholesterol and coronary heart disease — future directions
Grundy S M (1990) J. Am. Med. Assn. 264. 3053

Calcium antagonists: Hypertension, atherosclerosis, and stroke — Proceedings of an International Symposium to the Fourth European Meeting on Hypertension — Milan. Italy. June 18, 1989
Hansson L & others (1990) J. Cardiovasc. Pharmacol. 15. Suppl. 1. S1

Control of mitochondrial respiration in the heart in vivo
Henneman F W & Balaban R S (1990) Annu. Rev. Physiol. 52. 523
Interaction of alcohol and stress at the cardiovascular level — excretion? — A review of the evidence

Cellular mechanism for ischemic ventricular arrhythmias

Effects of changes of pH on the contractile function of cardiac muscle antagonists

Dietary n-3-polyunsaturated fatty acids and amelioration of pathogenetic mechanisms

Polymethylene tetraamines. a novel class of cardioselective M2-receptors

Role of endothelium-formed nitric oxide on vascular responses

Lipoprotein(a). A unique risk factor for atherothrombotic disease

Cardiovascular and biological effects of K+ channel openers, a class of drugs with vasorelaxant and cardioprotective properties [Minireview]

Symposium on Molecular Biology of the Cardiovascular System, Keystone, CO, April 10 17, 1989

Reflex control of the circulation during exercise: chemoreflexes and mechanoreflexes [Brief review]

Ultrastructure of myofibers and cells synthesizing DNA in the developing and regenerating lymph-heart muscles

Catecholamine cardiomyopathy - review and analysis of pathogenetic mechanisms

Catecholamine cardiomyopathy — review and analysis of pathogenetic mechanisms

Sex hormones and coronary disease — a review of the clinical studies

Kalin M F & Zumoff B (1990) Steroids. 55. 330

Diabetic n-1-polyunsaturated fatty acids and amelioration of cardiovascular disease: possible mechanisms

Kinsella J E. Lokesh B & Stone R A (1990) Am. J. Clin. Nutr. 52, 1

The sympathoadrenal system, obesity and hypertension: an overview

Landsberg L (1990) J. Neurosci. Methods, 34. 179

Endogenous opioid peptides and cardiac arrhythmias

Lee A Y S (1990) Int. J. Cardiol. 27, 145

Endothelin — a new cardiovascular regulatory peptide

Lerman A & others (1990) Mayo Clin Proc 65, 1441

11th International Congress of Pharmacology, 8–10 July 1990, Essen, Germany — Significance of Peripheral Diaminergic System in Cardiovascular and Renal Function

Lokhandwala M F & others (1990) J. Autonom. Pharmacol. 10, Suppl. 1, 83–8123

Cardiovascular dopamine receptors: role of renal dopamin and dopamine receptors in sodium excretion [Minireview]

Lokhandwala M F & Hegde S S (1990) Pharmacol. Toxicol 66, 237

Lipoprotein(a): a unique risk factor for atherothrombosis disease

Loscalzo J (1990) Athero. 100.

Ca2+ as a second messenger within mitochondria of the heart and other tissues

McCormack J G & Denton R M (1990) Annu Rev. Pharmacol. 52, 451

Diabetes and hypertension

Mahler R J (1990) Horm. Metab. Res. 22, 599

Role of endothelium-formed nitric oxide on vascular responses

Marin J & Sanchez-Ferrer C F (1990) Gen Pharmacol. 21, 575

Pomylmethylene tetraamines. a novel class of cardioselective M2-antagonists

Melchiorre C (1990) Med. Res. Rev. 10, 327

Synaptic mechanisms regulating cardiovascular afferent inputs to solitary tract nucleus [Brief review]

Moffin S W & Felder R B (1990) Am. J. Physiol. 259, No 3. Pt 2. H653

Measuring plasma fibrinogen to predict stroke and myocardial infarction

Minuo G di & Mancini M (1990) Atherosclerosis. 10, 1

Cardiovascular purinoreceptors

Olsson R A & Pearson J D (1990) Physiol. Rev. 70, 761

Cellular mechanism for ischemic ventricular arrhythmias

Opie L H & Clusin W T (1990) "Atrial natriuretic factor: a physiological regulator of sodium excretion? — A review of the evidence

Richards A M (1990) J. Cardiovasc Pharmacol. 16, Suppl. 7. S39

Cardiovascular and biological effects of K+ channel openers, a class of drugs with vasorelaxant and cardioprotective properties [Minireview]

Richer C & others (1990) Life Sci. 47, 1693

Symposium on Molecular Biology of the Cardiovascular System, Keystone, CO, April 10 17, 1989

Roberts R & Schneider M D, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 131, 343 pp.

Reflex control of the circulation during exercise: chemoreflexes and mechanoreflexes [Brief review]

Kowell L B & O‘Leary D S (1990) J. Appl. Physiol. 69, 401

Ultrastructure of myofibers and cells synthesizing DNA in the developing and regenerating lymph-heart muscles

Rumyantsev P P & Krylova M I (1990) Int. Rev. Cytol. 120, 1

Regulation of brain atrial natriuretic peptide and angiotensin receptors — quantitative autoradiographic studies

Saavedra J M, Castren E, Gutkind J S & Nazarali A J (1989) Int. Rev Neurobiol. 31, 257

Atrial natriuretic peptides

Sagulla G A & Macgregor G A (1990) Q. J. Med. 77, 1001

Endothelin-derived contractile factors

Sanchez-Ferrer C F & Mann J (1990) Gen. Pharmacol. 21, 589

Lipoprotein[a]: a genetically determined cardiovascular pathogen in search of a function

Scana A M (1990) J Lab Clin. Med. 116, 142

Eicosanoids in myocardial ischemia [Minireview]

Schror K & Thiemermann C (1989) Biomed. Biochim. Acta, 48, 729

Enkephalinase (EC 3.4.24.11) inhibitors: protection of endogenous ANF against inactivation and potential therapeutic applications [Minireview]

Schwartz J-C, Gros C, Lecomte J-M & Bralet J (1990) Life Sci. 47, 1279

Increased vascular wall sodium in hypertension: where is it, does it get there and what does it do there? [Editorial review]

Simon G (1990) Clm. Sci. 78. 533–540

Structure–activity relations of the cardiac gap junction channel

Spray D C & Burt J M (1990) Am. J. Physiol. 258, No 2, Pt 1. C195

Cardiovascular adaptations to mechanical overload

Stephens N L & Swyngedauw B (1990) Mol. Cell. Biochem. 93, 1

Steroid hormones and the cardiovascular system — direct actions of estradiol, progesterone, testosterone, glucocorticoids and mineralocorticoids, and sotolol [vitamin D] on central nervous regulatory and peripheral tissues

Stumpf W F (1990) Experientia. 46, 113

Insulin resistance and hypertension

Swislocki A (1990) Am. J. Med. Sci. 300. 104

G protein-mediated regulation of K+ channels in heart

Szabo G & Otero A S (1990) Annu. Rev. Physiol. 52, 293

Atherosclerosis and molecular pathology: mechanisms of cholesterol ester accumulation in foam cells and extracellular space of atherosclerotic lesions

Takano T & Mineo C (1990) J Pharmaco-Bio-Dynam 13. 385

Mechanisms of calcium2+ overload in reperfused ischemic myocardium

Tani M (1990) Annu Rev Physiol 57, 543

Regulation of cardiac L-type calcium current by phosphorylation and G proteins

Trautwein W & Hescheler J (1990) Annu. Rev. Physiol. 52, 257
Endomyocardial fibrosis — the possible connexion with myocardial levels of magnesium and cerium
Valiathan S M & Kartha C C (1990) Int. J. Cardiol 28, 1

Ischemia and Serotonin: Proceedings of a Satellite Symposium
Presented at the 15th World Congress of Angiology, Rome, Italy, 17-22 September 1989
Vanhouette P M & others (1990) J. Cardiovasc Pharmacol. 16, Suppl. 3, US1, S1–S81

The role of serotonin in cardiovascular diseases and their treatment
Vanzweiden P A, Blauw G J & Vanbrummelen P (1990) Cardiovasc. Drugs Ther. 4, 1443

Mechanisms of diabetic renal and cardiovascular disease
Viberti G C (1990) Acta Diabetol. Lat. 27, 267

Mechanisms of cardiovascular drugs as antioxidants
Weglicki W B, Mak I T & Simic M G (1990) J. Mol. Cell Cardiol. 22, 1199

β-Adrenoceptor partial agonists: a renaissance in cardiovascular therapy?
Waller D G (1990) Br J Clin. Pharmacol. 30, 157

Mechanisms of cardiovascular drugs as antioxidants
Weglicki W B, Mak I T & Simic M G (1990) J. Mol. Cell Cardiol. 22, 1199

Cytoplasmic Ca²⁺ in mammalian ventricle: dynamic control by cellular processes
Wier G (1990) Annu. Rev Physiol. 52, 467

HEAT SHOCK
See: PROTEINS, SYNTHESIS

HELMINTHS
Glutathione transferase in helminths
Brophy P M & Barrett J (1990) Parasitology, 100, 345

Regulatory peptides in parasitic platyhelmints
Halton D W, Fairweather I, Shaw C & Johnston C F (1990) Parasitol. Today, 6, 284

Stoll-Stunkard Lecture: The molecular revolution and nematode parasitology: yesterday, today, and tomorrow
Ogilvie B M, Selkirk M E & Maizels R M (1990) J. Parasitol. 76, 607

HEPARIN
Heparin — Present and Future — Proceedings of the Symposium, Florence, 28-31 March, 1990
Serneri G G N & others (1990) Haemostasis. 20, Suppl. 1, 1–220

Heparin and thrombosis — a seventy-year long story [Special lecture]
Verstraete M (1990) Haemostasis, 20, Suppl. 1, 4

Pharmacotherapeutic aspects of unfractionated and low molecular weight heparins
Verstraete M (1990) Drugs, 40, 498

HISTAMINE
See: AMINES

HISTOCHEMISTRY
Cytochemical markers of ischaemia in the heart and brain [Editorial review]
Borgers M, Vandelaessche G & Van Reempts J (1990) Histochem. J. 22, 125

Ultrastructural cytochemistry of the mammalian cell nucleus
Derenzini M, Thiry M & Goessens G (1990) J. Histochem. Cytochem. 38, 1237

Assessment of cell proliferation in histological material
Hall P A & Levison D A (1990) J. Clin. Path. 43, 184

Immunochemical markers of cellular proliferation — achievements, problems and prospects
Hall P A & Woods A L (1990) Cell Tissue Kinet. 23, 505

In situ hybridization histochemistry and the study of gene expression in the human brain
Harrison P J & Pearson R C A (1990) Progr Neurobiol. 34, 271

Recent progress in the use of the technique of non-radioactive in situ hybridization histochemistry — new tools for molecular neurobiology
Kiyama H, Emson P C & Tohyama M (1990) Neurosci. Res. 9, 1

Immunochemistry of solid tumors. Brief review of selected problems
Miettinen M (1990) APMIS, 98, 191

Lysozomal cytochemistry in marine environmental monitoring [Editorial review]
Moore M (1990) Histochem. J. 22, 187

Immunocytochemistry of the cell nucleus
Raska I, Ochs R L & Salaminmichel L (1990) Electron Microsc. Rev. 3, 301

Histochemistry of ATPases
Stahl W L & Baskin D G (1990) J. Histochem. Cytochem. 38, 1099

Immunocytochemical localization of the intracellular sites of sialylation in rat hepatocytes and colon epithelial cells [Robert Feulgen Prize Laureates]
Taatjes D J (1990) Acta Histochem. Suppl. 40, 9

Ontogeny of the rat immune system — an immunohistochemical approach
Vanrees E P, Dijkstra C D & Sminia T (1990) Dev. Comp. Immunol. 14, 9

Anti-idiotypes used in immunohistochemistry
Wang M W (1990) Histochem. J. 22, 519

HISTONES
On the biological role of histone acetylation
Csordas A (1990) Biochem. J. 265, 23–38

Histone function in transcription
Grunstein M (1990) Annu. Rev. Cell Biol. 6, 643

Histone H1 and the regulation of transcription of eukaryotic genes
Zlatanova J (1990) Trends Biochem. Sci. 15, 273

Immunochemical approaches to the study of histone H1 and high mobility group chromatin proteins
Zlatanova J S (1990) Mel Cell. Biochem. 92, 1

HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS
See also: CALCITONIN

CATECHOLAMINES AND RECEPTORS

GROWTH, GROWTH FACTORS AND DEVELOPMENT

INSULIN

PROSTAGLANDINS

STEROIDS, STEROID HORMONES AND RECEPTORS
Treatment of the anemia of chronic renal failure with recombinant human erythropoietin
Adamson J W & Eschbach J W (1990) Annu. Rev. Med. 41, 349
The potential relevance of cytokines to ovarian physiology — the emerging role of resident ovarian cells of the white blood cell series
Adashi E Y (1990) Endocr. Rev. 11, 154
Positive control [Minireview]
Adhya S & Garges S (1990) J. Biol. Chem. 265, 10797–10800
Calcitonin gene-related peptide (CGRP) and amylase and the endocrine pancreas
Ahren B & Pettersson M (1990) Int. J. Pancreatol. 6, 1
Biologie of multifunctional cytokines: IL 6 and related molecules (IL 1 and TNF)
Akira S, Hirano T, Taga T & Kishimoto T (1990) FASEB J. 4, 2860
Chemical communication in insect communities: a guide to insect pheromones with special emphasis on social insects
Al M F & Morgan E D (1990) Biol. Rev. 65, 227
New perspectives in the function of putative folliculo-stellate cells
Aliuets W Carmeliet P & Debyet F (1990) Mol. Cell Endocrinol. 71, 73
T-Lymphocyte activation: a biological model of signal transduction
Altman A, Mustelin T & Coggeshall K (1990) Crit. Rev. Immunol. 10, 347
Hereditary dwarfism — recent advances in molecular genetics of the growth hormone receptor [In French; English abstract]
Amelem S & Goossens M (1990) Presse Med. 19, 1699
Plasminogen activator inhibitors: hormonally regulated serpins
Andreasen P A, Georg B, Lund L R, Ricioe A & Stacey S N (1990) Mol. Cell. Endocrinol. 68, 1–19
Somatostatin gene expression
Andrisani O M & Dixon J E (1990) Annu. Rev. Physiol. 52, 793
Oxidative muscular injury and its relevance to hyperthyroidism
Asayama K & Kato K (1990) Free Radical Biol. Med 8, 293
Puffs, genes, and hormones revisited [Minireview]
Ashburner M (1990) Cell 67, 1–3
Genetic and mutational analysis of the T cell antigen receptor
Ashwell J D & Klausner R D (1990) Annu. Rev. Immunol. 8, 139
Cancer, cytokines, and cytotoxic cells: interleukin-2 in the immunotherapy of human neoplasms
Atzpodien J & Kirchner H (1990) Klin. Wochenschr. 68, 1
Some locus-specific negative regulators [Minireview]
Axelrad A A (1990) Exp. Hematol. 18, 143
Thudiehum Lecture: Receptor-mediated activation of phospholipase-A2 and arachidonic acid release in signal transduction
Axelrod J (1990) Biochem. Soc. Trans. 18, 503
Interleukin-4 [Plenary lecture]
Banchereau J (1990) Nucl. Med. Biol. Int. J. Rad. Appl. Instrum. Pt. B, 1/1, 619
Interleukin-4 [In French; English abstract]
Banchereau J (1990) M/S Méd. Sci. 0, 946
Interleukin-5 [In French; English abstract]
Banchereau J (1990) M/S Méd. Sci. 6, 954
Phosphatidylinositol-derived precursors and signals
Bansal V S & Majerus P W (1990) Annu. Rev. Cell Biol. 6, 41
Review — Progastrin in pancreas and the Zollinger–Ellison syndrome
Bartram I. (1990) Scand. J Gastroenterol. 35, 1185
Muscarinic receptors in airways: recent developments [Brief review]
Barnes P J (1990) J. Appl. Physiol. 68, 1777
Hormonal control, tissue specificity and development — common regulatory sites [Minireview] [In French; English abstract]
Barouki R (1990) M/S Méd. Sci. 6, 680
Recent achievements in studies on thyroid hormone–binding proteins
Bartalena L (1990) Endocr. Rev. 11, 47
Steroidal control of behavioural, neuroendocrine and brain sexual differentiation: studies in a carnivore, the ferret
Baum M J, Carroll R S, Cherry J A & Tobet S A (1990) J. Neuroendocrinol. 2, 401
“APUD” cells: fact and fiction [Brief review]
Baylin S D (1990) Trends Endocrinol. Metab. 1, 198–204
Symposium on Structure–Function Relationship of Gonadotropins.
Paris, France, May 1989
Bellet D & Bidart J M, eds (1989) Serono Symp. Publ. 65, 328 pp.
Control of prolactin secretion [In German; English abstract]
Benker G, Jaspers C, Hauser G & Reinwein D (1990) Klin. Wochenschr. 68, 1157
Central role for vasopressin in cardiovascular regulation and the pathogenesis of hypertension [Brief review]
Berecek K H & Swords B H (1990) Hypertension, 16, 213
The new endocrinology — its scope and its impact [Plenary lecture]
Bern H A (1990) Am. Zool. 30, 877
Control of thyroid cell and follicle growth: recent advances and current controversies [Brief review]
Bidey S P (1990) Trends Endocrinol. Metab. 1, 174
Agonist-stimulated turnover of the phosphoinositides and the regulation of adrenocortical steroidogenesis
Bird T M, Walker S W & Williams B C (1990) J. Mol. Endocrinol. 5, 191
G proteins in signal transduction
Birnbaumer L (1990) Annu. Rev. Pharmacol. Toxicol. 30, 675–706
Roles of G proteins in coupling of receptors to ionic channels and other effector systems
Birnbaumer L & others (1990) Crit. Rev. Biochem. Mol. Biol. 25, 225
Receptor-effector coupling by G proteins
Birnbaumer L, Abramowitz J & Brown A M (1990) Biochim. Biophys. Acta, 1031, 163
Beta-core chemical and clinical properties [Brief review]
Blimth D L, Wehmann R E & Nisula B C (1990) Trends Endocrinol. Metab. 1, 394
P2 purinoceptors on vascular endothelial cells: physiological significance and transduction mechanisms
Buynuams J-M & Pearson J D (1990) Trends Pharmacol. Sci. 11, 34
Transcription factor phosphorylation — a link between signal transduction and the regulation of gene expression
Boehm J H (1990) Cancer Cells, 2, 337
Interactions between inflammatory mediators in expression of antitumor cytostatic activity of macrophages [Minireview]
Bonta I L & Ben-Efraim S (1990) Immunol. Lett. 25, 295
The production of alveolar macrophage-derived growth-regulating proteins in response to lung injury [Minireview]
Brandle M E & Finkelstein J N (1990) Toxicol Lett. 54, 3
Wallach B, Cahnson Lecture: Introduction — Regulation of heartbeat by G-protein-coupled ion channels
Brown A M (1990) Am. J. Physiol. 259, No 6, Pt 2, H1621
Signal transducing GTP-binding proteins in olfaction [Minireview]
Bruch R C (1990) Comp Biochem Physiol. Pt A, 95, 27
11th International Symposium on Comparative Endocrinology, Malaga, Spain, May 14–20, 1989

An emerging role for a cardiac peptide hormone in fish osmoregulation

Evans D H (1990) Annu. Rev. Physiol. 52, 43

The role of growth factors in the pituitary

Ezzat S & Melmed S (1990) J. Endocrinol. Invest. 13, 691

Regulation of phosphoinoside-specific phospholipase C

Fain J N (1990) Biochim. Biophys. Acta. 1053, 81

Regulation of complement biosynthesis by tissue-specific and hormonal factors [Minireview]

Falus A (1990) Immunol. Lett. 24, 227

Protein kinase C in transmembrane signalling [Minireview]

Faron A & Nishizuka Y (1990) FEBS Lett. 268, 350-354

Endothelium-derived relaxing factor (EDRF) and nitric oxide (NO).

Feng Q & Hedner T (1990) Clin. Physiol. 10, 407

Endothelium-derived relaxing factor (EDRF) and nitric oxide (NO).

Feng Q & Hedner T (1990) Clin. Physiol. 10, 503

Pheromone response in yeast

Fields S (1990) Trends Biochem. Sci. 15, 270

Growth factor receptor-mediated assembly of signal transfer particles

[French; English abstract]

Fitholi & Cochet C (1990) M/S Mol. Sci. 6, 980

Three-dimensional modelling of G-protein-linked receptors

Findlay J & Eliopoulos E (1990) Trends Pharmacol. Sci. 11, 492

Lymphokine control of in vivo immunoglobulin isotype selection

Finkelman F D & others (1990) Annu. Rev. Immunol. 8, 303

Hormone epidermal growth factor interactions in development [Plenary lecture]

Fisher D A (1990) Horm. Res. 33, 69

Tumor necrosis factor in the pathophysics of infection and sepsis [Short analytical review]

Fong Y & Lowry S F (1990) Clin. Immunol. Immunopath. 55, 157

Interactions among a subfamily of nuclear hormone receptors: the regulatory zipper model [Minireview]

Forman B M & Samuels H H (1990) Mol. Endocrinol. 4, 1293

Thyroid and steroid hormone regulation of protooncogene expression [Brief review]

Franklyn J A & Sheppard M C (1989) Trends Endocrinol. Metab. 1, 35

Mammosomatotropes: current status and possible functions [Brief review]

Frawley L S (1990) Trends Endocrinol. Metab. 1, 31

Subtypes of receptors for serotonin

Frazer A, Maavani S & Wolfe B B (1990) Annu. Rev. Pharmacol. Toxicol. 30, 307–348

The 1989 Ulf von Euler Lecture: Studies on endothelium-dependent vasodilation and the endothelium-derived relaxing factor

Furchgott R F (1990) Acta Physiol. Scand. 139, 257

The structure of thyroid autoantigens

Furmaniak J & Rees Smith B (1990) Autoimmunity, 7, 63

Hydrophobic cluster analysis reveals duplication in the external structure of human alpha-interferon receptor and homology with gamma-interferon receptor external domain [Discussion letter]

Gabriellaud C, Uze G, Luftalla G & Mogensen K (1990) FEBS Lett. 269, 1

Goitrigenes in food and water

Gaitan E (1990) Annu. Rev. Nutr. 10, 21

The physiology and mechanisms of the stress-induced changes in prolactin secretion in the rat [Minireview]

Gala R R (1990) Life Sci. 46, 1407

Cyclic GMP and the second messenger hypothesis [Brief review]

Garbers D L (1990) Trends Endocrinol. Metab. 1, 64

Pancreatic glucagon signals postprandial satiety

Geary N (1990) Neurosci. Biobehav. Rev. 14, 323

Modulation of vasopressin antidiuretic action by renal α2-adrenoceptors [Editorial review]

Gallai M (1990) Am. J. Physiol. 259, No 1, Pt 2, F1

Accessory cell signals involved in T-cell activation

Geppert T D, Davis L S, Gur H, Wacholtz M C & Lipsky P E (1990) Immunol. Rev. 117, 5

Special issue: Signals and Signal Processing 6. Receptor Expression and Release — Regulatory Role of Membrane Bound and Soluble Receptors

Gergely J & others (1990) Mol. Immunol. 27, 1163–1155

The tissue matrix — cell dynamics and hormone action

Getzenberg H R II, Piscata K J & Coufey D S (1990) Endocr. Rev. 11, 399

Molecular biology of the pituitary gonadotropins

Gharib S D, Wierman M E, Shupnik M A & Chin W W (1990) Endocr. Rev. 11, 177

Regulation of gene expression by the thyroid hormone receptor

Glass C K & Holloway J M (1990) Biochim. Biophys. Acta, 1032, 15/1

Airway epithelium derived inhibitory factor

Golé R G, Fernandez L B, Farmer S G & Hay D W P (1990) Trends Pharmacol. Sci. 11, 67

Cytokines in the pathophysiology of systemic lupus erythematosus

Goldman M (1990) Autoimmunity, 8, 173

Parathyroid hormone like peptide: molecular characterization and biological properties [Brief review]

Goldtzman D, Hendy G N & Banville D (1989) Trends Endocrinol. Metab. 1, 39

Somatostatin gene regulation — an overview

Goodman R H, Kenfigs K R, Verner M, Ventimiglia R & Low M J (1990) Metabolism, 39, No. 9, Suppl. 2, 2

Mass cells as a source of multifunctional cytokines

Gordon J R, Burd P R & Galli S J (1990) Immunol. Today. 11, 458

5-HT1A Receptors in the Brain: A Subtype of Serotonin Receptors Involved in Blood Pressure Reduction — International Symposium, Bonn, 18 November 1989

Goethor M & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 7, SI–586

Hormonal regulation of haemostasis and the molecular biology of the fibrinolytic system [Editorial review]

Grant P J & Merkalf R 1. (1990) Clin. Sci. 78, 3–11

Lymphokine signal transduction [Minireview]

Guy G R, Bee N S & Peng C S (1990) Cell. Signal. 2, 415

Bifunctional role of glycosphingolipids — modulators for transmembrane signaling and mediators for cellular interactions

Hakomori S I (1990) J. Biol. Chem. 265, 18713
Regulatory peptides in parasitic platyhelminths
Halton D W, Fairweather I, Shaw C & Johnston C F (1990) Parasitol. Today, 6, 281

Molecular properties of corticosteroid binding globulin and the sex-steroid binding proteins
Hammond G L (1990) Endocr. Rev. 11, 65

Preliminary clinical and biochemical pharmacology of platelet-activating factor receptor antagonists
Handley D A (1990) Med. Res. Rev. 10, 351

Thyrotropin-releasing hormone: a growth hormone-releasing factor
Harvey S (1990) J. Endocrinol. 125, 345-358

Turning off the signal: desensitization of β-adrenergic receptor function
Hausdorff W P, Caron M G & Lefkowitz R J (1990) FASEB J. 4, 2881

Interleukin-6 and the acute phase response
Heinrich P C, Castell J V & Andus T (1990) Biochem. J. 265, 621-636

Diversity in mammalian tachykinin peptidergic neurons: multiple peptides, receptors, and regulatory mechanisms
Helke C J, Krause J E, Mantyh P W, Couture R & Bannon M J (1990) FASEB J. 4, 1606

Colloquium on Early Embryo Development and Paracrine interactions, Taos, NM, February 3-8, 1989
Heyner S & Wiley L M, eds (1990)

Biological and clinical aspects of interleukin-6
Hirano T, Akira S, Taga T & Kishimoto T (1990) Immunol. Today, 11, 443

Transducin — a signaling switch regulated by guanine nucleotides
Ho Y K, Hingorani V N, Navon S E & Fung B K K (1989) Curr. Top Cell. Regul. 30, 171

Ethanol and guanine nucleotide binding proteins: a selective interaction
Hoffman P J. & Tahakoff B (1990) FASEB J. 4, 2612

International Satellite Symposium to the 20th Annual Meeting of the American Society for Neurochemistry: Trophic Factors and the relationship to Paracrine culture?
Horrocks L A, Neff N H, Yates A J & Hadjiconstantinou M, eds (1990) Fd Res. Fdn Symp. Ser. 3, 358 pp.

Vitronectin receptor: tissue specific expression or adaptation to culture?
Horton M (1990) Int. J. Exp. Path. 71, 741

Platelet-activating factor (PAF) and PAF antagonists in asthma
Hosford D, Menciabueerta J M & Braquet P (1990) Crit. Rev. Ther. Drug Carr Syst. 7, 261

Regulatory peptides produced in the anterior pituitary [Brief review]
Houben H & Denef C (1990) Trends Endocrinol. Metab. 1, 398

Towards a functional significance of peptides and biogenic amines produced by the anterior pituitary
Houben H, Tilemans D & Denef C (1990) J. Endocrinol. Invest. 13, 855

Emerging approaches in the molecular design of receptor-selective peptide ligands: conformational, topographical and dynamic considerations
Hruby V J, Al-Obeidi F & Kazmerski W (1990) Biochem. J. 265, 249-262

Conformational and structural considerations of oxytocin receptor binding and biological activity
Hruby V J, Chow M-S & Smith D D (1990) Annu. Rev. Pharmacol. Toxicol. 30, 501-534

Ontogeny of pituitary–gonadal interactions: current advances and controversies [Brief review]
Huhtanemi I T & Warren D W (1990) Trends Endocrinol. Metab. 1, 356

Muscarinic receptor subtypes
Hulme E C, Birdsell N J M & Buckley N J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 633-673

Specific receptors of platelet-activating factor, receptor heterogeneity, and signal transduction mechanisms
Hwang S-B (1990) J. Lipid Mediators, 2, 123

Nitric oxide — a novel signal transduction for transcellular communication [Brief review]
Ignarro L J (1990) Hypertension, 16, 471

Regulation of mammary epithelial cell growth in mice and rats
Inagawa W, Bandyopadhyay O K & Nanul S (1990) Endocr. Rev. 11, 494

A family of POU-domain and PIT-1 tissue-specific transcription factors in pituitary and neuroendocrine development
Ingraham H A & others (1990) Annu. Rev. Physiol. 52, 773

Quantal, Ca++ release and the control of Ca++ entry by inositol phosphates — a possible mechanism
Irvine K F (1990) FASEB J. 4, 5-9

Influences of cholecystokinin and analogues on memory processes
Itoh S & Lal H (1990) Drug Dev Res 21, 257

Neuropharmacological profile of V9-M, a putative neuropeptide derived from procholecystokinin
Itoh S & Takashima A (1990) Progr. Neurobiol., 34, 429

Adaptive filtering in biological signal processing
Iyer V K, Ploysongsang Y & Ramamoorthy P A (1990) Crit Rev. Biomed. Eng. 17, 531

Clinical review 5: recombinant DNA strategies for determining the molecular basis of endocrine disorders
Jameson J L & Arnold A (1990) J. Clin. Endocrinol. Metab. 70, 301

Paracrine control of anterior pituitary hormone secretion
Jones T H, Brown B L & Dolson P R M (1990) J. Endocrinol. 127, 5-13

Role of the CD28 receptor in T-cell activation
June C H, Ledbetter J A, Linsley P S & Thompson C B (1990) Immunol. Today, 11, 211

Sex hormones and coronary disease — a review of the clinical studies
Kalnin M F & Zumoff B (1990) Steroids, 55, 330

Endothelin-derived constricting factor(s) — the last novelty-endothelin
Karwatskow-Prokopczuk K & Wemmann M (1990) Clin. Physiol. 10, 113

The structure of prolactin and growth hormone receptors is now known [In French: English abstract]
Kelly P A, Djiane J, Boutin J M & Edery M (1990) M/S Endocr 6, 778

The role of intracellular messengers in adrenocorticotropin secretion in vivo
King M S & Baertschi A J (1990) Experientia, 46, 26

Inositol phosphates in receptor-mediated cell signaling — metabolic origins and interrelationships
Kirk C J, Maccallum S H, Michell R H & Barker C J (1990) Biotechnol. Appl. Biochem. 12, 489

The vasopressin-regulated urea transporter in renal inner medullary collecting duct [Editorial review]
Knepper M A & Star R A (1990) Am. J. Physiol. 259, No 3, Pt 2, F393

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April 1992
Methods for synthesizing thyroxine and triiodothyronine (a review) [In Russian]
Kochergin P M, Palei R M, Kravechenko A N & Popova Y V (1990) 
Khim. Farm. Zh. SSSR. 24, 43

Signal transduction processes leading to acrosomal exocytosis in 
mammalian spermatozoa [Brief review]
Kopf G S & Wilde M W (1990) Trends Endocrinol. Metab. 1, 362

Pituitary cells producing more than one hormone: human pituitary 
adenomas [Brief review]
Kovacs K, Horvath E, Asa S L, Stefanau L & Sano T (1989) 
Trends Endocrinol. Metab. 1, 104

Regulatory sites in the melatonin system of mammals
Krause D N & Dubocovich M L (1990) Trends Neurosci. 13, 464

Tumour necrosis factor signal transduction [Minireview]
Kroenke M & others (1990) Cell. Signal. 2, 1

Somnogenic activity of immune response modifiers
Krueger J M (1990) Trends Pharmacol. Sci. 11, 122

Tamm-Horsfall protein — uromodulin (1950-1990) [Editorial review]
Kumar S & Muchmore A (1990) Kidney Int. 37, 1395-1-4-1

Second messengers and protein phosphorylation in cellular signal 
transduction [In Japanese; English abstract]
Kuno T (1990) Folia Pharmacol. Jap. 96, 41

Protein phosphorylation and inositol phospholipid metabolism in 
activated mast cells
Kurosawa M (1990) Clin. Exp. Allergy, 20, 7

Peptide YY and neuropeptide Y in the gut; availability, biological 
actions, and receptors [Brief review]
Laburthe M (1990) Trends Endocrinol. Metab 1, 168

Clinical applications of somatostatin analogs [Brief review]
Lamberts S W J & Macleod R M (1990) Physiol Rev. 70, 279

Regulation of prolactin secretion at the level of the lactotroph
Lamberts S W J & Macleod R M (1990) Physiol Rev. 70, 279

Structure and function of G-protein coupled receptors
Lameth J & others (1990) Pharmacol. Res. 7, 1213

The sympathoadrenal system, obesity and hypertension: an overview
Landsberg L (1990) J. Neurosci. Methods. 34, 179

The signal transduction induced by thrombin in human platelets 
[Minireview]
Lapetina E G (1990) FEBS Lett. 268, 400-404

Novel perspectives for structuring synthetic inhibitors of human blood 
platelet aggregation and potential antithrombotic agents
Lasslo A (1990) Res Commun. Chem Path. Pharmacol. 69, 133

Glucose metabolism, 2nd messengers and insulin secretion 
[Minireview]
Laychock S G (1990) Life Sci. 47, 2307

Cholecystokinin — a key integrator of nutrient assimilation
Lewis L D & Williams J A (1990) News Physiol. Sci. 5, 163

Ion channels and signal transduction in lymphocytes
Lewis R S & Catralan M D (1990) Annu. Rev. Physiol. 52, 413

Erythropoietin: biological aspects and clinical usefulness
Liberato N L, Costa A & Barosi G (1990) Haematologica. 75, 346

Clinical review of histamine receptor antagonists
Lipsey R J, Feninrby B & Fagan T C (1990) Arch. Intern. Med. 150, 745

Molecular characterization of opioid receptors
Loh H H & Smith A P (1990) Annu. Rev. Pharmacol. Toxicol. 30, 123-147

Homologies between the amino acid sequences of some vertebrate 
peptide hormones and peptides isolated from invertebrate sources 
[Minireview]
Loof A de & Schoofs L (1990) Comp. Biochem. Physiol. Pt B, 95, 459

Aminoglutethimide enzyme induction: pharmacological and 
edocrinological implications
L'Abbé P E (1990) Cancer Chemother. Pharmacol. 26, 241

2nd International Symposium on Challenges of Hypersecretion / 
Monograph Symposium of the European Neuroendocrine 
Association on ACTH-Hypersecretion, Crete, Greece, April 14-16, 
1989
Ludecke D K, Chrousos G P & Tols G, eds (1990) Progr Endocr. 
Res. Ther. 5, 318 pp.

Phenolic signals in cohabitation: implications for plant development
Lynn D G & Chang M (1990) Annu. Rev. Plant Physiol. Plant Mol. 
Biol. 41, 497-526

Signal transduction and the ras family gene: molecular switches of 
unknown function [Brief review]
Maceara I G & Wolfman A (1989) Trends Endocrinol. Metab. 1, 26

Angiotensin converting enzyme inhibitors and moderate hypertension
McAreavey D & Robertson J I S (1990) Drugs, 40, 326-345

Regulation of Cl− and K+ channels in airway epithelium
McCann J D & Welsh M J (1990) Annu. Rev. Physiol. 52, 115

Ca++ as a second messenger within mitochondria of the heart and 
other tissues
McCormack J G & Denton R M (1990) Annu. Rev. Physiol. 52, 451

Bombesin: potential integrative peptide for feeding and satiety
McCoy J G & Avery D D (1990) Peptides, 11, 595

P-Glycoprotein and progesterone receptor in human breast cancer
McGuire W L (1990) Cancer Cells. 2, 27

Regulation of gene expression by intracellular hormone receptors
Maggi A (1990) Pharmacol. Res. 22, 409

Tachykinin receptors in the airways and lung: what should we block?
Maggi C A (1990) Pharmacol. Res. 22, 327

Thyroid-stimulating hormone — biosynthesis, cell biology, and 
bioactivity
Magner J A (1990) Endocr. Rev. 11, 354

The tissue-specific processing of pro-ACTH/endorphin recent 
advances and unsolved problems [Brief review]
Mains R E & Eipper B A (1990) Trends Endocrinol. Metab. 1, 388

Recent insights in phosphatidylinositol signaling
Majerus P W & others (1990) Cell, 63, 459

Desmopressin: a nontransfusional hemostatic agent
Mannucci P M (1990) Annu. Rev. Med. 41, 55

Endothelium-derived relaxing factors: a perspective from in vivo data 
[Brief review]
Marshall J J & Kontos H A (1990) Hypertension, 16, 371

Properties of parathyroid hormone-related protein and its role in 
malignant hypercalcaemia
Martin T J (1990) Q. J. Med. 76, 771

Interferons, interleukins, virus-host interaction — relation to 
leukotrienes and other lipoxygenase derivatives of the arachidonic 
acid
Mayer M (1990) Acta Virol. 34, 99

International Conference on Molecular and Cellular Biology of Il-1, 
TNF, and Lipocortins in Inflammation and Differentiation, Siena, 
Italy, October 22-25, 1989
Melli M & Parente L, eds (1990) Progr. Clin. Biol. Res. 349, 463 pp.
The brain angiotensin system: insights from mapping its components [Brief review]
Mendelsohn F A O & others (1990) Trends Endocrinol. Metab. 1, 189

Structural features of the LH CG receptor [Minireview]
Metsikko M K, Petajajerepo U E, Lakkakorpi J T & Rajaniemi H J (1990) Acta Endocrinol. 122, 545–552

Dietary modulation of cytokine production and biologic functions
Meydani S N (1990) Nutr. Rev. 48, 361

ω-Opioid receptors and analgesia
Millan M J (1990) Trends Pharmacol. Sci. 11, 70

Signal transduction and gene regulation through the phosphorylation of two regulatory components: the molecular basis for the osmotic relaxation to the L-arginine:NO pathway
Montacca S (1990) Blood Vessels. 27, 208

Mitogenic effect of interleukin-2 on unstimulated human T cells: an editorial review
Mookerjee B K & Pauly J L (1990) J. Clin. Lab Anal. 4, 138

The ras-1 kinase as a transducer of mitogenic signals
Mizuno T & Mizushima S (1990) Mol. Microbiol. 4, 1077

The First Robert Furchgott Lecture — From endothelium-dependent relaxation to the L-arginine: NO pathway
Montacca S (1990) Blood Vessels. 27, 208

Growth factors and their receptors in differentiation and early murine development
Mummery C L, Van den Eijnden-van Raaij A J M (1990) Cell Differentiation Dev. 30, 1

Signal transduction mechanisms of Ca2+ mobilizing hormones — the case of gonadotropin-releasing hormone
Naor Z (1990) Endocr. Rev. 11, 326

Clinical review 12: The use and misuse of the sensitive thyrotropin assays
Nicoloff J T & Spencer C A (1990) J Clin Endocrinol. Metab. 71, 553

Insights into hormonal control of messenger RNA stability [Minireview]
Nielsen D A & Shapiro D J (1990) Mol. Endocrinol. 4, 953

Cytokines and endothelial cell biology
Peterlik M & Bronner F* eds (1990) INSERM, 198, 122 pp.

Oscillating intracellular Ca2+ signals evoked by activation of receptors linked to inositol lipid hydrolysis — mechanism of generation [Topical review]
Petersen O H & Wacki M (1990) J Membr Biol. 118, 73

Insights into hormonal control of messenger RNA stability [Minireview]
Nielsen D A & Shapiro D J (1990) Mol. Endocrinol. 4, 953

Interleukin production by human colorectal cells after in vitro mitogen stimulation — review
Nikolova E & others (1990) Ann. J Reprod Immunol. 23, 104

14th European Symposium on Hormones and Cell Regulation, MT Sainte-Odile, France, September 25-28, 1989
Nunez J & Dumont J E, eds (1989) Colloq. INSERM, 198, 122 pp.

10th Conference of the International Society on Kidney Disease (ISKD) — Amsterdam, The Netherlands, 10-14, 1989
Nunez J & Dumont J E, eds (1989) Colloq. INSERM, 198, 122 pp.

Human autoimmune thyroid disease: a mechanistic update
O’Connor G & Davies T F (1990) Trends Endocrinol. Metab. 1, 266

Degradation of thyrotropin-releasing hormone and luteinising hormone-releasing hormone by enzymes of brain tissue [Short review]
O’Cuin G, O’Connor B & Elmore M (1990) J. Neurochem. 54, 1

Chorionic gonadotropin secretion in normal, nonpregnant humans [Brief review]
Odlill W D, Griffin I & Sawitzke A (1990) Trends Endocrinol. Metab. 1, 418

Interα-trypsin inhibitor, a plasma proteinase inhibitor with a unique chemical structure [Minireview]
Odum L (1990) Int. J. Biochem. 22, 925

Cardiovascular purinoceptors
Olsson R A & Pearson J D (1990) Physiol. Rev. 70, 761

GABA-receptors in peripheral tissues [Minireview]
Ong J & Kerr D I B (1990) Life Sci. 46, 1489

Interferons and Related Cytokines: Basic Research and Applied Therapy — Proceedings of the Second International Dermatology Symposium, October 11–14, 1989, Berlin
Orfanos C E & others (1990) J. Invest. Dermatol. 95, No. 6, Suppl. S65–S238

Platelet-activating factor — a biologically active phospholipid
Ostermann G, Kertscher H-P & Hoffmann B (1990) Pharmacie. 45, 465

Transfer of phytohormone genes to induce morphogenesis in plants
Owens L D & Smigocki A C (1989) Advan Cell Culture. 7, 183

Endocrinology of the early embryo: an emerging role for hormones and hormone-like factors
Pablo F de & Rosh J (1990) Trends Biochem. Sci. 15, 329

Proceedings of the International Symposium on Somatostatin — Basic and Clinical Aspects, Montreal, Canada, 6–9 August 1989
Pate1 Y C & others (1990) Metabolism. 39, No. 9, Suppl. 2, 1–189

Mechanism of action of somatostatin — an overview of receptor function and studies of the molecular characterization and purification of somatostatin receptor proteins
Patel Y C & others (1990) Metabolism. 39, No. 9, Suppl. 2, 63

Hormonal regulation of cytochrome P450 enzymes, cholesterol side-chain cleavage and 17α-hydroxylase/C17,20 lyase in Leydig cells [Minireview]
Payne A (1990) Biol. Reprod. 42, 399

Regulation of the primate fetal adrenal cortex
Pepe G J & Albrecht E D (1990) Endocr. Rev. 11, 151

Symposium on Molecular and Cellular Regulation of Calcium and Phosphate Metabolism, Vienna, Austria, November 17, 1988
Peterik M & Bronner F* eds (1990) Progr. Clin. Biol. Res. 332, 239 pp.

Recent studies of fish pancreatic hormones — selected topics
Piisetskyaya E M (1990) Zool. Scr. 7, 335

Cytokines and endocellular cell biology
Poor J S & Cotran R S (1990) Physiol. Rev. 70, 427

The plasma membrane and thyroid hormone entry into cells [Brief review]
Pontecorvi A & Robbins J (1989) Trends Endocrinol. Metab. 1, 90

The role of platelet-activating factor in endothelial cells
Prescott S M, McIntyre T M & Zimmerman G A (1990) Thromb. Haemost. 64, 99

Progesterone as a bone-trophic hormone
Prior J C (1990) Endocr. Rev. 11, 386

Alpha-l-adrenergic and beta-adrenergic receptors in brown adipose tissue and the adrenergic regulation of thyroxine 3'- deiodinase
Raasmaja A (1990) Acta Physiol. Scand. 139, Suppl.590, 7–61
Role of phosphoinositides in transmembrane signaling
Rana R S & Hokin L E (1990) Physiol. Rev. 70, 115

Involvement of cytoskeleton in polypeptide hormone secretion from the anterior pituitary lobe: a review
Ravindra R & Grosvenor C E (1990) Mol. Cell. Endocrinol. 71, 165

Adrenergic receptors: models for regulation of signal transduction processes [Brief review]
Raymond J R, Hnatowich M, LaFkowitz R J & Caron M G (1990) Hypertension, 15, 119

Neurokinin A: A pharmacological study
Regoli D & others (1990) Pharmacol. Rev. 22, 1

New selective bradykinin receptor antagonists and bradykinin B2 receptor characterization
Regoli D, Rhaleb N E, Donn S & Drapeau G (1990) Trends Pharmacol. Sci. 11, 136

Mechanisms of sodium homeostasis: sodium and water excretion in mammals — hemodynamic, endocrine, and neural mechanisms
Reinhardt H W & others (1990) Acta Physiol. Scand. 139, Suppl. 591, 3–107

Species variations of receptor-effector parameters: a solvable problem of drug research?
Repke K R H, Schönfeld W, Schönfeld R & Menke K-H (1990) Pharmazie, 45, 237

Effects of post-menopausal oestrogen-progestogen replacement therapy on serum lipids and lipoproteins: a review
Rupkema A H M, van der Sanden A A & Ruis J H C (1990) Maturitas, 12, 259

In vitro systems for the study of human placental endocrine function
Ringler G E & Strauss J F (1990) Endocr. Rev. 11, 105

Receptor-mediated calcium channel entry [Minireview]
Rink T J (1990) FEBS Lett. 268, 381–385

Calcium signaling in human platelets
Rink T J & Sage S O (1990) Annu. Rev. Physiol. 52, 431

Growth hormone treatment of short stature — State-of-the-art in 1989. Proceedings of a Meeting held in Stockholm, October 19–20, 1989
Ritzén E M & others (1989) Acta Paediatr. Scand. Suppl. 362, 5

Synthetic peptide vaccines against pathogens and biological mediators
Riveau G J & Audibert F M (1990) Trends Pharmacol. Sci. 11, 194

Role of an analogue of parathyroid hormone in the pathogenesis of malignant hypercalcemia [In French; English abstract]
Rizzoli R & others (1990) Path. Biol. 38, 656

Modulation of hormone response elements by promoter environment [Brief review]
Roesler W J & others (1990) Trends Endocrinol. Metab. 1, 347

Epidermal growth factor and transforming growth factor-β differently modulate the acute phase response elicited by interleukin-6 in cultured liver cells from man, rat and mouse [Minireview]
Rokita H, Bereta J, Koj A, Gordon A H & Gauldie J (1990) Comp. Biochem. Physiol. Pt A, 93, 41

Physiological Regulation and Biological Function of Thyrotropin
Rondeel J M M & others (1990) Horm. Metab. Res. 23, Suppl. 1–72

Role of CR3 in induced myelomonocytic recruitment — insights from in vivo monoclonal antibody studies in the mouse [Minireview]
Rosen H (1990) J. Immunol. 144, 465

GABA as a presumptive paracrine signal in the pineal gland. Evidence on an intrapineal GABAAergic system
Rosenstein R E, Chuluyan H E, Diaz M C & Cardinali D P (1990) Brain Res. Bull. 25, 339

Renovascular Effects of Angiotensin II. Budapest, Hungary, July 16–19, 1989
Rosivall L & others (1990) Kidney Int. 38, Suppl. 30, S-1–S-123

Regulation of the epidermal growth factor receptor by growth-modulating agents
Rovery M R (1990) Biotechnol. Appl. Biochem. 12, 473

Messenger molecules in the cerebellum
Rossa C A, Bredt D & Snyder S H (1990) Trends Neurosci. 13, 216

Phosphatidylinositol-linked proteins and paroxysmal nocturnal hemoglobinuria
Rosse W F (1990) Blood, 75, 1595

The soluble interleukin-2 receptor — biology, function, and clinical application
Rubin L A & Nelson D L (1990) Ann. Int. Med. 113, 619

Granulocyte-macrophage colony-stimulating factor: pleiotropic cytokine with potential clinical usefulness
Ruef C & Coleman D L (1990) Rev Infect. Dis. 12, 41

Ecotopic hormone production by small cell undifferentiated carcinomas
Russell P J, O'Mara S M & Raghavan D (1990) Mol. Cell. Endocrinol. 71, 1

Insulin-like growth factors and their binding proteins [Minireview]
Rutanen E M & Pekonen F (1990) Acta Endocrinol. 123, 7

Regulation of brain atrial natriuretic peptide and angiotensin receptors — quantitative autoradiographic studies
Saaavedra J M, Castren E, Gutkind J S & Nazarali A J (1989) Int. Rev Neurobiol. 31, 257

Melanocortin receptors: targets for control by extracellular calcium
Salomon Y (1990) Mol. Cell. Endocrinol. 70, 139

Endothelin-derived contractile factors
Sánchez-Ferrer C F & Marín J (1990) Gen. Pharmacol. 21, 589

Pineal melatonin in schizophrenia — a review and hypothesis
Sandé R & Kay S R (1990) Schizophrenia Bull. 16, 653

4th International Symposium on Cellular Endocrinology: Molecular Endocrinology and Steroid Hormone Action, W. Alton Jones Cell Sci. Ctr. Lake Placid, NY, August 24–27, 1988
Sato G H & Stevens J L, eds (1990) Progr. Clin. Biol. Res. 322, 320 pp.

Experimental uses of neurohypophysial hormone analogs [Brief review]
Sawyer W H & Manning M (1989) Trends Endocrinol. Metab. 1, 48

Growth hormone secretion in type-1 diabetes — a review
Schaper N C (1990) Acta Endocrinol. 122, Suppl. 2, 7

Growth hormone in type I diabetic and healthy man
Schaper N C & others (1990) Acta Endocrinol. 122, Suppl. 2, 5

Nuclear protooncogene products: fine-tuned components of signal transduction pathways [Minireview]
Schönthal A (1990) Cell. Signal. 2, 215

New thoughts on the evolution of hormone-receptor systems [Minireview]
Schwabe C (1990) Comp. Biochem. Physiol. Pt A, 97, 101

Relaxin
Schwabe C & Bullesbach E E (1990) Comp. Biochem. Physiol. Pt B, 96, 15

Interleukin-6 in infection and cancer [Minireview]
Sehgla P B (1990) Proc. Soc. Exp. Biol. Med. 193, 183

Sex hormone binding globulin — origin, function and clinical significance
Selby C (1990) Annu. Clin. Biochem. 27, 532
Lymphokine activated killer cells: a new approach to immunotherapy of cancer
Semenzato G (1990) Leukemia 4, 71

The role of chemical mediators in the pathogenesis of inflammation with emphasis on the kinin system
Sharma J N & Mohan S S J (1990) Exp. Path. 39, 73

Growth hormone and the microvascular complications of diabetes [Brief review]
Sharp P S & Johnston D G (1990) Trends Endocrinol. Metab. 1, 315

Regulation of cell-type-specific transcription and differentiation of the pituitary
Sharp Z D & Cao Z (1990) BioEssays. 12, 80

Smoking out the estrogens
Shulman A, Allenbogen A, Mayron R & Bahary C (1990) Hum Reprod. 5, 231

Hormonal control of neuroepitope gene expression in sexually dimorphic olfactory pathways
Simerly R B (1990) Trends Neurosci. 13, 104

Gonadotropin releasing hormone (GnRH) — mode of action and clinical applications — a review
Simon A, Birkenfeld A & Schenker J G (1990) Int. J. Fertil. 25, 350

Cellular signaling by peptides of the endothelin gene family
Simonon M S & Dunn M J (1990) FASEB J. 4, 2989

Metabolism of thioamide antithyroid drugs
Star D S (1990) Drug Metab. Rev. 22, 477

International Symposium on Developmental Endocrinology, Geneva, Switzerland, October 23–24, 1990
Siroen P C & Aurbacht M I, eds (1990) Serono Symp. Publ. 67, 252 pp.

Gene expression in response to abscissic acid and osmotic stress
Skriven K & Mundy J (1990) Plant Cell, 2, 503–512

Steroid/thyroid receptor-like proteins with oncogenic potential — a review
Slyusser M (1990) Cancer Res. 50, 451

Prolactin and growth hormone — molecular heterogeneity and measurement in serum
Smith C R & Norman M R (1990) Ann Clin Biochem 37, 549

Interleukin-2
Smith K A (1990) Sci. Am. 262, No 3, 50

Stimulus-response coupling: the search for intracellular calcium mediator proteins [Minireview]
Smith V L, Kaetzel M A & Dedman J R (1989) Cell Regul. 1, 165–172

Interleukin-6: an overview
Snick J van (1990) Annu. Rev. Immunol. 8, 253

Platelet-activating factor and related acetylated lipids as potent biologically active cellular mediators
Snyder F (1990) Am. J. Physiol. 259, No 5. Pt 1, C697

The role of immuno-peptides in the regulation of anterior pituitary hormone release [Brief review]
Spangelo B L & Macleod R M (1990) Trends Endocrinol. Metab. 1, 408

Signal transformations required for the generation of saccadic eye movements
Sparks D L & Mayes L E (1990) Annu. Rev. Neurosci. 13, 300

Receptor-effector coupling by G-proteins: implications for endocrinology [Brief review]
Spiegel A M (1989) Trends Endocrinol. Metab. 1, 72

IgE Immunopathology. 1. Fc Receptors and Cytokines Involved in IgE Regulation and Function
Spiegelberg H L & others (1990) Springer Semin. Immunopath. 12, 301–415

The hormone-induced regulation of contact-dependent cell cell communication by phosphorylation
Stagg R B & Fletcher W H (1990) Endocr. Rev. 11, 302

Melatonin receptors: current status, facts, and hypotheses [Minireview]
Stankow B & Reiter R J (1990) Life Sci. 40, 911

Neuroendocrine mechanisms involved in regulation of body weight, food intake and metabolism;
Steffens A B, Strubbe J H, Balkan B & Scheunink A J W (1990) Neurosci. Biobehav. Rev. 14, 305

Parathyroid hormone-related proteins — coming of age in the 1990s — clinical review. 16
Stewart A F & Broadus A E (1990) J. Clin. Endocrinol Metab. 71, 1410

Signal transduction in bacteria
Stock J B, Stock A M & Mottonen J M (1990) Nature, 344, 395

Oncogenes, protooncogenes, and signal transduction — toward a unified theory
Storms R W & Bose H R (1989) Advan. Virus Res. 37, 1

Molecular genetics of congenital adrenal hyperplasia [Brief review]
Strachan T (1989) Trends Endocrinol. Metab. 1, 68

Peptide mediators of hypercalcemia in malignancy
Strewler G J & Nissenson R A (1990) Annu. Rev. Med. 41, 35

The search for the elusive adrenal steroidogenic “regulatory” protein [Brief review]
Strott C A (1990) Trends Endocrinol. Metab. 1, 312

Retinoic acid, a developmental signalling molecule
Summerbell D & Maden M (1990) Trends Neurosci. 13, 142

Physiological and pharmacological comparisons of angiotensin II receptors in neuronal and astrocytic glial cultures
Summers C, Myers L M, Kalberg C J & Raizada M K (1990) Progr. Neurobiol. 34, 355

Pharmacodynamics: Changes in homeostatic mechanisms, receptor and target organ sensitivity in the elderly
Swift C G (1990) Br. Med. Bull. 46, 36–52

Hormonal regulation of sociosexual behavior in female mammals
Takahashi L K (1990) Neurosci. Biobehav. Rev. 14, 403

Puffs and gene regulation — molecular insights into the Drosophila ecdysone regulatory hierarchy
Thummel C S (1990) BioEssays. 12, 561

Endothelium-derived relaxing factor (EDRF)
Toda N & Okamura T (1990) Folia Pharmacol. Jap. 95, 295

Cellular and molecular mechanisms in hormone and neurotransmitter secretion
Trifaro J M (1990) Can. J. Physiol. Pharmacol. 68, 1–16

How to kill cancer cells: membranes and cell signaling as targets in cancer chemotherapy
Trintin R T & Hickman J A (1990) Cancer Cells, 2, 93

Central neuroregulation of hypothalamic corticotropin-releasing hormone (CRH-41) secretion
Tsargarakis S & Grossman A (1990) J Endocrinol Invest. 13, 765
Action of inhibitors on brain glutamate decarboxylase [Minireview]
Tunnich G (1990) *Int. J. Biochem.* 22, 1235

N-Methyl-D-aspartate receptor complex — different sites for regulation and clinical consequences [In German; English abstract]
Turski L (1990) *Arzneim. Forsch.* 40, 511

Watching G proteins at work
Uhl R, Wagner R & Ryba N (1990) *Trends Neurosci.* 13, 64

Transmission of signals from T lymphocyte antigen receptor to the genes responsible for cell proliferation and immune function
Ullman K, Northrop J P, Verweij C L & Crabtree G R (1990) *Annu. Rev. Immunol.* 8, 421

Somatomedins on the move [Plenary lecture]
Van den Brande J L (1990) *Horm. Res.* 33, 58

Diurnal and ultradian rhythms in human endocrine function — a minireview
Vancauter E (1990) *Horm. Res.* 34, 45

Growth-hormone-releasing hormone
Vance M L (1990) *Clin. Chem.* 36, 415

Donors of EDRF (Endothelium-Derived Relaxing Factor) — Workshop held in Strasbourg, France, July 5, 1989
Vanhouaye P M & others (1989) *J. Cardiovasc. Pharmacol.* 14, Suppl. 11, S1–S139

The thyrotropin (TSH) receptor, an unusual member of the G-protein-coupled receptor family [In French; English abstract]
Vassart G, Parmentier M, Libert F & Dumont J (1990) *M/S Méd. Sci.* 6, 985

A review and appraisal of deconvolution methods to evaluate in vivo neuroendocrine secretory events
Veldhuis J D & Johnson M L (1990) *J. Neuroendocrinol.* 2, 755

The effects of interleukin-1 on articular cartilage destruction as observed in arthritic diseases, and its therapeutical control
Verschuer P J & Vannoorden C J F (1990) *Clin. Exp. Rheumatol.* 8, 303

The role of sulfation in thyroid hormone metabolism [Brief review]
Visser T J, Buuren J C J van, Rutgers M, Rooda S J E & Herder I (1990) *Int. J. Endocrinol.* 23, No 5, Pt 1, 903

Glucocorticoid hormone reception under physiological and extreme conditions [In Russian; English abstract]
Vorobyov D V & Larina I M (1990) *Kosmich. Biol. Aviakosmich. Med.* SSSR, 24, 4

Colony-stimulating factors
Wakefield P E, James W D, Samskaka C P & Meltzer M S (1990) *J. Am. Acad. Dermatol.* 23, No 5, Pt 1, 903

Receptors and sexual messengers — from the 4th Transatlantic Airway Conference — January 1989
Wanner A & others (1990) *Am. Rev Resp Dis.* 141, No 3, Suppl S97

Protein engineering and the study of structure-function relationships in receptors
Ward W H J, Timms D & Fersht A R (1990) *Trends Pharmacol. Sci.* 11, 280

Immunomodulation by cocaine — a neuroendocrine mediated response [Minireview]
Watzl B & Watson R R (1990) *Life Sci.* 46, 1319

Growth factors and pituitary tumors [Brief review]
Webster J, Ham J, Bevan J S & Scanlon M F (1989) *Trends Endocrinol. Metab.* 1, 95

Postembryonic neuronal plasticity and its hormonal control during insect metamorphosis
Weeks J C & Levine R B (1990) *Annu. Rev. Neurosci.* 13, 183

Thyroid peroxidase as an antigen in autoimmune thyroiditis [Editorial review]
Weetman A P (1990) *Clin. Exp. Immunol.* 80, 1

Insulin-like growth factors somatomedins — basic and clinical aspects [In German; English abstract]
Weimann E & Kiess W (1990) *Klin. Wochenschr.* 68, 985

Gene regulation by receptors binding lipid-soluble substances
Weinberger C & Bradley D J (1990) *Annu. Rev. Physiol.* 52, 823

GTP-binding proteins and signal transduction in the human neutrophil [Minireview]
Weingarten R & Bokoch G M (1990) *Immunol. Lett.* 26, 1

The thyroctic anion as a physiologically significant active substance in living nature
Weuffen W & others (1990) *Pharmacie.* 45, 16

Lipid metabolism and signal transduction in endothelial cells
Whatley R E, Zimmerman G A & McIntyre T M (1990) *Progr. Lipid Res.* 29, 45

Cytokines in disease
Whicher J T & Evans S W (1990) *Clin. Chem.* 36, 1269

Hybrid insulin receptors — molecular mechanisms of negative dominant mutations in receptor-mediated insulin resistance
Whittaker J, Soos M A & Siddie K (1990) *Diabetes Care.* 13, 576

Glucose homeostasis and hypothalamic–pituitary–adrenocortical axis during development in rats
Widmaier E P (1990) *Am. J. Physiol.* 259, No 5, Pt 1, E601

Mechanisms of disease — receptor autoimmunity in endocrine disorders
Wilkin T J (1990) *New Engl. J. Med.* 323, 1318

Gonadotropin glycosylation and function
Wilson C A, Leigh A J & Chapman A J (1990) *J. Endocrinol.* 125, 3–14

Human recombinant interleukin-2 as an experimental therapeutic
Winkelhake J L & Gauny S S (1990) *Pharmacol. Rev.* 42, 1

Properties and possible function of phosphatidylinositol-transfer proteins
Wirtz K W A, Snoek G T, Gadella T W J, Vanparidon P A & Somerharju P J (1990) *Biotechnol. Appl. Biochem.* 12, 485

Interleukin-6: historical background, genetics and biological significance [Minireview]
Wolffkamp M C J & Marquet R L (1990) *Immunol. Lett.* 24, 1

The Renin–Angiotensin System as a Therapeutic Target: Proceedings of an International Symposium held in Basel, Switzerland, October 29–30, 1989
Wood J M & others (1990) *J. Cardiovasc. Pharmacol.* 16, Suppl. 4, S1–S76

Regulation of rat inhibin synthesis in the rat ovary
Woodruff T K & Mayo K E (1990) *Annu. Rev. Physiol.* 52, 807

Release of intracellularly stored Ca2+ by inositol 1,4,5-triphosphate — an overview [Minireview]
Yamamoto H & Kanaide H (1990) *Gen. Pharmacol.* 21, 387

Hormone-sensitive lipase — a multipurpose enzyme in lipid metabolism [Minireview]
Yeaman S & Chi M (1990) *Biochim. Biophys. Acta.* 1052, 128

Evaluation of the annexins as potential mediators of membrane fusion in eukaryotes [Minireview]
Zaks W J & Creutz C E (1990) *J. Bioenerget. Biomembr.* 22, 97

Renal action of atrial natriuretic peptide: regulation of collecting duct sodium and water transport
Zeidel M L (1990) *Annu. Rev. Physiol.* 52, 747
442C Cells: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]
Zeytin F N (1989) Trends Endocrinol Metab 1, 107
Production of pteridines during hematopoiesis and T-lymphocyte proliferation: potential participation in the control of cytokine signal transmission
Ziegler I (1990) Med Res. Rev 10, 95
Brief review: Molecular mechanisms of neutrophil binding to endothelium involving platelet-activating factor and cytokines
Zimmerman G A, McIntyre T M, Prescott S M & Otsuka K (1990) J Lipid Mediators, 2, Suppl, S31
Regulation of hemopoiesis by cytokines that restrict options for growth and differentiation
Zipori D (1990) Cancer Cells, 2, 205

HYDROCARBONS

Acetylenes and related compounds in Cynareae
Christensen L P & Lam J (1990) Phytochemistry, 29, 2753
Metabolism of nitro-polycyclic aromatic hydrocarbons
Fu P P (1990) Drug Metab. Rev. 22, 299
Lipid polymorphism and hydrocarbon order
Lafleur M, Bloom M & Cullis P R (1990) Biochem. Cell Biol. 68, 1-8
Microbial degradation of hydrocarbons in the environment
Leathy J G & Cotwell R R (1990) Microbiol Rev. 54, 303-315
Monitoring of the anaerobic methane fermentation process
Switsenbaum M S, Giraldos-Gomez E & Hickey R F (1990) Enzyme Microb Technol 12, 722

HYDROGEN, HYDROGEN EXCHANGE AND HYDROGEN IONS

Regulation of intracellular pH and its role in vascular smooth muscle function [Editorial review]
Aalkjaer C (1990) J Hypertension, 8, 197
Biochemical consequences of phosphorylcholines low pH with special relevance to human semen: passive pH regulation [Minireview]
Burt C T & Chen B (1990) Int J. Biochem. 22, 115
The regulation and modulation of pH in the nervous system
Chesler M (1990) Progr Neurobiol, 34, 401
Gene duplication as a means for altering H+/ATP ratios during the evolution of FOF/ATPases and synthases
Cross R L & Taiz L (1990) FEBS Lett 259, 227-229
Subunit δ of H+-ATPases: at the interface between proton flow and ATP synthesis
Engelbrecht S & Junge W (1990) Biochim Biophys Acta, 1015, 379
Calcium and pH in anoxic and toxic injury
Herman B & others (1990) Curr Rev Toxicol. 21, 127
Permeable membrane - surface charge density and the multiple effect of pH and cations
Joras N, Koutalos Y & Ebrey T G (1990) Photochem. Photobiol 52, 1163
Regulatory mechanism of the cytoplasmic pH by H+-adenosinetriphosphatase [In Japanese; English abstract]
Kobayashi H (1990) Yakugaku Zasshi, 110, 703
Sequential transduction of light into redox and acid-base energy in photosynthesis
Losada M, Guerrero M G, Rosa M A de la, Serrano A, Hervás & Ortega J M (1990) Bioelectrochem Bioenerget 23, 105

HYDROGEN EXCHANGE

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HYDROGEN IONS

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IHYPOTERMIA

Effects of cooling on smooth muscle contraction [Minireview]
Nasu T (1990) Comp Biochem. Physiol. Pt A, 95, 201
Life in a frozen state: adaptive strategies for natural freeze tolerance in amphibians and reptiles [Editorial review]
Storey K B (1990) Am. J. Physiol 258, No 3, Pt 2, R559

IMMUNOGLOBULINS AND IMMUNOGLOBULIN RECEPTORS

Proteinase inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Microreview]
Björck L (1990) Mol Microbiol. 4, 1439
Monoclonal immunoglobulin deposition disease — light chain and light and heavy chain deposition diseases and their relation to light chain amyloidosis — clinical features, immunopathology, and molecular analysis
Bukbaum J N, Chuba J V, Hellman G C, Solomon A & Gallo G R (1990) Ann. Int Med 112, 455
Immunoglobulin secretion in the airways
Daniele R P (1990) Annu. Rev. Physiol. 52, 111
Immunoglobulin class switching: molecular and cellular analysis
Esser C & Radbruch A (1990) Annu. Rev Immunol 8, 717
Lymphokine control of in vivo immunoglobulin isotype selection
Finkelman F D & others (1990) Annu Rev Immunol 8, 303
Platelet immunoglobulin-G — its significance for the evaluation of thrombocytopenia and for understanding the origin of alpha-granule proteins
George J N (1990) Blood, 76, 859
The two binding-site models of human IgG binding Fcy receptors
Gergely J & Sarmay G (1990) FASEB J. 4, 3275

From Prout to the proton pump — a history of the science of gastric acid secretion and the surgery of peptic ulcer
Modlin I M (1990) Surg. Gynecol. Obstet. 170, 81
The alphastat hypothesis in respiratory control and acid-base balance [Brief review]
Nattie E E (1990) J Appl. Physiol 69, 1201
Determinants and consequences of colonic luminal pH — implications for colon cancer
Newmark H L & Lupton J R (1990) Nutr Cancer, 14, 161
Effects of changes of pH on the contractile function of cardiac muscle
Orchard C H & Kentish J C (1990) Am. J Physiol 258, No 6, Pt 1, C967
The proton-translocating ATPase in Eschersuchia coli
Senior A E (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 7
Reductive biotransformations of organic compounds by cells or enzymes of yeast
Ward O P & Young C S (1990) Enzyme Microb. Technol 12, 482

HYDROGEN IONS

See: HYDROGEN, HYDROGEN EXCHANGE AND HYDROGEN IONS
Selective IgG subclass deficiency — quantification and clinical relevance

Jeffers R & Kumararatne D S (1990) Clin. Exp. Immunol. 81, 357

Can persistent IgE responses be suppressed? [Editorial review]

Kemeny D M & Diaz-Sanchez D (1990) Clin. Exp. Immunol. 82, 423

Octamer transcription factors and the cell type-specificity of immunoglobulin gene expression

Kemler R & Schaffner W (1990) FASEB J. 4, 1444

The structure and function of human IgA

Kerr M A (1990) Biochem. J. 271, 285

Multiple phenotypic consequences of the Ig/Myc translocation in B-cell-derived tumors

Klein G (1989) Gene Chromosome Cancer, 1, 3

Regulation of the immunoglobulin gene transcription

Lefranc G & Lefranc M (1990) Biochimie, 72, 7

Molecular biology of IgE-binding protein, IgE-binding factors, and IgE receptors

Liu F-T (1990) Crit. Rev Immunol. 10, 289

The laboratory investigations for the study and the follow-up of monoclonal gammopathies

Myara I (1980) Path. Biol. 38, 134

Newer uses of intravenous immunoglobulins as anti- infective agents

Pennington J E (1990) Antimicrob Agents Chemother 34, 1463–1466

Dysregulation of IgE responses and airway allergic inflammation in atopic individuals — Review

Ricci M & Rossi O (1990) Clin. Exp. Allergy. 20, 601

Regulation and deregulation of human IgE synthesis

Romagnani S (1990) Immunol. Today, 11, 316

Is IgE-mediated hypersensitivity an autoimmune disease?

Shahin F (1990) Allergy; 45, 1

IgE Immunopathology I. Fc Receptors and Cytokines Involved in IgE Regulation and Function

Spiegelberg H L & others (1990) Springer Semin Immunopath. 12, 301–415

The dynamics of glycans–protein interactions in immunoglobulins.

Results of spin label studies

Sykulev Y K Nezlin R S (1990) Glycoconjugate J. 7, 163

IMMUNOLOGY AND IMMUNOCHEMISTRY

See also ANTIBODIES

ANTIGENS AND ANTIGEN RECEPTORS

IMMUNOGLOBULINS AND IMMUNOGLOBULIN RECEPTORS

LYMPHOCYTES

Human endogenous retroviruses and immune disease [Short analytical review]

Abraham G N & Khan A S (1990) Clin. Immunol Immunopath. 56, 1

Mechanisms of liver allograft rejection in man [Editorial review]

Adams D (1990) Clin. Sci 78, 343–350

Interactions between the brain and the immune system

Ader R, Felton D & Cohen N (1990) Annu. Rev. Pharmacol. Toxicol. 30, 561–602

Antigen presentation and self–nonself discrimination [Short analytical review]

Adorini L (1990) Clin. Immunol. Immunopath. 55, 327

Symposium on Parasites: Molecular Biology, Drug and Vaccine Design, Keystone, CO, April 3–10, 1989

Agabian N & Cerami A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 130, 504 pp.

The unique lipoprotein(a) — properties and immunochemical measurement

Albers J J, Marcovina S M & Lodge M S (1990) Clin. Chem. 36, 2019

Immunology of hepatitis B virus infection

Alexander G J M (1990) Br. Med. Bull. 46, 354

Leukocyte adhesion molecules deficiency: Its structural basis, pathophysiology and implications for modulating the inflammatory response

Arnault M A (1990) Immunol Rev 114, 145

From protein synthesis to antibody formation and cellular immunity, a personal view

Askonas B A (1990) Annu. Rev Immunol. 8, 1

Cancer, cytokines, and cytotoxic cells: interleukin-2 in the immunotherapy of human neoplasms

Atzpodien J & Kirchner H (1990) Klin. Wochenschr. 68, 1

Herpesviruses, the Immune System, and AIDS

Aurelian L, ed. (1990) Dev. Med. Virol. 6, 377 pp.

Inactivation of viral antigens for vaccine preparation with particular reference to the application of binary ethylenimine

Bahnemann H G (1990) Vaccine, 8, 299

Modulation of neurogenic inflammation, novel approaches to inflammatory disease

Barnes P J, Belvisi M G & Rogers D F (1990) Trends Pharmacol. Sci. 11, 185

Human immunodeficiency virus, type-2 [In Russian]

Bektimirov T A (1990) Vopr Virusol. 35, 1

Regulation of major histocompatibility complex class-II genes: X, Y, and other letters of the alphabet

Benost C & Mathis D (1990) Annu. Rev. Immunol. 8, 681

Immunodeficiency after bone marrow transplantation can be associated with autoimmune T-cell receptor γδ-bearing lymphocytes

Bensussan A, David V, Vilmer E, Leca G & Boumsell L (1990) Immunol Rev 116, 5

Interactions between inflammatory mediators in expression of antitumor cytotoxic activity of macrophages [Minireview]

Bonta I L & Ben-Efraim S (1990) Immunol. Lett. 25, 295

Pharmacology of Cyclosporine (Sandimmune). Pharmacological properties in vivo

Borrel J F (1989) Pharmacol Rev 41, 759

Haematologic abnormalities in the acquired immunodeficiency syndrome

Bricci M F, Porcu P, Porteri A & Pegoraro L (1990) Haematologica, 75, 454

The role of γδ T cells in the normal and disordered immune system

Bröker B & Emmrich F (1990) Klin Wochenschr. 68, 489

Mechanisms of transfusion-induced immunosuppression

Brunson M E & Alexander J W (1990) Transfusion, 30, 651

Immunological features of diffuse connective tissue diseases

Burgio G R & Martini A (1990) Eur. J Pediatr 149, 224

Immunomodulation by bacterial endotoxin

Burrell R (1990) Crit. Rev. Microbiol. 17, 189

Tumor vaccines

Bystryn J-C (1990) Cancer Metast. Rev. 9, 81
The role of platelet-activating factor in inflammation [Short analytical review]
Camussi G, Tetta C & Baglioni C (1990) Clin. Immunol. Immunopath. 57, 331

Allergy — present and future [In French; English abstract]
Capron A & Desseint J P (1990) M/S Méd. Sci. 6, 958

International Symposium on Tryptophanase and Thyroid Autoimmunity, Marseille, France, June 28–30, 1990
Carayon P & Ruf J, eds (1990) Colloq. INSERM, 207, 361 pp.

Type-1 diabetes: a chronic autoimmune disease of human, mouse, and rat
Castano L & Eisenbarth G S (1990) Annu. Rev. Immunol. 8, 647

Host genetic control of spontaneous and induced immunity to murine retrovirus infection
Clesseau B, Miyazawa M & Brit W J (1990) Annu. Rev. Immunol. 8, 477

Immunology 1989 — the peptidic revolution
Claverie J M (1990) M/S Méd. Sci. 6, 367

Immunological memory
Colle J-H, Le Moal M A & Truffa-Bachi P (1990) Crit. Rev. Immunol. 10, 259

Cellular and molecular mechanisms of allograft rejection
Colvin R B (1990) Annu. Rev. Med. 41, 361

FceRIICD23: the low affinity receptor for IgE
Conrad D H (1990)

Effect of monoclonal antibodies on primate allograft rejection
Conti D J & Cosimi A B (1990) Immunol. Rev. 110, 113

Lipid mediators in inflammatory skin disorders
Cunningham F (1990) J. Lipid Mediators, 2, 61

Genes for MHC, TCR and MIS determine susceptibility to collagen induced arthritis
David C S (1990) APMS, 98, 575

The use of fluorescent probes in immunochemistry
Davidson R S & Hilkenbach M M (1990) Photochem Photobiol. 52, 431

Toxicity to the immune system — a review
Dean J H, Cornacoff J B & Luster M I (1990) Immunopharmacol. Rev. 1, 377

Immunological aspects of fungal pathogenesis
Depee G S & Bullock W E (1990) Eur. J. Clin. Microbiol. Infect. Dis 9, 567

Hepatitis-B vaccination — problem of insufficient antibody formation
[In German; English abstract]
Dennhofer L (1990) Dtsch. Med. Wochenschr. 115, 1560

Reviews of molecular biology of sexually transmitted diseases — molecular techniques in the diagnosis of human infectious diseases
Desselberger U & Collingham K (1990) Genitourin. Med. 66, 313

Pharmacology of Cyclosporine (Sandimmune). Pharmacological effects on immune function — in vitro studies
Dipadova F E (1989) Pharmacol. Rev. 41, 373

Dissection of an inflammatory process induced by CD8+ T-cells
Doherty P C, Allan J E, Lynch F & Ceredig R (1990) Immunol. Today, 11, 55

An immunopharmacological approach for prevention of retrovirus-associated disease in human pathology
Donofrio C & Bonmassar E (1990) Pharmacol. Res. 22, 645

Early events of the immune response mediated by leukocyte integrins
Dranfield I, Buckle A-M. & Hogg N (1990) Immunol. Rev. 114, 29

Heat-shock proteins in autoimmune arthritis: A critical contribution based on the adjuvant arthritis model
Eden W van (1990) APMS, 98, 383

Ontogenic maturation of the immune system in reptiles
Eldeeb S O & Saad A H M (1990) Dev. Comp. Immunol. 14, 151

Regulation of complement biosynthesis by tissue-specific and hormonal factors [Mini review]
Fales A (1990) Immunol. Lett. 24, 227

Heberden papers: Molecular biology approaches in rheumatology research
Feldmann M & others (1990) Ann. Rheumatic Dis. Suppl 1, 425

Transgenic mice as an in vivo model for self-reactivity
Ferrick D A, Ohashi P S, Wallace V A, Schilham M & Mak T W (1990) Immunol. Rev. 118, 257

Neisseria meningitidis outer membrane proteins — prospects of their use in the development of preparations for immunoprophylaxis [In Russian; English abstract]
Filatova T N (1990) Zh. Mikrobiol. Epidemiol. Immunobiol SSSR. No.2, 86

Cefodizime: a Third-Generation Cephalosporin with Immunomodulating Properties. International Congress for Infectious Diseases, Montreal, July 15–19, 1990
Finch R & others (1990) J. Antimicrob. Chemother. 26, Suppl. C, R3, 1–17

Function of autoreactive T cells in immune responses
Finnegan A, Needleman B W & Hodes R J (1990) Immunol. Rev. 116, 15

Immunogenetics of the Q and TL regions of the mouse
Flaherty L, Elliott E, Tine J A, Walsh A C & Waters J B (1990) Cnt Rev Immunol. 10, 131

The immunogenetics of insulin-dependent (type I) diabetes [Brief review]
Fletcher J A & Barnett A H (1989) Trends Endocrinol. Metab. 1, 44

Leukotriene B4 in inflammation
Ford-Hutchinson A W (1990) Crit. Rev. Immunol. 10, 1

The immune response to cytomegalovirus infection and serological methods used in its diagnosis
Galea G (1990) Med. Lab. Sci 47, 297

Does the presence of self-reactive T cells indicate the breakdown of tolerance? [Short analytical review]
Gammon G & Sercarz E (1990) Clin. Immunol. Immunopath. 56, 287

How does HLA-B27 confer susceptibility to autoimmune arthritis? [Editorial review]
Gashon J S H (1990) Clin Exp Immunol 89 1

Special issue: Signals and Signal Processing. 6. Receptor Expression and Release — Regulatory Role of Membrane Bound and Soluble Receptors
Gergely J & others (1990) Mol. Immunol. 27, 1163-1355

The two binding-site models of human IgG binding Fcy receptors
Gergely J & Sarmay G (1990) Cell. Immunol. 138, 275

The immune response to influenza vaccines
Ghendron Y (1990) Acta Virol. 34, 295

Cytokines in the pathophysiology of systemic lupus erythematosus
Goldman M (1990) Autoimmunity, 8, 173

Symposium: AIDS, Other Immunodeficiency Disorders, and the Lymphatic System: Pathophysiology, Diagnosis, and Immunotherapy
Good R A & others (1990) Lymphology, 23, 55-98

Molecular mechanisms by which adenoviruses counteract antiviral immune defenses
Gooding L R & Wold W S M (1990) Crit. Rev Immunol 10, 53
A decade of development in immunoassay methodology
Gosling J P (1990) Clin. Chem. 36, 1408

Immunological adjuvants — a role for liposomes
Gregoriadis G (1990) Immunol. Today, 11, 89

Insights into autoimmunity — from classical models to current perspectives
Gretherrezzamos J C & others (1990) Immunol. Rev. 118, 73

The characterization of immunotherapeutic agents
Hadden J W, Renoux G & Chirigos M (1990) Immunopharmacol. Rev. 1, 1

Role of metabolism in dimethylthiourea-induced immunosuppression: a review
Haggerty H G & Holsapple M P (1990) Toxicology, 63, 1-23

Immunohistochemical markers of cellular proliferation — achievements, problems and prospects
Hall P A & Woods A L (1990) Cell Tissue Kinet. 23, 505

Transgenic mouse models of self-tolerance and autoreactivity by the immune system
Hanahan D (1990) Annu. Rev. Cell Biol. 6, 493

Immunomodulation of T cell efficiency in humans by thymic humoral factor: from crude extract to synthetic thymic humoral factor-y2
Handzel Z T, Burstein Y, Buchner V, Pecht M & Trainin N (1990) J. Biol. Resp. Modif. 9, 269

Autoimmune diseases and HLA
Hansen J A & Nelson J L (1990) Crit. Rev. Immunol. 10, 307

Immunomodulation with gastrointestinal neuropeptides [in German; English abstract]
Hart R, Lersch Ch, Wagner F, Rothdauscher G & Clasen M (1990) Dtsch. Med. Wochenschr. 115, 944

Influenza A virus and the neutrophil: a model of natural immunity
Hartshorn K L, Karnad A B & Tauber A I (1990) J. Leukocyte Biol. 47, 176

Assay methods for cyclosporine monitoring following liver transplantation
Haven M C, Sobeski L M, Earl R A & Markin R S (1990) J. Clin. Lab. Anal. 4, 150

Non-steroidal anti-inflammatory drugs and peptic ulcers
Hawkey C J (1990) Clin. Microbial. Rev. 3, 132-152

Effects of mainstream and environmental tobacco smoke on the immune system in animals and humans: a review
Johnson J D, Houchens D P, Kluwe W M, Craig D K & Fisher G L (1990) Crit. Rev. Toxicol. 20, 369

Eliciting the pathogenesis of autoimmune disease — recent advances at the molecular level and relevance to oral mucosal disease
Jonsson R, Mountz J & Koopman W (1990) J. Oral Path. Med. 19, 341

First Breton Workshop on Autoimmunity — Proceedings of a Symposium, March 8-10, 1989
Jouquard J & others (1990) Clin. Exp. Rheumatol. 8, Suppl 5, 1-89

Measurement of the complement system — general principles and prospects [in French; English abstract]
Julen N & others (1990) Ann. Biol. Clin. Paris. 48, 349

T lymphocyte immune dysfunctions in systemic lupus erythematosus
Kammer G M & Stein R L (1990) J. Clin. Med. 115, 273

Cyclosporine: an immunosuppressant affecting epithelial cell proliferation
Kanitakis J & Thivolet J (1990) Arch. Dermatol. 126, 369

Heat shock proteins and the immune response
Kaufmann S H E (1990) Immunol. Today, 11, 129

Allergy, Inflammation and Histamine-H1 blockade — Proceedings of the UCB Symposium, EAACI, Glasgow, 1990
Kay A B & others (1990) Clin. Exp. Allergy, 20, Suppl. 4, 1-31

Zinc deficiency and immune function
Kep C L & Gershwin M E (1990) Annu. Rev. Nutr. 10, 415

Effects of stress on the immune system
Khanara D N, Murgio A J & Faith R E (1990) Immunol. Today. 11, 170

Autoimmunity to collagen II and myelin basic protein — comparative studies in humans and rodents
Klarenskog L & Olsens T (1990) Immunol. Rev. 118, 285

Circulating immune complexes in HIV-infected persons
Krapf F E, Herrmann M, Letzmann W, Schwartlander B & Kalden J R (1990) Klin. Wochenschr. 68, 299

Retroviruses and autoimmunity
Krieg A M & Siegelberg A D (1990) J. Autoimmun. 3, 137

Effects of UV radiation on tumor immunity
Kripke M L (1990) J. Nat. Cancer Inst. 82, 1392

Somnogenic activity of immune response modifiers
Kruger J M (1990) Trends Pharmacol. Sci. 11, 122

Does HIV cause AIDS — an updated response to Duesberg’s theories [MiniReview]
Kurth R (1990) Intervirology, 31, 301

Immunological assays of apolipoproteins in plasma: methods and instrumentation
Laburc C, Shepherd J & Rosseneu M (1990) Clin. Chem. 36, 591

Novel vaccination and antireceptor strategies against HIV
Laurenc J (1990) AIDS Res. Hum. Retrovirus, 6, 175
Abnormal intestinal permeability in Crohn’s disease. A possible pathogenetic factor
Olaison G, Sjödahl R & Tagesson C (1990) Scand. J. Gastroenterol. 25, 321

Stress, emotion, and human immune function
Oleary A (1990) Psychol. Bull. 108, 363

Lymphocytes and bronchial hyperresponsiveness [Minireview]
Oosterhout A I M van & Nijkamp F P (1990) Life Sci. 46, 1255

The technique of pulsed field gel electrophoresis and its impact on molecular immunology
O’Reilly M-A J & Kinnon C (1990) J. Immunol. Methods, 131, 1

Leukocyte adhesion to endothelium in inflammation [Minireview]
Osborn L (1990) Cell, 62, 3-6

Drug-protein conjugation and its immunological consequences
Park B K & Kitteringham N R (1990) Drug Metab. Rev. 22, 87

Cellular immune response against autologous human malignant melanoma: are in vitro studies providing a framework for a more effective immunotherapy?
Parmiani G, Anichini A & Fossati G (1990). J. Nat. Cancer Inst. 82, 361

Cell-mediated immunity in experimental cytomegalovirus infections: a perspective
Pasternak M S, Medearis D N jr & Rubin R H (1990) Rev. Infect. Dis., 12, Suppl. 7, 5720

Alternative pathways of T-cell activation and positive clonal selection
Patarea R & others (1990) Immunol. Rev. 116, 85

The role of endothelial cells in inflammation [Overview]
Pober J S & Cotran R S (1990) Transplantation, 50, 537

Allelic variations of human TCR V-gene products
Posnett D N (1990) Immunol. Today. 11, 368

Immunomodulation in humans caused by β-carotene and vitamin-A
Prabhala R H, Garewal H S, Meyskens F L & Watson R R (1990) Nutr. Res. 10, 1473

The carbohydrate- and lipid-containing cell wall of mycobacteria, phenolic glycolipids: structure and immunological properties
Puzo G (1990) Crit. Rev. Microbiol. 17, 307

Pharmacology of Cyclosporine (Sandimmune). Immunochemistry and monitoring
Queenan V F I (1989) Pharmacol. Rev. 41, 749

Adhesion molecules on endothelial cells in the central nervous system: an emerging area in the neuroimmunology of multiple sclerosis [Short analytical review]
Raine C S, Lee S C, Scheinberg L C, Duijvestijn A M & Cross A H (1990) Clin. Immunol. Immunopath. 57, 173

Immunocytochemistry of the cell nucleus
Rauka I, Oechs R L & Salammmichel L (1990) Electron Microsc. Rev. 3, 301

Possible immunoregulatory role for CD5+ B cells [Short analytical review]
Raveche E S (1990) Clin. Immunol. Immunopath. 56, 135

The body against itself
Rennie J (1990) Sci. Am. 263, No 6, 76-85

Third International Workshop of Current Events in Immunology — Infectious Agents/Host’ Relations, 12 June 1990 [In French; English abstracts]
Revillard J P & others (1990) M/S Méd. Sci Suppl. 7, 31-77

Dysregulation of IgE responses and airway allergic inflammation in atopic individuals — Review
Ricci M & Rossi O (1990) Clin. Exp. Allergy, 20, 601

Immune suppression by herpesviruses
Rinaldo C R jr (1990) Annu. Rev. Med. 41, 331

Synthetic peptide vaccines against pathogens and biological mediators
Riveau G J & Audibert F M (1990) Trends Pharmacol. Sci. 11, 194

CD4: Collaborator in immune recognition and HIV infection [Minireview]
Robey E & Axel R (1990) Cell, 60, 697-700

Adaptive immunotherapy for cancer
Rosenberg S A (1990) Sci. Am. 262, No 5, 62

Cellular activation — regulation of intracellular events by cyclosporine
Ryffel B (1989) Pharmacol. Rev. 41, 407

Virus-induced autoimmunity
Schattner A & Rager-Zisman B (1990) Rev. Infect. Dis. 12, 204

Effects of gender and sex steroids on the immune response
Schuurs A H W M & Verheul H A M (1990) J. Steroid Biochem. 35, 151

Interleukin-6 in infection and cancer [Minireview]
Sengal P B (1990) Proc. Soc. Exp. Biol. Med. 197, 183

Lymphokine activated killer cells: a new approach to immunotherapy of cancer
Semenzato G (1990) Leukemia, 4, 71

Is IgE mediated hypersensitivity an autoimmune disease?
Shakib F (1990) Allergy, 45, 1

The role of chemical mediators in the pathogenesis of inflammation with emphasis on the kinin system
Sharma J N & Mols S S J (1990) Exp. Path. 38, 73

Persistence of group A streptococci and biodegradation of their cell walls from the viewpoint of the immunopathogenesis of nonpurulent post-streptococcal diseases [In Russian, English abstract]
Shikhaman A R, Chernyakova A M & Briko N I (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR. No 2, 74

Pathogenic idiotypes of autoantibodies in autoimmunity. Lessons from new experimental models of SLE
Shoenfield Y & Meizes E (1990) FASEB J 4, 2646

Immunotrophic activity of azo derivatives and their condensed heterocyclic systems [a review] [In Russian]
Smirnov S V, Strokin Y V, Sadykov R F & Dianov V M (1990) Khim. Pharm. Zh. SSSR. No 11, 19

Mechanisms of autoimmunity in the context of T-cell tolerance — insights from natural and transgenic animal model systems
Siegel R M & others (1990) Immunol. Rev. 118, 165

Recent advances in hepatitis-A vaccine development
Siegl G & Lemon S M (1990) Virus Res. 17, 75

T-Cell receptor-VB repertoire expression in murine models of SLE
Singer P A & Theofilopoulos A N (1990) Immunol. Rev. 118, 103

Inherited complement deficiency states — implications for immunity and immunological disease
Sjoholm A G (1990) APMS, 98, 861

The impact of Hodgkin’s disease in the immune system
Sjolund D J, Ellis T M, Nawrocki J F & Fisher R I (1990) Seminars Oncol. 17, 673

Antigen recognition and peptide-mediated immunotherapy in autoimmune disease
Smiley D E, Lock C B & Medevitt H O (1990) Immunol. Rev. 118, 37
The role of immune peptides in the regulation of anterior pituitary hormone release [Brief review]
Spangelo B L & MacLeod R M (1990) Trends Endocrinol. Metab. 1, 408

IgE Immunopathology. 1. Fc Receptors and Cytokines Involved in IgE Regulation and Function
Spiegelberg H L & others (1990) Springer Semin. Immunopathol. 12, 301-415

Adhesion receptors of the immune system
Springer T A (1990) Nature, 346, 425

Immunomodulation by histamine
Stanciu L (1990) Ann. Biol. Clin. Paris, 48, 623

Mycobacterium vaccae in immunophrophylaxis and immunotherapy of leprosy and tuberculosis
Stamford J L & others (1990) Vaccine, 8, 325

Theoretical and experimental approaches to generalized autoimmunity
Steinberg A D. Krieg A M, Gourley M F & Klinman D M (1990) Immunol. Rev. 118, 129

Prospects for specific immunotherapy in myasthenia gravis
Steinman L & Mantegazza R M (1990) FASEB J, 4, 2726

The effect of anaesthetic agents on the human immune response
Stevenson G W, Hall S C, Rudnick S, Seleny F L & Stevenson H (1990) Anesthesiology, 72, 542

Synthetic immunomodulating agents
Stavnezer J (1990) Med. Res. Rev. 10, 371

Editorial review — Lessons about autoantibody specificity in systemic lupus-crythematous from animal models
Stott D I (1990) Clin. Exp. Immunol. 81, 1

Mechanisms of immune injury in rheumatoid arthritis — evidence for the involvement of T-cells and heat-shock protein
Strober S & Holoshitz J (1990) Immunol. Rev. 118, 233

Immunoregulatory function of human autoreactive T-cell lines and clones
Strober W & James S P (1990) Immunol. Rev. 110, 117

Molecules related to class-I major histocompatibility complex aequus
Strychnos I (1990) Annu. Rev. Immunol. 8, 501

The pharmacology of microbial modulation in the induction and expression of immune reactivities — the pharmacologically active effector molecules of immunologic inflammation, immunity, and hypersensitivity
Szentivanyi A, Krzanowski J J, Polson J B & Abarca C M (1990) Immunopharmacol. Rev. 1, 159

Immunocytochemical localization of the intracellular sites of sialylation in rat hepatocytes and colonic epithelial cells [Robert Feulgen Prize Laureates]
Taatjes D J (1990) Acta Histochem. Suppl. 40, 9

Poxvirus-based vectors as vaccine candidates
Tartaglia J, Pincus S & Paololetti E (1990) Crit. Rev. Immunol. 10, 13

Molecular basis of homing of intravenously transplanted stem cells to the marrow
Tavassoli M & Hardy C L (1990) Blood, 76, 1059

Follicular dendritic cells as accessory cells
Tew J G, Kracik M H, Burton G F & Szakal A K (1990) Immunol Rev. 117, 185

Mast cells: the immune gate to the brain [Minireview]
Theoharides T C (1990) Life Sci 46, 607

Autoreactive HLA-DR-specific autoreactive T cell clones: possible regulatory function for B lymphocytes and hematopoietic precursors
Tilkin A-F, Vinci G, Michon J & Levy J-P (1990) Immunol. Rev. 117, 171

Genetic control of autoimmunity in type-I diabetes
Todd J A (1990) Immunol. Today, 11, 122

Transmission of signals from T lymphocyte antigen receptor to the genes responsible for cell proliferation and immune function
Ullman K, Northrop J P, Verweij C L & Crabtree G R (1990) Annu. Immunol. Rev. 8, 421

The Paramyxoviridae — aspects of molecular structure, pathogenesis, and immunity
Vainionpaa K, Marusyk R & Salmi A (1989) Advan. Virus Res. 37, 211

Molecular structure and vaccine design
Vajda S & others (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 69

Immunogenecity and immunoochemistry of Streptococcus pneumonia capsular polysaccharides
Van Dam J M, Fleer A & Snipe H (1990) Anton. Leeuwendoek Int. J. Gen. Mol. Microbiol. 58, 1

Ontogeny of the rat immune system — an immunohistochemical approach
Vannere E P, Dijkstra C D & Smimia T (1990) Dev. Comp Immunol. 14, 9

The Niels Jerne Lecture — Why does the exposure to allogeneic cells sometimes lead to immunization and sometimes not?
Vannoo J J (1990) Rev. Immunol. 141, 783

Self recognition by the immune system
Vonboehmer H (1990) Eur. J. Biochem 194, 693#

Lipid mediators of inflammation in gastric ulcer — Editorial review
Wallace J L (1990) Am. J. Physiol. 258, No 1. Pt I, G1

Anti-idiotypes used in immunohistochemistry
Wang M W (1990) Histochem. J. 22, 519

Endogenous interference in immunoassays in clinical chemistry. A review
Weber T H, Kåpyaho K I & Tanner P (1990) Scand. J. Clin. Lab. Invest. 50, Suppl.201, 77

Viruses and autoimmunity
Weetman A P & Borysiwicz L R (1990) Autoimmunity, 5, 277

Immunological techniques — Editorial overview
Weir D (1990) Curr. Opin. Immunol. 2, 877

Inflammation and cancer — role of phagocyte-generated oxidants in carcinogenesis
Weitzman S A & Gordon L I (1990) Blood. 76, 655

Mechanisms of disease — receptor autoimmunity in endocrine disorders
Wilkin T J (1990) New Engl. J. Med. 323, 1318

Pharmacokinetics of immunomodulators
Williams J F (1990) Immunopharmacol. Rev. 1, 65

Structural bases of immune recognition of influenza virus hemagglutinin
Wilson I A & Cox N J (1990) Annu. Rev. Immunol. 8, 737

The potential use of thalidomide in the therapy of graft-versus-host-disease — a review of clinical and laboratory information
Wood P M D & Proctor S J (1990) Leukemia Res. 14, 395

FK 106, a new immunosuppressive agent: a review
Yoshimura N & Oka T (1990) EOS-Riv. Immunol. Immunopharmacol. 10, 32
Stress proteins and immunology
Young R A (1990) Annu. Rev. Immunol. 8, 401

Immunoregulatory cell dysfunction in chronic B-cell leukemias
Zaknoen S L & Kay N E (1990) Blood Rev. 4, 165

Imprint of thymic selection on autoreactive repertoires
Zauderer M & Natarajan K (1990) Immunol. Rev. 116, 159

INFLAMMATION
See: IMMUNOLOGY AND IMMUNOCHEMISTRY

INOSITOL AND INOSITOL PHOSPHATES
See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS
METABOLISM AND METABOLIC CONTROL

INSECTS
Mechanisms for regulating oxygen toxicity in phytophagous insects
Ahmad S & Pardini R S (1990) Free Radical Biol. Med. 8, 401

Chemical communication in insect communities: a guide to insect pheromones with special emphasis on social insects
Ali M F & Morgan E D (1990) Biol. Rev 65, 227

Puffs, genes, and hormones revisited [Minireview]
Ashburner M (1990) Cell, 61, 1–3

The role of cell-cell interaction in the development of the Drosophila visual system
Banerjee U & Zipursky S L (1990) Neuron, 4, 177–187

IXth Eccdyson Workshop, Paris, September 11–14, 1989, — a collection of review articles
Barker G C & others (1990) Invertebr. Reprod. Dev. 18, 1–91

A molecular view of the Ultrabithorax homeotic gene of Drosophila
Beachy P A (1990) Trends Genet 6, 46

Genetic engineering of plants for insect resistance
Boulter D, Gatehouse J A, Gatehouse A M R & Hilder V A (1990) Endeavour, 14, 185

I-Transposable elements and I-R hybrid dysgenesis in Drosophila
Bucheton A (1990) Trends Genet. 6, 16

Molecular analysis of a cellular decision during embryonic development of Drosophila melanogaster: epidermogenesis or neurogenesis
Campos-Ortega J A & Knust E (1990) Eur. J. Biochem. 190, 1–10

Thirteenth GIF Lecture in Neurobiology — Expression and Assembly of a Functional Neuron. Genetic and molecular mechanisms of neurogenesis in Drosophila melanogaster
Campos-Ortega J A & Knust E (1990) J. Physiol. Paris, 84, 1

Genetics of early neurogenesis in Drosophila melanogaster
Campos-Ortega J A & Knust E (1990) Annu. Rev. Genet. 24, 387

Zebra patterns in fly embryos: activation of stripes or repression of interstripes
Carroll S B (1990) Cell, 60, 9–16

Current developments in new media and cell culture systems for the large-scale production of insect cells
Cho T, Shuler M L & Granados R R (1989) Advan. Cell Culture, 7, 261

P element transposition [Minireview]
Craig N L (1990) Cell, 62, 399–402

Insect cell cultures as tools in the study of bacterial protein toxins
Davidson E W (1989) Advan. Cell Culture, 7, 125

Transcriptional regulation of the Drosophila segmentation gene fushi tarazu (ftz)
Dearolf C R, Topol J & Parker C S (1990) BioEssays, 12, 109

Closely watched clocks: molecular analysis of circadian rhythms in Neuresera and Drosophila
Dunlap J C (1990) Trends Genet. 6, 159

How an insect sickness turns out to be useful in protein engineering
Filhol O, Cochet C & Chambaz E M (1990) M&S Mol. Sci. 6, 797

Genetic approaches to myofibril form and function in Drosophila
Fyrborg E & Bell C (1990) Trends Genet. 6, 126

The Drosophila cytoskeleton
Fyrborg E A & Goldstein L S B (1990) Annu. Rev. Cell Biol. 6, 559

What determines the specificity of action of Drosophila homeodomain proteins?
Hayashi S & Scott M P (1990) Cell, 63, 883

Sex determination compared in Drosophila and Caenorhabditis
Hodgkin J (1990) Nature, 344, 721

Cell patterning and segment polarity genes in Drosophila
Ingham P W & Nakano Y (1990) Dev. Growth Differentiation, 32, 563

Genes required for specifying cell fates in Drosophila embryonic sensory nervous system
Jan Y N & Jan L Y (1990) Trends Neurosci. 13, 493

The endogenous regulation of mosquito reproductive behavior
Klowden M J (1990) Experientia, 46, 660

Ecdysteroids
Koolman J (1990) Zool. Sci. 7, 563

Segmentation and segmental differentiation in the development of the central nervous systems of leeches and flies
Levine M & Macagno E (1990) Annu. Rev. Neurosci. 13, 195

GABA receptors in insects [Minireview]
Lumis S C R (1990) Comp. Biochem. Physiol. Pt C, 95, 1

Chemical information processing in the olfactory system of insects
Mason C & Mustaparta H (1990) Physiol. Rev. 70, 199

Oncogene research using Drosophila as a model system
Nishida Y (1990) Jap. J. Genet. 65, 121

The pharmacology of the gut of the desert locust Schistocerca gregaria and other insects [Minireview]
Osborne R H, Banner S E & Wood S J (1990) Comp. Biochem. Physiol. Pt C, 96, 1

Making stripes in the Drosophila embryo
Pankratz M J & Jäckle H (1990) Trends Genet. 6, 287

Hsr-omega: a novel gene encoded by a Drosophila heat shock puff
Pardue M L & others (1990) Biol. Bull. 179, 77

Imprinting a determined state into the chromatin of Drosophila
Paro R (1990) Trends Genet. 6, 416

Germ-line sex determination in Drosophila melanogaster
Pauli D & Mahowald A P (1990) Trends Genet. 6, 259

Receptor tyrosine kinases — genetic evidence for their role in Drosophila and mouse development
Pawson T & Bernstein A (1990) Trends Genet. 6, 350

Pharmacological and biochemical properties of insect GABA receptors
Rauh J J, Lummis S C R & Sattelle D B (1990) Trends Pharmacol. Sci. 11, 325

Molecular mechanisms regulating Drosophila P element transposition
Rio D C (1990) Annu. Rev. Genet. 24, 543
Dynamics of insect lipophorin metabolism
Ryan R O (1990) J. Lipid Res. 31, 1725

Eastern equine encephalomyelitis virus — epidemiology and evolution of mosquito transmission
Scott T W & Weaver S C (1989) Advan. Virus Res 37, 277

Serine/threonine protein kinases in Drosophila
Siegfried E, Ambrosio L & Perrimon N (1990) Trends Genet 6, 357

Molecular genetics of neuronal development in the Drosophila embryo
Thomas J B & Crews S T (1990) FASEB J. 4, 2476

NMR spectroscopy: its basis, biological application and use in studies of insect metabolism [Mini-review]
Thompson S N (1990) Insect Biochem. 20, 223

Puffs and gene regulation — molecular insights into the Drosophila edysone regulatory hierarchy
Thummel C S (1990) BioEssays. 12, 561

Glia cells form boundaries for developing insect olfactory glomeruli
Tolbert L P & Oland L A (1990) Exp. Neurol 109, 19

Lipid transport function of lipoproteins in flying insects
Vanderhorst D J (1990) Biochim. Biophys. Acta. 1047, 195

Drosophila src family proteins [Mini-review]
Waldsworth S C (1990) Comp Biochem Physiol. Pt B, 97, 403

Gene transfer in insects
Walki V K (1989) Advan. Cell Culture. 7, 87

Postembryonic neuronal plasticity and its hormonal control during insect metamorphosis
Weeks J C & Levine R B (1990) Annu Rev Neurosci 13, 183

INSULIN

Insulin receptor structure and function in normal and pathological conditions
Becker A B & Roth K A (1990) Annu. Rev. Med 41, 99

A new dimension in hypertension: Role of insulin resistance — Proceedings of an International Symposium
Bühlér F R & others (1990) J Cardiovass. Pharmacol. 15, Suppl 5, S1

Insulin-like growth factor binding proteins [Brief review]
Clemmons D R (1990) Trends Endocrinol Metab 1, 412

Genetic susceptibility to the development of spontaneous insulin-dependent diabetes mellitus in the rat [Short analytical review]
Cole E (1990) Clin Immunol Immunopath 57, 1

Insulin and insulin-like growth factor-I in early development — peptides, receptors and biological events
Depablo F, Scott L A & Roth J (1990) Endocr. Rev. 11, 558

Antibodies directed to the insulin receptor — clinical aspects and applications to the study of insulin action
Depirro R, Borboni P, Marini M A, Montemurro A, Sesti G & Lauro R (1990) J. Endocrinol Invest 13, 951

Lipid-derived mediators in insulin action [Mini-review]
Farese R V (1990) Proc. Soc. Exp Biol. Med 195, 312

Insulin, insulin sensitivity and hypertension [Editorial review]
Ferrant P & Weidmann P (1990) J. Hypertension. 8, 491

The immunogenetics of insulin-dependent (type I) diabetes [Brief review]
Fletcher J A & Barnett A H (1989) Trends Endocrinol Metab 1, 44

Therapeutic potential of insulinlike growth factor I
Froesch E R, Guler H-P, Schmid C, Binz K & Zapf J (1990) Trends Endocrinol Metab 1, 254

Review issue: Insulin — continued
Galloway J A & others (1990) Diabetes Care, 13, 1209–1265

Proinsulin trafficking and processing in the pancreatic B cell
Halban P A (1990) Trends Endocrinol. Metab. 1, 261

Distinct functional domains on the insulin receptor β-subunit: do they provide a molecular basis for “selective” insulin resistance? [Brief review]
Houclay M D (1989) Trends Endocrinol. Metab. 1, 83

Insulin-like growth factors I and II
Humbel R F (1989) Fur J Biochem 190, 445–462

Identification of susceptibility loci for type-1 (insulin-dependent) diabetes by trans-racial gene mapping
Jenkins D & others (1990) Diabetologia, 33, 387

Insulin-receptor tyrosine kinase and glucose transport
Lam D & others (1990) Diabetes Care, 13, 565

Glucose metabolism, 2nd messengers and insulin secretion [Mini-review]
Laychock S G (1990) Life Sci 47, 2307

Lipid transport function of lipoproteins in flying insects
Vanderhorst D J (1990) Biochim. Biophys. Acta. 1047, 195

Drosophila src family proteins [Mini-review]
Waldsworth S C (1990) Comp Biochem Physiol. Pt B, 97, 403

Gene transfer in insects
Walki V K (1989) Advan. Cell Culture. 7, 87

Postembryonic neuronal plasticity and its hormonal control during insect metamorphosis
Weeks J C & Levine R B (1990) Annu Rev Neurosci 13, 183

Insulin receptor structure and function in normal and pathological conditions
Becker A B & Roth K A (1990) Annu. Rev. Med 41, 99

A new dimension in hypertension: Role of insulin resistance — Proceedings of an International Symposium
Bühlér F R & others (1990) J Cardiovass. Pharmacol. 15, Suppl 5, S1

Insulin-like growth factor binding proteins [Brief review]
Clemmons D R (1990) Trends Endocrinol Metab 1, 412

Genetic susceptibility to the development of spontaneous insulin-dependent diabetes mellitus in the rat [Short analytical review]
Cole E (1990) Clin Immunol Immunopath 57, 1

Insulin and insulin-like growth factor-I in early development — peptides, receptors and biological events
Depablo F, Scott L A & Roth J (1990) Endocr. Rev. 11, 558

Antibodies directed to the insulin receptor — clinical aspects and applications to the study of insulin action
Depirro R, Borboni P, Marini M A, Montemurro A, Sesti G & Lauro R (1990) J. Endocrinol Invest 13, 951

Lipid-derived mediators in insulin action [Mini-review]
Farese R V (1990) Proc. Soc. Exp Biol. Med 195, 312

Insulin, insulin sensitivity and hypertension [Editorial review]
Ferrant P & Weidmann P (1990) J. Hypertension. 8, 491

The immunogenetics of insulin-dependent (type I) diabetes [Brief review]
Fletcher J A & Barnett A H (1989) Trends Endocrinol Metab 1, 44

Therapeutic potential of insulinlike growth factor I
Froesch E R, Guler H-P, Schmid C, Binz K & Zapf J (1990) Trends Endocrinol Metab 1, 254

Review issue: Insulin — continued
Galloway J A & others (1990) Diabetes Care, 13, 1209–1265

Proinsulin trafficking and processing in the pancreatic B cell
Halban P A (1990) Trends Endocrinol. Metab. 1, 261

Distinct functional domains on the insulin receptor β-subunit: do they provide a molecular basis for “selective” insulin resistance? [Brief review]
Houclay M D (1989) Trends Endocrinol. Metab. 1, 83

Insulin-like growth factors I and II
Humbel R F (1989) Fur J Biochem 190, 445–462

Identification of susceptibility loci for type-1 (insulin-dependent) diabetes by trans-racial gene mapping
Jenkins D & others (1990) Diabetologia, 33, 387

Insulin-receptor tyrosine kinase and glucose transport
Lam D & others (1990) Diabetes Care, 13, 565

Glucose metabolism, 2nd messengers and insulin secretion [Mini-review]
Laychock S G (1990) Life Sci 47, 2307

The intracellular site of action of insulin — the mitochondrial Krebs cycle
Mohlan C, Gieger P J & Reeseman S P (1989) Curr Top Cell Regul 30, 105

Intrinsic kinase activity of the insulin receptor [Mini-review]
O’Hare T & Pilch P F (1990) Int. J. Biochem. 22, 315

Control of insulin secretion in pancreatic β-cells
Petersen O H (1990) News Physiol Sci. 5, 254

Insulin-like growth factors and their binding proteins [Mini-review]
Ruianen F M & Pekonen F (1990) Acta Endocrinol 123, 7

Second messengers of insulin action [Brief review]
Sattel A R (1990) Trends Endocrinol Metab. 1, 158

Signal transduction in insulin action
Sattel A R (1990) J Nutr Biochem 1, 180

Insulin-like growth factors and their binding proteins
Sara V R & Hall K (1990) Physiol. Rev 70, 591

What happens after insulin binds to its receptor? [Mini-review]
Sheorain V S (1990) Indian J Biochem. Biophys. 27, 125

Lessons learned from molecular biology of insulin-gene mutations
Steiner D F & others (1990) Diabetes Care. 13, 600

Insulin resistance and hypertension
Swislocki A (1990) Am. J Med Sci. 300, 104

Mutations of the human insulin receptor gene [Brief review]
Taylor S I, Cama A, Kadowaki H, Kadowaki T & Accm D (1990) Trends Endocrinol Metab 1, 134

Glucose regulation of insulin gene expression
Welsh M (1989) Diabetes Metab 15, 367

Hybrid insulin receptors — molecular mechanisms of negative dominant mutations in receptor-mediated insulin resistance
Whittaker J, Soos M A & Siddle K (1990) Diabetes Care, 13, 576

Insulin autoantibodies as markers for type-1 diabetes
Wilkin T J (1990) Endocr. Rev. 11, 92

Protein kinase C in insulin releasing cells. Putative role in stimulus secretion coupling [Mini-review]
Wollheim C B & Regazzi R (1990) FEBS Lett. 268, 376–380

Control of insulin secretion: a model involving Ca2+, cAMP and diacylglycerol
Zawalich W S & Rasmussen H (1990) Mol Cell Endocrinol 70, 119
INTERFERONS

The interferon-γ receptor — a comparison with other cytokine receptors [Milestone Award Lecture]
Aguet M (1990) J. Interferon Res. 10, 551

Interferon in Hematologic Malignancies and Related Disorders
Appelbaum F R & others (1990) Seminars Hematol. 27, No 3, Suppl. 4, I–31

Is interferon effective after oral administration? The state of the art
Bocci V (1990) J Biol Regul. Homeostat. Agents, 4, 81

Interferon status in different diseases [In Russian]
Ershov F I, Gotovtseva E P & Lavrukhina L A (1990) Vopr. Virusol. 35, 444

Hydrophobic cluster analysis reveals duplication in the external structure of human alpha-interferon receptor and homology with gamma-interferon receptor external domain [Discussion letter]
Gaboriaud C, Uze G, Lutfalla G & Mogensen K (1990) FEBS Lett. 269, 1

The current status of interferon α in haemic malignancy
Galvani D W & Cawley J C (1990) Blood Rev. 4, 175

Interferons, interleukins, virus-host interaction — relation to leukotrienes and other lipoxygenase derivatives of the arachidonic acid
Mayer M (1990) Acta Virol. 34, 99

Interferons and Related Cytokines: Basic Research and Applied Therapy — Proceedings of the Second International Dermatology Symposium, October 11–14, 1989, Berlin
Orfanos C E & others (1990) J. Invest. Dermatol. 95, No. 6, Suppl., S65–S238

Interferons: a new class of tumor suppressor genes?
Pitha P M (1990) Cancer Cells, 2, 215

Recent progress in interferon research: molecular mechanisms of regulation, action, and virus circumvention
Taylor J L & Grossberg S E (1990) Virus Res. 15, I

Antineoplastic activity of the combination of interferon and cytotoxic agents against experimental and human malignancies — a review
Wadler S & Schwartz E L (1990) Cancer Res. 50, 3473

Clinical pharmacokinetics of interferons
Wills R J (1990) Clin. Pharmacokinet. 19, 390

INTERLEUKINS

See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

ION CHANNELS

See: TRANSPORT

IONOPHORES

See: MEMBRANES

IRON

Iron deficiency
Baynes R D & Bothwell T H (1990) Annu. Rev. Nutr. 10, 133

Recent developments in the field of iron–sulfur proteins
Reinert H (1990) FEBS J. 4, 2483

Manipulations of cellular iron metabolism for modulating normal and malignant cell proliferation — achievements and prospects
Cazzola M, Bergamaschi G, Dezza L & Arosio P (1990) Blood, 75, 1903

The biology of transferrin [Critical review]
De Jong G, Van Dijk J P & Van Eijk H G (1990) Clin. Chim. Acta, 190, 1

The sickle erythrocyte in double jeopardy: autoxidation and iron decompartmentalization
Hebbel R P (1990) Seminars Hematol. 27, 51

Iron chelation
Hershko G, Pinson A & Link G (1990) Blood Rev. 4, 1

Mechanisms of iron acquisition and bacterial virulence
Martinez J L, Delgado-Iribarren A & Baquero F (1990) FEMS Microbiol. Rev. 75, 45

Regulation of ferritin and transferrin receptor mRNAs
Theil E C (1990) J. Biol. Chem. 265, 4771

The role of transferrin in the mechanism of cellular iron uptake
Thorstensen K & Rommel H (1989) Biochem J. 277, 1

Iron acquisition and the pathogenesis of meningococcal and gonococcal disease [Mini review]
Vanputten J P M (1990) Med. Microbiol. Immunol. 179, 289

Cellular iron metabolism in health and disease
Weinberg E D (1990) Drug Metab. Rev. 22, 531

Iron nutrition in childhood — papers presented at the Milupa Workshop held in Athens, 10th–11th March 1989
Wharton B A & others (1989) Acta Paediat. Scand. Suppl. 361, 1

Ferritin
Woodrow M (1990) Blood Rev. 4, 259

A mechanistic hypothesis for meat enhancement of nonheme iron absorption — stimulation of gastric secretions and iron chelation
Zhang D J, Carpenter C E & Mahoney A W (1990) Nutr. Res. 10, 929

ISOENZYMES

Primary sequence of cyclic nucleotide phosphodiesterase isozymes and the design of selective inhibitors
Beavo J A & Reifsnyder D H (1990) Trends Pharmacol. Sci 11, 150

Multilocus isozyme systems in fishes [Mini review]
Coppes Z L, Vecci S de, Ferreira E & Hirschhorn M (1990) Comp. Biochem. Physiol. Pt B, 96, 1

Physiological functions of (Na+ K+)–adenosinetriphosphatase (ATPase) isozymes [In Japanese; English abstract]
Matsuda T (1990) Yakugaku Zasshi, 110, 235

Isozymes: Structure, Function, and Use in Biology and Medicine, 6th International Congress on Isozymes, Toyama, Japan, May 29–June 2, 1989
Ogita Z I & Markert C L, eds (1990) Progr Clin. Biol. Res. 344, 973 pp.

Aspartate aminotransferase isoenzymes — invited review
Panteghini M (1990) Clin. Biochem. 23, 311

ISOPRENOIDS

See: LIPIDS

113
KIDNEYS AND URINARY TRACT

Renal failure caused by chemicals, foods, plants, animal venoms, and misuse of drugs — an overview
Abuelo J G (1990) Arch. Intern. Med. 150, 505

Treatment of the anemia of chronic renal failure with recombinant human erythropoietin
Adamson J W & Eschbach J W (1990) Annu. Rev. Med. 41, 349

Cell mechanisms of proximal tubule acidification
Alpern R J (1990) Physiol. Rev. 70, 79

Hunt for the dominant autosomal polycystic kidney disease gene [Minireview] [In French; English abstract]
Bachner L (1990) M/5 Méd. Sci. 6, 904

Renal proximal tubular cells in suspension or in primary culture as in vitro models to study nephrotoxicity
Boogaard P J, Nagelkerke J F & Mulder G J (1990) Chem-Biol. Inter. 76, 251

Biochemical mechanisms and pathobiology of alpha2u-globulin nephropathy
Borghoff S J, Short B G & Swenberg J A (1990) Annu. Rev. Pharmacol. Toxicol. 30, 349–367

Molecular mechanisms of diuretic agents
Breyer J & Jacobson H R (1990) Annu. Rev. Med. 41, 265

Control of the renal microvasculature by vasoactive peptides
Carnines P K & Fleming J T (1990) FASEB J 4, 3300

Effects of calcium channel blockers on renal function
Chan L & Schrier R W (1990) Annu. Rev. Med. 41, 289

Renal medullary circulation: hormonal control [Editorial review]
Chou S-Y, Porush J G & Faubert P F (1990) Kidney Int 37, 1

Renal effects of atrial natriuretic factor
Cogan M G (1990) Annu. Rev. Physiol. 52, 699

Angiotensin II: a powerful controller of sodium transport in the early proximal tubule [Brief review]
Cogan M G (1990) Hypertension, 15, 451

Molecular and biochemical mechanisms of chemically induced nephrotoxicity: a review
Comandow J N M & Verner E N P E (1990) Chem. Res. Toxicol. 3, 171

Basolateral K conductance: role in regulation of NaCl absorption and sequestration
Dawson D C & Richards N W (1990) Am. J. Physiol. 259, No 2, Pt 1, C181

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part I [Editorial review]
De Wardener H E (1990) Clin. Sci. 79, 193–200

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part II [Editorial review]
De Wardener H E (1990) Clin. Sci. 79, 289–297

Effects of dietary interventions on glomerular pathophysiology [Brief review]
Diamond J R (1990) Am. J. Physiol. 258, No 1, Pt 2, F1

PHT receptor coupling to phospholipase C is alternate pathway of signal transduction in bone and kidney [Brief review]
Dunlay R & Hruska K (1990) Am. J. Physiol. 258, No 2, Pt 2, F223

The mechanism of pressure natriuresis [Editorial review]
Firth J D, Raina A E G & Ledingham J G G (1990) J. Hypertension, 8, 97

Basolateral amino acid transport in the kidney [Minireview]
Foulkes E C (1990) Proc. Soc. Exp. Biol. Med. 195, 1

Importance of organic osmolytes for osmoregulation by renal medullary cells [Brief review]
Garciaperez A & Burg M B (1990) Hypertension, 16, 595

Modulation of vasopressin antidiuretic action by renal alpha2-adrenoceptors [Editorial review]
Gellai M (1990) Am. J. Physiol. 259, No 1, Pt 2, F1

Reactive oxygen and glomerular dysfunction
Iwasaki K (1990) Xenobiotica, 20, 909

ACE Inhibitors and the Kidney — Proceedings of a Satellite Symposium held in Conjunction with the International Society of Hypertension, Kyoto, Japan, May 21, 1988
Johnston C I & others (1990) Nephron. 55, Suppl. 1, 1

Pathogenic factors in aminoglycoside-induced nephrotoxicity [Minireview]
Kacew S & Bergeron M G (1990) Toxicol. Lett. 51, 241

Lipids and the kidney [Brief review]
Kasikse B L, O'Donnell M P, Coward W & Keane W F (1990) Hypertension, 15, 443

The pathogenesis of membranous glomerulonephritis: from morphology to molecules
Keszaki D (1990) Virchows Arch. 38. 253

Isolated cells as tool to investigate renal function [In German; English abstract]
Kinne R K-H, Grupp C & Grunewald R W (1990) Klin. Wochenschr. 68, 199

The vasopressin-regulated urea transporter in renal inner medullary collecting duct [Editorial review]
Knepper M A & Star K A (1990) Am. J. Physiol. 259, No 5, Pt 2, F393

Tamm-Horsfall protein — uromodulin (1990–1990) [Editorial review]
Kumar S & Muchmore A (1990) Kidney Int. 37, 1395-141

Eicosanoid biosynthesis and role in renal immune injury
Lianos E A (1990) Prostagland. Leuk. Essent. Fatty Acids. 41, 1

11th International Congress of Pharmacology, 8-10 July 1990, Essen, Germany — Significance of Peripheral Dopaminergic System in Cardiovascular and Renal Function
Lokhandwala M F & others (1990) J Autonom. Pharmacol. 10, Suppl. 1, S3-S123

Cardiovascular dopamine receptors: role of renal dopamine and dopamine receptors in sodium excretion [Minireview]
Lokhandwala M F & Hegde S S (1990) Pharmacol. Toxicol. 66, 237

Effect of ca-platinum on heme, drug, and steroid metabolism pathways: possible involvement in nephrotoxicity and infertility
Manes M S (1990) Crit. Rev. Toxicol. 21, 1

Adverse antibiotic effects associated with renal insufficiency
Manian F A, Stone W J & Alford R H (1990) Rev. Infect. Dis. 12, 326

Nonsteroidal antiinflammatory drugs: acute effects on the kidney
Oberle G P & Stahl R A K (1990) Disch. Med. Wochenschr. 115, 309

Renal medullary microcirculation
Pallone T L, Robertson C R & Jamison R L (1990) Physiol. Rev. 70, 885

Involvement of platelet-activating factor in renal processes
Piotzky E & others (1989) Advan. Lipid Res. 23, 271
The metabolic effects of diuretics and other antihypertensive drugs — a perspective as of 1989
Raftery E B (1990) *Int. J. Cardiol.* 28, 143

Is glomerulosclerosis a consequence of altered glomerular permeability to macromolecules?  [Editorial review]
Remuzzi G & Bertani T (1990) *Kidney Int.* 38, 284

Renovascular Effects of Angiotensin II, Budapest, Hungary, July 16–19, 1989
Rosivall L & others (1990) *Kidney Int.* 38, Suppl. 30, S-1–S-123

Phosphatidylinositol-linked proteins and paroxysmal nocturnal hemoglobinuria
Rosse W F (1990) *Blood,* 75, 1595

Microalbuminuria in diabetes mellitus — review and recommendations for the measurement of albumin in urine
Rowe D J F, Dawnay A & Watts G F (1990) *Ann. Clin. Biochem.* 27, 297

Regulation of renal transport processes and hemodynamics by macrophages and lymphocytes [Editorial review]
Schreiner G F & Kohan D E (1990) *Am. J. Physiol.* 258, No 4, Pt 2, F761

Brain–gut peptides, renal function and cell growth [Editorial review]
Unwin R J, Ganz M D & Sterzel R B (1990) *Kidney Int.* 37, 1031

The biology of mesangial cells in glomerulonephritis [Minireview]
Veis J H, Yamashita W, Liu Y J & Ooi B S (1990) *Proc. Soc. Exp. Biol. Med.* 195, 160

Animal models of spontaneous diabetic kidney disease
Velasquez M T, Kimmel P L & Michaelis O E IV (1990) *FASEB J.* 4, 2850

Mechanisms of diabetic renal and cardiovascular disease
Viberti G C (1990) *Acta Diabetol. Lat.* 27, 267

Atrial natriuretic peptide in peripheral organs other than the heart
Vollmar A M (1990) *Klin. Wochenschr.* 68, 699

Renal action of atrial natriuretic peptide: regulation of collecting duct sodium and water transport
Zeidel M L (1990) *Ann. Rev. Physiol.* 52, 747

**LECTINS**

Soluble galactoside-binding vertebrate lectins — a protein family with common properties [Minireview]
Caron M, Bladier D & Joubert R (1990) *Int. J. Biochem.* 22, 1379

On the carbohydrate binding specificity of lectins — the game is never over [Minireview]
Goldstein I J (1990) *Ind. J. Biochem. Biophys.* 27, 368

Sialic acid binding lectins
Mandal C & Mandal C (1990) *Experientia,* 46, 433

Functional diversity of dyneins
Piperno G (1990) *Cell Motil. Cytoskel.* 17, 147

Legume lectins — a large family of homologous proteins
Sharon N & Lis H (1990) *FASEB J.* 4, 3198

Lectins and their application to clinical microbiology
Slikkin M & Doyle R J (1990) *Clin. Microbiol. Rev.* 3, 197–218

Induction of a phosphomannosyl binding lectin activity in *Giardia*
Ward H D, Keusch G T & Pereira M E (1990) *BioEssays,* 12, 211

Serum alpha-lactoprotein and its lectin reactivity in liver diseases: a review
Wu J T (1990) *Ann. Clin. Lab. Sci.* 20, 98

Functions and properties of animal lectins
Yoshizaki N (1990) *Zool. Sci.* 7, 581

**LEUKOTRIENES**

See: PROSTAGLANDINS

**LIGNINS**

Lignin: occurrence, biogenesis, and degradation
Lewis N G & Yamamoto E (1990) *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 41, 455-496

**LIPIDS**

Specific interactions of proteins with functional lipid monolayers — ways of stimulating biomembrane processes
Ahlers M, Muller W, Reichert A, Ringsdorf H & Venzmer J (1990) *Angew. Chem.* 29, 1269

New trends in mammalian non-pancreatic phospholipase A2 research
Berézat G, Etienne J, Kokkinidis M, Olivier J L & Pemas P (1990) *J. Lipid Mediators,* 2, 159

The regulation and cellular functions of phosphatidylcholine hydrolysis
Billah M M & Anthes J C (1990) *Biochem. J.* 269, 281–291

Agonist-stimulated turnover of the phosphoinositides and the regulation of adrenocortical steroidogenesis
Bird I M, Walker S W & Williams B C (1990) *J. Mol. Endocrinol.* 5, 191

Uptake of chylomicron remnant retinyl ester via the low density lipoprotein receptor — implications for the role of vitamin-A as a possible preventive for some forms of cancer
Blohmoff R, Skrede B & Norum K R (1990) *J. Intern. Med.* 228, 207

Calcium-activated, phospholipid-dependent protein kinase (protein kinase C) — general aspects and experimental considerations
Boneh A & Tenenhouse H S (1990) *Israel J. Med. Sci.* 26, 293

Metabolism of carotenoid pigments in birds
Brush A H (1990) *FASEB J.* 4, 2969

**LEARNING**

See: MEMORY
Effects of lipids on cancer therapy
Burns C P & Spector A A (1990) *Nat Rev* 48, 233

Biochemical consequences of phosphorylcholines low pH with special relevance to human semen: passive pH regulation [Minireview]
Burt C T & Chen B (1990) *Int J. Biochem*. 22, 115

Regulation of lung surfactant secretion
Chander A & Fisher A B (1990) *Am J. Physiol*. 258, No 6, Pt I, L241

Chemistry and biology of N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)-
labeled lipids: fluorescent probes of biological and model membranes
Chattopadhyay A (1990) *Chem. Phys. Lipids*, 53, 1

Lipid activators of protein kinase C [Minireview]
Chauhan V P S, Chauhan A, Deshmukh D S & Brockerhoff H (1990) *Life Sci*. 47, 981

The phosphomonoester/protein kinase C system as a potential target for
neurotoxicity
Costa L G (1990) *Pharmacol. Res*. 22, 393

Glycolipid anchoring of plasma membrane proteins
Cross G A M (1990) *Annu. Rev. Cell Biol*. 6, 1

Lipid mediators in inflammatory skin disorders
Cunningham F (1990) *J. Lipid Mediators*. 2, 61

The nuclear receptors of retinoic acid
Darmon M (1990) *J. Lipid Mediators*. 2, 247

Multi-author review: Assembly of lipids into membranes
Daum G & others (1990) *Experientia*. 46, 551

Glycosphingolipid function in cancer [Meeting review]
Dawson G (1990) *Cancer Cells*. 2. 327

Regional distribution of body fat, plasma lipoproteins, and
cardiovascular disease
Després J P & others (1990) *Arteriosclerosis*. 10, 497

Control of the transmembrane phospholipid distribution in
eukaryotic cells by aminophospholipid translocase
Devaux P F & others (1990) *Biotechnol. Appl. Biochem*. 12, 517

Hyperlipidemia in diabetes mellitus
Dunn F L (1990) *Diabetes/Metab. Rev*. 6, 47

Transmembrane signaling via phosphatidylinositol 4,5-bisphosphate
hydrolysis in plants
Einspahr K J & Thompson G A (1990) *Plant Physiol*. 93, 361

Relationship of phospholipid hexagonal phases to biological
phenomena
Epand R M (1990) *Biochem. Cell Biol*. 68, 17-23

Signaling through phosphatidylcholine breakdown [Minireview]
Exton J H (1990) *J. Biol. Chem*. 265, 3

Regulation of phosphoinositide-specific phospholipase C
[Finean J B (1990) *Biochim. Biophys. Acta*. 1053, 81

Lipid-derived mediators in insulin action [Minireview]
Farese R V (1990) *Proc. Soc. Exp. Biol. Med*. 195, 312

Lipid metabolism in bile and malabsorption
Färkkilä M & Miettinen T A (1990) *Annu. Med*. 22, 5

Glycoconjugate expression during embryogenesis and its biological
significance
Fenderson B A, Eddy E M & Hakomori S (1990) *BioEssays*. 12, 173-179

Interaction between cholesterol and phospholipid in hydrated bilayers
Finean J B (1990) *Chem. Phys. Lipids*, 54, 147

Analysis of dietary fat, calories, body weight, and the development of
mammary tumors in rats and mice - a review
Freedman L S, Clifford C & Messina M (1990) *Cancer Res*. 50, 5710

Prion liposomes
Gabizon R & Prusiner S B (1990) *Biochem. J*. 266, 1-14

Photosensitization of cultured cells and viruses by pyrene lipids
[Minireview]
Gatt S, Dinur T, Abouraiba S, Kotler M & Fibach E (1990) *Int J. Biochem. Biophys*. 27, 359

Regulation of the mevalonate pathway
Goldstein J L & Brown M S (1990) *Nature*. 343, 425

Immunological adjuvants — a role for liposomes
Gregoriadis G (1990) *Immunol. Today*, 11, 89

Dietary influences on serum lipids and lipoproteins
Grundy S M & Grozovski T (1990) *J. Lipid Res*. 31, 1149

Is there any role of membrane bilayer skeleton interaction in
maintaining the transmembrane phospholipid asymmetry in
erythrocytes
Gupta C M (1990) *Biotechnol. Appl. Biochem*. 12, 506

Membrane-associated cytoskeleton and transbilayer phospholipid
asymmetry [Minireview]
Gupta C M (1990) *Int. J. Biochem. Biophys*. 27, 365

Bifunctional role of glycosphingolipids — modulators for
transmembrane signaling and mediators for cellular interactions
Hakomori S I (1990) *J. Biol. Chem*. 265, 18713

Lipid metabolism in algae
Harwood J L & Jones A L (1989) *Adv. Bot. Res*. 16, 1

Heinrich Wieland Prize Lecture. Mixed-chain phospholipids and
interdigitated bilayer systems
Huang C (1990) *Klin Wochenschr*. 68, 149

Phospholipases in biology and medicine [Plenary lecture]
Kaiser E, Chiba P & Zaky K (1990) *Clin. Biochem*. 23, 349

Lipids and the kidney [Brief review]
Kasiske B L, O'Donnell M P, Cowardin W & Keane W F (1990)
*Hypertension*. 15, 443

Lipids of dermatophytes
Krüger G K & Sanadi S (1989) *Adv. Lipid Res*. 23, 25

Glycoconjugates and cell surface interactions in pre-implantation and
peri-implantation mammalian embryonic development
Kimber S J (1990) *Int. Rev. Cytol*. 120, 53-167

Inositol phosphates in receptor-mediated cell signaling — metabolic
origins and interrelationships
Kirk C J, Maccallum S H, Michell R H & Barker C J (1990)
*Biotechnol. Appl. Biochem*. 12, 489

Triglyceride measurements: a review of methods and interferences
Klotzsch S G & McNamara J R (1990) *Pharmacol. Rev*. 42, 327

Catecholaminergic drugs and phospholipid storage disorder
Kodavanti U P & Mehendale H M (1990) *Pharmacol Rev*. 42, 327

Protein phosphorylation and inositol phospholipid metabolism in
activated mast cells
Kurosawa M (1990) *Clin. Exp. Allergy*. 20, 7

Lipid polymorphism and hydrocarbon order
Laiﬀeur M, Bloom M & Cullis P R (1990) *Biochem. Cell Biol*. 68, 1-8

Genetic predisposition to lung cancer
Law M R (1990) *Br. J. Cancer*. 61, 195

Coordinate interactions of cyclic nucleotide and phospholipid
metabolizing pathways in calcium-dependent cellular processes
Laychock S G (1989) *Curr. Top. Cell. Regul*. 30, 203
Lipid Disorders in Diabetes — Satellite to the Congress: Triglycerides:
The Role in Diabetes and Atherosclerosis — Vienna, May 23, 1990
Paoletti R & others (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 9
R5, 51–535
Effect of fish oil on atherosclerosis and lipoprotein metabolism
Parks J S & Rudek L L (1990) Atherosclerosis, 84, 83
Oscillating intracellular Ca2+ signals evoked by activation of
receptors linked to inositol lipid hydrolysis — mechanism of
generation [Topical review]
Petersen O H & Wakui M (1990) J Membr. Biol 118, 93
Liposomes in experimental virology [In Russian]
Pshenichnov V A, Khamitov R A & Koloskov A V (1990) Vopr.
Virusol. 35, 4
The carbohydrate- and lipid-containing cell wall of mycobacteria,
phenoic glycolipids: structure and immunological properties
Puzo G (1990) Crit. Rev Microbiol. 17, 305
Plasma lipid transfer activities
Quig D W & Zilversmit D B (1990) Annu. Rev. Nutr. 10, 169
Biosynthesis and function of phospholipids in Escherichia coli
[Minireview]
Raetz C R H & Dowhan W (1990) J. Biol. Chem 265, 1235
Effects of post-menopausal estrogen-progestogen replacement
therapy on serum lipids and lipoproteins: a review
Rijpkema A H M, van der Sanden A A & Ru1js A H C (1990)
Maturitas, 12, 259
Lipid transfer proteins
Rueckert D G & Schmidt K (1990) Chem. Phys. Lipids, 56, 1
Dynamics of insect lipophorin metabolism
Ryan R O (1990) J. Lipid Res. 31, 1725
Effects of antioxidants on hemoglobin oxidation in the presence of
phospholipid dispersions [In Russian]
Sablina M A & others (1990) Khim. Farm Zh. SSSR, 24, No. 12,
1
The role(s) of gangliosides in neural differentiation and repair. a
perspective
Schengrund C-L (1990) Brain Res Bull. 24, 131
Postprandial Lipid Metabolism and Atherosclerosis — an
International Symposium, Frankfurt, March 10, 1990
Schettler G & others (1990) Klin. Wochenschr. 68, Suppl 22, R7,
1–124
N-Acylated gycerophospholipids and their derivatives
Schmid H H O, Schmid P C & Natarajan V (1990) Progr. Lipid Res.
29, 1
Triterpenoid saponins, Part 6
Schöpke Th * Hiller K (1990) Pharmazie, 45, 313
Structure of the inverted hexagonal (H11) phase, and non-lamellar
phase transitions of lipids
Seddon J M (1990) Biochim. Biophys. Acta, 1031, 1
Arachidonic acid cascade and signal transduction [Short review]
Shimizu T & Wolfe L S (1990) J. Neurochem. 55, 1
Platelet-activating factor and related acetylated lipids as potent
biologically active cellular mediators
Snyder P (1990) Am J Physiol. 299, No 5, Pt 1, Cb97
Relationship between the regulation of membrane enzyme activities
by gangliosides and possible ganglioside segregation in membrane
microdomains [Minireview]
Sonnino S & others (1990) Ind. J. Biochem. Biophys. 27, 353
The lipid hypothesis and the role of hemodynamics in atherogenesis
Stehbens W E (1990) Progr. Cardiovasc. Dis. 33, 119

International Meeting on Biomembranes and Nutrition: Nutrients
Affecting Lipid Composition and Properties of Cell Membranes,
Paris, France, June 12–14, 1989
Leger C L & Bereziat G, eds. (1989) Colloq. INSERM, 195, 575 pp.
Chronic toxicities of surfactants and detergent builders to algae — a
review and risk assessment
Lewis M A (1990) Ecotoxicol. Environ. Safety, 20, 123
Conformational analysis of carbohydrate chains of glycoconjugates
[In Russian; English abstract]
Lipkind G M (1990) Biorg. Khim. 16, 5
Glycosphospholipid membrane anchoring provides clues to the
mechanism of protein sorting in polarized epithelial cells
Lisanti M P & Rodriguez-Boulan E (1990) Trends Biochem. Sci. 13, 113
Emerging functional roles for the glycosyl-phosphatidylinositol
membrane protein anchor [Topical review]
Lisanti M P, Rodriguez-Boulan E & Saltiel A R (1990) J Membr.
Biol 117, 1
Arachidonic acid metabolism in filarial parasites [Minireview]
Liu L X & Weller P F (1990) Exp. Parasitol. 71, 496
Antiphospholipid antibodies — anticardiolipin and the lupus
anticoagulant in systemic lupus erythematosus (SLE) and non-SLE
disorders — prevalence and clinical significance
Love P E & Santoro S A (1990) Trends Biochem. Sci. 15, 387
Recent insights in phosphatidylinositol signaling
Majerus P W & others (1990) Cell, 63, 459
Lipids in gap junction assembly and function
Malewicz B, Kumar V V, Johnson R G & Baumann W J (1990)
Lipids. 25, 419
Lipid-protein interactions in membranes [Minireview]
Marsh D (1990) FEBS Lett. 268, 371–375
Intracellular fatty acid trafficking and the role of cytosolic lipid
binding proteins
Matarese V, Stone R L, Waggoner D W & Bernlohr D A (1989)
Progr. Lipid Res. 28, 245
Regulation of pulmonary surfactant protein synthesis in fetal lung: a
major role of glucocorticoids and cyclic AMP [Brief review]
Mendelson C R & Boggaram V (1990) Trends Endocrinol. Metab.
1, 20
An update of the enzymology and regulation of sphingomyelin
metabolism
Merrill A H Jr & Jones D D (1990) Biochim. Biophys. Acta 1044.
1
Arachidonate-related Lipid Mediators
Murphy R C & Fitzpatrick F A, eds (1990) Methods Enzymol. 187,
683 pp.
Effects of n-3 fatty acids on lipid metabolism
Nestel P J (1990) Annu. Rev. Nutr. 10, 149
Dietary lipids and thrombosis. Relationships to atherosclerosis
Norday A & Goodnight S H (1990) Arteriosclerosis, 10, 149
Platelet-activating factor — a biologically active phospholipid
Ostermann G, Kertscher H-P & Hoffmann B (1990) Pharmacie, 45,
465
The Golgi apparatus — insights from lipid biochemistry [Sixth
Morton Lecture]
Pagano R E (1990) Biochem. Soc. Trans. 18, 361

117
Symposium: Dietary Lipids and the Central Nervous System — Stockholm, 2-3 November, 1988
Svennerholm L & others (1990) Upsala J Med. Sci. Suppl. 48, 5-267
The future of liposomal drug delivery
Szoka F C (1990) Biotechnol. Appl. Biochem. 12, 496
Gangliosides and synaptic transmission
Thomas P D & Brewer G J (1990) Biochim. Biophys. Acta, 1031, 277
Self-assembling bilayer lipid membranes on solid support
Tien H T & Salamon Z (1990) Biotechnol. Appl. Biochem. 12, 478
Ionization of phospholipids and phospholipid-supported interfacial lateral diffusion of protons in membrane model systems
Toccani J-F & Teissié J (1990) Biochim. Biophys. Acta. 1031, 111
The photophysics and photochemistry of the carotenoids
Truscott T G (1990) J. Photochem. Photobiol. B-Biol. 6, 359
Boehringer Mannheim Award Lecture: Phosphatidyolpholine metabolism — masochistic enzymology, metabolic regulation, and lipoprotein assembly
Vance D E (1990) Biochem. Cell Biol. 68, 1151
Lipid transport function of lipoproteins in flying insects
Vanderhorst D J (1990) Biochim. Biophys. Acta, 1047, 195
Lipid polymorphism of the model and biological membranes [In Russian; English abstract]
Vasilenko I A & Borovoygin V L (1990) Biol. Membranys. 7, 677
Lipid involvement in protein translocation in Escherichia coli [Microreview]
Vrije G J de, Batenburg A M, Killian J A & Kruijff B de (1990) Mol. Microbiol. 4, 143
Phospholipid-based reverse micelles
Walde P, Giuliani A M, Boicelli C A & Luisi P L (1990) Chem. Phys. Lipids, 53, 265
Lipid mediators of inflammation in gastric ulcer [Editorial review]
Wallace I I. (1990) Am. J. Physical 258, No 1. Pt I, G1
Gene regulation by receptors binding lipid-soluble substances
Weinberger C & Bradley D J (1990) Annu. Rev Physiol. 52, 823
Symposium on Glycoconjugates, Frisco, CO, January 14-20, 1989
Welpl J K & Jaworski E, eds (1990) UCLA Symp Mol. Cell Biol NS, 111, 206 pp.
Lipid metabolism and signal transduction in endothelial cells
Whatley R E, Zimmerman G A & McIntyre T M (1990) Progr. Lipid Res. 29, 45
3rd International Symposium on Basic Research on Lung Surfaccant, Marburg, F.R.G., September 12-14, 1988
Wischert P V & Muller B, eds (1990) Progr Resp. Res. 25, 360pp
Properties and possible function of phosphatidylinositol-transfer proteins
Wirtz K W A, Snoek G T, Gadella T W J, Vanparidon P A & Somerharju P J (1990) Biotechnol. Appl. Biochem. 12, 485
Hormone-sensitive lipase — a multipurpose enzyme in lipid metabolism [Minireview]
Yeaman S J & Chi M (1990) Biochim. Biophys. Acta, 1052, 128
Phospholipids and electrolyte transport [Minireview]
Yorio T & Frasier I W (1990) Proc Soc Exp Biol Med 195, 703
Antiphospholipid antibodies — more than just a disease marker?
Young C M (1990) Immunol Today, 11, 60
Gangliosides of lymphocytes-T — evidence for a role in T-cell activation
Yuasa H, Scheinberg D A & Houghton A N (1990) Tissue Antigens, 36, 47
Control of insulin secretion: a model involving Ca++, cAMP and diacylglycerol
Zawalich W S & Rasmussen H (1990) Mol. Cell Endocrinol. 70, 119

LIPOPOLYSACCHARIDES
See: POLYSACCHARIDES

LIPOPROTEINS
Cellular and secreted lipoprotein lipase revisited [Plenary lecture]
Ailhaud G (1990) Clin. Biochem. 23, 343
The unique lipoprotein(a) — properties and immunochemical measurement
Albers J J, Marcovina S M & Lodge M S (1990) Clin. Chem. 36, 2019
What do we know about apo-A-containing lipoproteins? [In French, English abstract]
Barkia A (1990) Ann. Biol. Clin Paris, 48, 529
The interaction of prostaglandin-E1 with serum lipoproteins — possible role in cholesterol homeostasis
Bergelsou L D (1990) Lipids, 25, 767
Uptake of chylomicron remnant retinyl ester via the low density lipoprotein receptor: implications for the role of vitamin-A as a possible preventive for some forms of cancer
Blomhoff R, Skrede B & Norum K R (1990) J. Intern Med. 228, 207
Evidence of association between plasma high-density lipoprotein cholesterol and risk factors for breast cancer
Boyd N F & McGuire V (1990) J. Nat. Cancer Inst. 82, 460
The effect of plasma lipoproteins on platelet responsiveness and on platelet and vascular prostanoid synthesis
Bruckdorfer K R (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 247
LDL heterogeneity and atherosclerosis [In French; English abstract]
Dejager S, Cohen R & Bruckert E (1990) Ann. Biol. Clin Paris, 48, 154
LDL-mediated drug targeting
Desmidt P C & Vanberkel T J C (1990) Crit. Rev. Ther. Drug Carr. Syst. 7, 90
Regional distribution of body fat, plasma lipoproteins, and cardiovascular disease
Després J P & others (1990) Arteriosclerosis, 10, 497
Biochemical, structural, and functional properties of oxidized low-density lipoprotein
Esterbauer H, Diebner-Rotheneder M, Waeg G, Striegl G & Jürgens G (1990) Chem. Res. Toxicol. 3, 77
Assembly and secretion of hepatic very-low-density lipoprotein
Gibbons G F (1990) Biochem. J. 268, 1-13
Dietary influences on serum lipids and lipoproteins
Grundy S M & Getz G (1990) J. Lipid Res 31, 1149
The LDL receptor locus in familial hypercholesterolemia — mutational analysis of a membrane protein
Hobbs H H, Russell D W, Brown M S & Goldstein J L (1990) Annu Rev. Genet. 24, 133
Hep G2 cells as a resource for metabolic studies, lipoprotein, cholesterol, and bile acids
Jawitz N B (1990) FASEB J 4, 161
Genetic studies of human apolipoproteins, XV. An overview of IEF immunoblotting methods to screen apolipoprotein polymorphisms
Kambho M T & Ferrell R E (1990) Hum. Hered. 40, 193
LITHIUM

See: TRACE ELEMENTS

LIPOSOMES

See: LIPIDS
The genes of hepatic glucose metabolism [Minireview]  
Granner D & Pilkis S (1990) J. Biol. Chem. 265, 10173

Hepatocellular carcinogenesis: recent advances and speculations  
Harris C C (1990) Cancer Cells, 2, 146

Hepatitis B virus DNA in peripheral blood leukocytes: a brief review  
Harrison T J (1990) J. Med. Virol 31, 33

Nutritional modulation of xenobiotic metabolism  
Hart K W & others (1990) J. Nutr. Biochem. 1, 396

Nitrogen metabolism in liver: structural and functional organization and physiological relevance  
Häusinger D (1990) Biochem. J. 267, 281–290

Assay methods for cyclosporine monitoring following liver transplantation  
Haven M C, Sobeski L M, Earl R A & Markin R S (1990) J. Clin. Lab. Anal. 4, 150

Hep G2 cells as a resource for metabolic studies: lipoprotein, cholesterol, and bile acids  
Javitt N B (1990) FASEB J. 4, 161

Mitogens and hepatocyte growth control in vivo and in vitro  
Koch K S & others (1990) In Vitro Cell. Dev. Biol. 26, 1011

Regulation of the plasma membrane potential in hepatocytes — a model for metabolic and toxicological studies  
Kremers P, Negro L & Gielen J E (1990) Acta Histochem Suppl. 40, 383

Genetic variability of hepatitis-B virus and the serological expression of the viral infection  
Kremers D & others (1990) M/S Méd. Sci. 6, 108

The 1988 Bernard B. Brodie Award Lecture — Functional Diversity of Hepatic Cytochromes-P-450  
Levin W (1990) Drug Metab. Disposition, 18, 824

Liver regeneration: molecular mechanisms of growth control  
Michalopoulos G K (1990) FASEB J. 4, 176

Hepatitis-B — aspects of research [In Russian]  
Mikhailov M I (1990) Vopr. Virusol. 35, 268

Regulation of protein degradation in the liver [Minireview]  
Mortimore G E & Khurana K K (1990) Int. J. Biochem. 22, 1075

Regulation of the plasma membrane potential in hepatocytes — mechanism and physiological significance  
Moule S K & McGivan J D (1990) Biochim. Biophys. Acta. 1031, 383

Phosphorylation of cytochrome-P450 isoenzymes in intact hepatocytes and its importance for their function in metabolic processes  
Oeschbartlomowicz B & Oesch F (1990) Arch. Toxicol. 64, 257

The maintenance of cytochrome P-450 in rat hepatocyte culture: some applications of liver cell cultures to the study of drug metabolism, toxicity and the induction of the P-450 system  
Painc A J (1990) Chem-Biol. Int. 74, 1

Molecular mechanisms of liver-specific albumin and α-fetoprotein gene regulation: A review  
Papaconstantinou J, Rabek J P & Zhang D-z (1990) Dev Growth Differentiation. 32, 205

Fructose-2,6-bisphosphate in control of hepatic gluconeogenesis — from metabolites to molecular genetics  
Pilkis S J, Elmaghrabi M R & Claus T H (1990) Diabetes Care, 13, 582

Altered hepatic focc: their role in murine hepatocarcinogenesis  
Pittot H C (1990) Annu. Rev. Pharmacol. Toxicol. 30, 465–500

Liver in disorders of porphyrin metabolism  
Rank J M, Straka J G & Bloomer J R (1990) J. Gastroenterol. Hepatol 5, 573

Hepatic glycogen metabolism in the db/db mouse  
Roesler W J, Pugazhenthi S & Kandelwal R L (1990) Mol Cell Biochem. 92, 99

Recent advances in hepatitis-B viruses and hepatocellular carcinoma [Meeting review]  
Rogler C E (1990) Cancer Cells, 2, 366

Hepatitis-B virus related hepatocellular carcinoma — chronicity of infection — the opening to different pathways of malignant transformation  
Schroder C H Zentgraf H (1990) Biochim. Biophys. Acta, 1052, 137

Hepatic lipase [In French, English abstract]  
Simard G & Perre1 B (1990) Ann. Biol. Clin. Paris, 46, 61

Scavenger functions of the liver endothelial cell  
Smadja B, Pertoft H, Gustafson S & Laurent T C (1990) Biochem. J. 266, 313–327

2nd Conference on Research Directions for Human Relevance in Carcinogenesis — Mouse Liver Carcinogenesis: Mechanisms and Species Comparisons, University of Texas, M D Anderson Cancer Center, Science Park Research Division, Austin, TX. November 30–December 3, 1988

Stevenson D F & others, ed (1990) Progr Clin Biol Res. 311, 444 pp.

Immunocytochemical localization of the intracellular sites of sialylation in rat hepatocytes and colonic epithelial cells [Robert Feulgen Prize Laureates]  
Tasiegos D J (1990) Acta Histochem Suppl. 40, 9

Hepatitis delta virus: cis and trans functions required for replication [Minireview]  
Taylor J M (1990) Cell. 61, 371–373

Biochemical and molecular aspects of the hepatic uptake of organic anions  
Tatibelli C, Lunazzi G C & Sottocasa G L (1990) Biochim. Biophys. Acta, 1051, 261

Identification of hepatitis-C virus (HCV) does represent a major breakthrough for public health  
Trepo C (1990) M/S Méd. Sci. 6, 98

Rhythms in morphology and function of hepatocytes  
Uchiyama Y (1990) J Gastroenterol. Hepatol 5, 321

Lipoprotein assembly and secretion by hepatocytes  
Vance J E & Vance D E (1990) Annu. Rev. Nutr. 10, 337

Lindane-induced liver oxidative stress  
Videla L A, Barros S B M & Junqueira V B C (1990) Free Radical Biol. Med. 9, 169

Cell biology and kinetics of Kupffer cells in the liver  
Wake K & others (1989) Int. Rev. Cytol. 118, 173

Hepatic drug metabolism and ageing  
Woodhouse K W & James O F W (1990) Br. Med. Bull. 46, 22

Cellular intermediate filament networks and their derangement in alcoholic hepatitis  
Woerner H J (1990) Alcoholism Clin. Exp. Res. 14, 789

Serum alpha-fetoprotein and its lectin reactivity in liver diseases: a review  
Wu J T (1990) Ann. Clin. Lab. Sci. 20, 98

Enhancement of hepatic glycogen by gluconeogenic precursors: substrate flux or metabolic control? [Editorial review]  
Youn] J H & Bergman R N (1990) Am J. Physiol. 258, No 6, Pt 1, E899

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Volume 298. Supplement FEBS LETTERS April 1992
LUNGS

Intercellular communication in bronchial epithelial cells: review of evidence for a possible role in lung carcinogenesis
Albright C D, Jones R T, Grimley P M & Resau J H (1990) Toxicol. Path. 18, 324

Muscarinic receptors in airways: recent developments [Brief review]
Barnes P J (1990) J Appl. Physiol. 68, 1777

Reactive oxygen species and airway inflammation
Barnes P J (1990) Free Radical Biol. Med. 9, 235

Potassium channels and airway function — new therapeutic prospects
Black J L & Barnes P J (1990) Thorax, 45, 213

The production of alveolar macrophage-derived growth-regulating proteins in response to lung injury [Minireview]
Brandes M E & Finkelstein J N (1990) Toxicol. Lett. 54, 3

Interactions of xenobiotics in the respiratory tract following non-inhalation routes of exposure
Brittebo E B & Brandt I (1990) Int. J. Epidemiol. 19, Suppl. 1, S24

Regulation of lung surfactant secretion
Chander A & Fisher A B (1990) Am. J. Physiol. 258, No 6, Pt I, L241

Oxidative stress and abnormal cholesterol metabolism in patients with adult respiratory distress syndrome
Cross C E & others (1990) J. Lab. Clin. Med. 115, 396

Immunoglobulin secretion in the airways
Danicke R P (1990) Annu. Rev. Physiol. 52, 177

Isolation and culture of alveolar type II cells
Dobbs L G (1990) Am. J. Physiol. 258, No 4, Pt I, L134

Protective dietary factors and lung cancer
Fontham E T H (1990) Inc. 13, 123

The regulation of lung elastin synthesis
Foster J A & Curtiss S W (1990) Am. J. Physiol. 259, No 2, Pt I, L13

Airway epithelium derived inhibitory factor
Goldie R G, Fernandes J. B, Farmer S G & Hay D W P (1990) Trends Pharmacol. Sci. 11, 67

Regulation of fetal lung maturation
Gross I (1990) Am. J. Physiol. 259, No 6, Pt I, L337

The cystic fibrosis defect approached from different angles — new perspectives on the gene, the chloride channel, diagnosis and therapy
Halley D J J & others (1990) Eur. J. Pediatr. 149, 670

Pulmonary neoplastic and lymphoproliferative disease in AIDS — a review
Heitman E R (1990) Radiology. 177, 347

Fleischner Lecture. Radionuclides and the lung — past, present, and future
Hughes J M B (1990) Am. J. Roentgenol. 155, 455

Pulmonary toxicity of cytotoxic and immunosuppressive agents — a review
Léhne G & Lote K (1990) Acta Oncol. 29, 113

Regulation of Cl- and K+ channels in airway epithelium
McCann J D & Welsh M J (1990) Annu. Rev. Physiol. 52, 115

Neutrophil kinetics in the lungs [Editorial review]
MacNee W & Selby C (1990) Clin. Sci. 79, 97-107

Tachykinin receptors in the airways and lung: what should we block?
Maggi C A (1990) Pharmacol. Res. 22, 227

Regulation of pulmonary surfactant protein synthesis in fetal lung: a major role of glucocorticoids and cyclic AMP [Brief review]
Mendelson C R & Boggaram V (1990) Trends Endocrinol. Metab. 1, 20

Metal toxicity and the respiratory tract
Nemery B (1990) Eur. Resp. J. 3, 202

Absorption of peptides and proteins from the respiratory tract and the potential for development of locally administered vaccine
Obagan D T & Illum L (1990) Crit. Rev. Ther. Drug Carr. Syst. 7, 35

Adrenergic-prostaglandin interactions in the respiratory system
Omini C, Daffonchio L, Abbraccio M P, Hernandez A & Castellani F (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 83

Staub and Bovet Award 1989 Lecture. Some aspects of mast cell subtypes from human lung tissue
Oversfeld F J van (1990) Agents Actions. 30, 24

Cystic fibrosis: a disease in electrolyte transport
Quinton P M (1990) FASEB J. 4, 2709

Fibrocartilage, epithelium and airway reactivity [Minireview]
Raeburn D (1990) Gen. Pharmacol. 21, 11

muc genes and their deregulation in lung cancer
Sakela K (1990) J. Cell. Biochem. 42, 153

Strategies for analysis of gene expression — pulmonary surfactant proteins — invited review
Stripp B R, Whitsett J A & Lattier D L (1990) Am. J. Physiol. 259, No 4, Pt I, L185

The effect of respiratory disorders on clinical pharmacokinetic variables
Taburet A M, Tollier C & Richard C (1990) Clin. Pharmacokinet. 19, 462

Pharmacokinetics of antibiotics in the lungs
Valcke Y, Pauwels R & Van Der Straeten M (1990) Eur. Resp. J. 3, 715

From basic defect to symptoms in cystic fibrosis — Proceedings of a Symposium on the occasion of the 20th Anniversary of the Dutch Cystic Fibrosis Association, 21–22 April 1989
Van der Laag J & others (1989) Acta Paediat. Scand. Suppl. 363, 5

Receptors and second messengers — from the 4th Transatlantic Airway Conference — January 1989
Wanner A & others (1990) Am. Rev. Resp. Dis. 141, No. 3, Suppl. S97

Pulmonary Epithelial Growth and Repair — from the Fifth Transatlantic Airway Conference, January 1990
Wanner A & others (1990) Am. Rev. Resp. Dis. 142, No 6, Suppl., S1-S60

The cell biology and pathogenic role of pulmonary intravascular macrophages
Warner A E & Brain J D (1990) Am. J. Physiol. 258, No 2, Pt I, L1

Abnormal regulation of ion channels in cystic fibrosis epithelia
Welsh M J (1990) FASEB J. 4, 2718

Biology of small cell lung cancer: an overview
Weynants P, Homblet V, Canon J L & Symann M (1990) Eur. Resp. J. 3, 699

3rd International Symposium on Basic Research on Lung Surfactant, Marburg, F.R.G., September 12–14, 1988
Wichert P V & Muller B, eds (1990) Progr. Resp. Res. 25, 360pp

Vitamin A and lung cancer
Willett W C (1990) Nutr. Rev. 48, 201

121
Clearance and recycling of pulmonary surfactant
Wright J R (1990) Am. J. Physiol. 259, No 2, Pt 1, L1

LYMPHOCYTES

T lymphocyte activation: a biological model of signal transduction
Altman A, Mustelin T & Coggshall K (1990) Crit. Rev. Immunol. 10, 347

Leukocyte adhesion molecules deficiency: its strucrual basis,
pathophysiology and implications for modulating the inflammatory response
Arnout M A (1990) Immunol. Rev 114, 145

Genetic and mutational analysis of the T cell antigen receptor
Ashwell J D & KlausnerRD (1990) Annu. Rev Immunol. 8, 139

Herpesviruses, the Immune System, and AIDS
Aurelian L. ed. (1990) Dev Med. Virol. 6, 377 pp.

Regulation of magnitude of antibody response to bacterial
polysaccharide antigens by thymus-derived lymphocytes [Minireview]
Baker P J (1990) Infection Immun. 58, 3465

HIV-1 reverse transcriptase: structure predictions for the polymerase domain [Minireview]
Barber A M, Hizi A, Maelzel J v jr & Hughes S H (1990) AIDS Res. Hum. Retrovirus, 6, 1061

Immunodeficiency after bone marrow transplantation can be
associated with autoreactive T-cell receptor γδ-bearing lymphocytes
Bensussan A, David V, Vilmer E, Leca G & Boumsell L (1990)
Immunol. Rev. 116, 5

Protein kinase C and T cell activation
Berry N & Nishizuka Y (1990) Eur J Biochem. 189, 205–214

Calcium and lymphocyte-T activation [In French; English abstract]
Bismuth G, Trautmann A & Debre P (1990) Immunol. Rev. 117, 5

The 3-D structure of HIV-1 protease and the design of antiviral agents for the treatment of AIDS
Broek H. van (1990) Trends Biochem. Sci 15, 425

Developmental biology of T cells in T cell receptor transgenic mice
Boehmer H von (1990) Annu. Rev Immunol. 8, 531

The molecular biology of acute lymphoblastic leukemia
Botti A C & Verma R S (1990) Anticancer Res. 10, No.2B, 519

Haematologic abnormalities in the acquired immunodeficiency syndrome
Briizi M F, Poreu P, Porteri A & Pagonaro L (1990) Haematologica, 75, 454

The role of γδ T cells in the normal and disordered immune system
Bröker B & Emmrich F (1990) Klin. Wochenschr. 68, 489

Molecular and genetic approaches to the study of regulation of the function of suppressor T-cells specific for epitopes of the histocompatibility molecule
Broncz B D, Chernovskii A V & Zaitseva M B (1990) Mol. Biol. Engl. Tr. 24, No 2, Pt 1, 244

The neutrophil, a professional killer of bacteria, may be controlled by T-cells
Campbell P A (1990) Clin. Exp. Immunol. 79, 141

Membrane proteins involved in phagocyte adherence to endothelium
Carlos T M & Harlan J M (1990) Immunol. Rev. 114, 5

Targets and strategies for the antiviral chemotherapy of AIDS
Clerq E de (1990) Trends Pharmacol. Sci. 11, 198

The HIV-1 TAT protein — an RNA sequence-specific processivity factor [Minireview]
Cullen B R (1990) Cell, 63, 655–657

Functions of the auxiliary gene products of the human immunodeficiency virus type 1 [Minireview]
Cullen B R & Greene W C (1990) Virology, 178, 1

The trouble with T cells
Davies A J S, Wallis V J & Morrison W I (1990) Lancet. 335, 1574

Human immunodeficiency virus protease — a target for AIDS therapy [Current trends review]
Debouck C & Metcalf B W (1990) Drug Dev. Res. 21, 1

The simian immunodeficiency viruses
Demosthenes R C (1990) Ann. Rev Immunol. 8, 557

Dissection of an inflammatory process induced by CD8+ T-cells
Doherty P C, Allan J E, Lynch F & Ceredig R (1990) Immunol Today, 11, 55

Early events of the immune response mediated by leukocyte integrins
Dranfield I, Buckle A-M. & Hogg N (1990) Immunol. Rev. 114, 29

Two-way signalling through the LFA-1 lymphocyte adhesion receptor
Dustin M L (1990) BioEssays, 12, 421

Do carbohydrate antigens stimulate human T cells?
Emmrich F (1990) APMIS, 98, 1

Human leucocyte differentiation antigens. review of the CD nomenclature
Erber W N (1990) Pathology, 22, 61

Function of autoreactive T cells in immune responses
Finnegan A, Needleman B W & Hodes R J (1990) Immunol. Rev 116, 15

Chronic lymphocytic leukemia — new insights into biology and therapy
Foon K A, Rai K R & Gale R P (1990) Ann. Int. Med. 113, 525

Does the presence of self-reactive T cells indicate the breakdown of tolerance? [Short analytical review]
Gammon G & Sercarz E (1990) Clin. Immunol. Immunopath. 56, 287

Patch clamp studies of lymphocyte activation
Gardner P (1990) Annu Rev Immunol. 8, 231

Accessory cell signals involved in T-cell activation
Geppert T D, Davis L S, Gur H, Wacholtz M C & Lipsky P E (1990) Immuno. Rev. 117, 5

Symposium: AIDS, Other Immunodeficiency Disorders, and the Lymphatic System: Pathophysiology, Diagnosis, and Immunotherapy
Good R A & others (1990) Lymphology, 23, 55–98

Regulation of human T-cell leukemia virus expression
Green P L & Chen 1 S Y (1990) FEBS Lett. 247, 4, 169

Early biochemical events in lymphocyte-T activation by mitogens
Hadden J W & Coffey R G (1990) Immunopharmacol. Rev. 1, 273

Immunomodulation of T cell deficiency in humans by thymic humoral factor: from crude extract to synthetic thymic humoral factor—γ2
Hanzel Z T, Burstein Y, Buchner V, Pecht M & Traumin N (1990) J. Biol. Resp. Modif. 9, 269

A function for Ly-1+ B-cells [Minireview]
Hardin J A, Vos K, Kawano Y & Sherr D H (1990) Proc. Soc. Exp. Biol. Med. 195, 172

Generation and characterization of T-helper cells by primary n vitro sensitization using Langerhans cells
Hauser C & Katz S I (1990) Immunol. Rev. 117, 67

The autoimmune T cell receptor: epitopes, idiotopes and malatopes [Short analytical review]
Heber-Katz E (1990) Clin. Immunol. Immunopath. 55, 1

Malnutrition in patients with AIDS
Hecker L M & Kotler D P (1990) Nutr. Rev. 48, 393
Human lymphocyte-B and lymphocyte-T responses to vaccination with pneumococcal polysaccharides
Heilmann C (1990) *APMIS, 98, Suppl.13, 4-23*

Pulmonary neoplastic and lymphoproliferative disease in AIDS — a review
Heitman E R (1990) *Radiology, 177, 347*

Human immunodeficiency virus type 2 (HIV2)
Hughes A & Corrath T (1990) *Blood Rev, 4, 158*

The endothelial cell as a regulator of T-cell function
Hughes C C W, Savage C O S & Pober J S (1990) *Immunol. Rev. 117, 85*

Self superantigens [Minireview]
Janeway C A (1990) *Cell, 63, 659-661*

Role of the CD28 receptor in T-cell activation
June C H, Ledbetter J A, Linsley P S & Thompson C B (1990) *Immunol Today, 11, 211*

T lymphocyte immune dysfunctions in systemic lupus erythematosus
Kammer G M & Stein R L (1990) *J. Lab. Clin. Med. 115, 273*

Nutritional aspects of AIDS
Keesch G T & Farthing M J G (1990) *Annu. Rev. Nutr. 10, 475*

Macrophages in HIV infection. Symposium organized under the Franco-German Agreement for Cooperation in AIDS Research, Frankfurt, FRG, May 5-6, 1989
Kirn A & Stutte H J, eds (1990) *Res. Virol. 141, 129*

The T-cell antigen receptor insights into organelle biology
Klausen R D, Lippincott-Schwartz J & Bonifacino J S (1990) *Annu. Rev. Cell Biol. 6, 403*

Multiple phenotypic consequences of the Ig/Myc translocation in B-cell-derived tumors
Klein G (1989) *Gene Chromosome Cancer. 1, 3*

Lymphoid dendritic accessory cells of the rat
Klontesov A A & Makarov V V (1990) *Vopr. Virusol. 35, 97*

Circulating immune complexes in HIV-infected persons
Krapf F E, Herrmann M, Leitmann W, Schwartlander B & Kalden J R (1990) *Klin. Wochenschr. 68, 299*

HIV DNA integration: observations and inferences
Kulkosky J & Skalka A M (1990) *J. Acq. Immun. Defic. Syndrome, 3, 839*

Does HIV cause AIDS — an updated response to Duesberg’s theories [Minireview]
Kurt R (1990) *Intervirology, 31, 301*

Application of flow cytometry to the study of HIV infection [Editorial review]
Landay A, Ohlsson Wilhem B & Giorgi J V (1990) *AIDS, 4, 479*

Receptor-mediated antigen uptake and its effect on antigen presentation to class-II-restricted T lymphocytes
Lanzavecchia A (1990) *Annu. Rev. Immunol. 8, 773*

Molecular analysis of chromosome abnormalities occurring in human T-cell malignancies
Larsen C J (1990) *M/S Med. Sci. 6, 344*

Structure and function of leukocyte integrins
Larson R S & Springer T A (1990) *Immunol. Rev. 114, 181*

Novel vaccination and antireceptor strategies against HIV
Laurence J (1990) *AIDS Res. Hum. Retroviruses, 6, 175*

Evolution of class-I MHC genes and proteins: from natural selection to thymic selection
Lawlor D A, Zemmour J, Ennis P D & Parham P (1990) *Annu. Rev. Immunol. 8, 23*

Antimicrobial polypeptides of human neutrophils
Lehrer R I & Ganz T (1990) *Blood, 76, 2169*

Immunologic and pathologic manifestations of the infection of Rhesus monkeys with simian immunodeficiency virus of macaques
Lettvin N L & King N W (1990) *J. Acq. Immun. Defic. Syndrome, 3, 1023*

Changing concepts in HIV infection — challenges for the 1990s [Editorial review]
Levy J A (1990) *AIDS, 4, 1051*

Ion channels and signal transduction in lymphocytes
Lewis R S & Cahalan M D (1990) *Annu. Rev. Physiol. 52, 415*

In search of the missing self — MHC molecules and NK cell recognition
Ljungren H G & Karre K (1990) *Immunol. Today, 11, 237*

Neutrophil kinetics in the lungs [Editorial review]
MacNee W & Selby C (1990) *Clin. Sci. 79, 97-107*

Expanding the role of donor lymphoid cells in allogeneic marrow engraftment
Martin P J (1990) *Bone Marrow Transplant. 6, 283*

The molecular basis of T-cell specificity
Matis L A (1990) *Annu. Rev. Immunol. 8, 65*

Evolution of antibody and T-cell receptor V genes — the antibody repertoire might have evolved abruptly
Matsunaga T & Tormanen V (1990) *Dev. Comp. Immunol. 14, 1*

Speculations on mechanisms of HLA associations with autoimmune diseases and the specificity of autoreactive lymphocyte-T
Meltzer M S, Skillman D R, Gomatos P J, Kalter D C & Gendelman H E (1990) *Annu. Rev. Immunol. 8, 169*

Transgenic models of T-cell self tolerance and autoimmunity
Miller J F A P, Morahan G, Slatterly R & Allison J (1990) *Immunol. Rev. 118, 21*

Nuclear medicine and AIDS
Miller R F (1990) *Eur. J. Nucl. Med. 16, 103*

Speculations on mechanisms of HLA associations with autoimmune diseases and the specificity of autoreactive lymphocyte-T
Moller E, Bohme J, Valugardi M A, Ridderstad A & Olerup O (1990) *Immunol. Rev. 118, 5*
Mitogenic effect of interleukin-2 on unstimulated T cells: an editorial review

Mookerjee B K & Pauly J L (1990) J. Clin. Lab. Anal. 4, 138

T-cell clones that react against autologous human tumors

Mukherji B, Chakraborty N G & Sivanandham M (1990) Immunol Rev 116, 33

Immunity to mycobacteria — possible role of alpha–beta and gamma–delta lymphocytes—T

Munk M E & others (1990) APMSIS. 98, 669

Effect of human immunodeficiency virus (HIV) infection on the course of syphilis and on the response to treatment

Musher D M, Hamill R J & Baughn R E (1990) Ann. Int. Med. 113, 872

Reproductive immunology of human immunodeficiency virus (HIV-1) infection — review

Naz R K & Ellaurie M (1990) Am. J. Reprod Immunol 23, 107

Role of opportunistic viral infections in AIDS [Editorial review]

Nelson J A, Ghazal C A (1990) AIDS, 4, 1

Cognate interactions between helper T-cells and B-cells

Noelle R J & Snow E C (1990) Immunol. Today, 11, 361

Human immunodeficiency virus antibody responses determined by site-directed serology [Minireview]

Norrby E (1990) Intervirology, 31, 315

Philip Levine Award Lecture: Chromosome translocations and oncongenes in human lymphoid tumors

Nowell P C & Croce C M (1990) Nature, 346, 105

The role of tumor necrosis factor—alpha in acquired immunodeficiency syndrome

Odeh M (1990) J Intern. Med. 228, 549

Cell-mediated killing: effector mechanisms and mediators

Oiocius D M & Young J D–E (1990) Cancer Cells, 2, 138

Natural killer cells — history, relevance, and clinical applications

Oldham R K (1990) Nature Immunol Cell Growth Regul 9, 297

Lymphocytes and bronchial hyperresponsiveness [Minireview]

Oosterhout A J M van & Nijjamp F P (1990) J. Clin. Path. 43, 229

The role of tumor necrosis factor–alpha in acquired immunodeficiency syndrome

Patarca R & others (1990) J Immunol. Rev 116, 85

Leukocyte–cell adhesion: A molecular process fundamental in leukocyte physiology

Patarroyo M & others (1990) Immunol. Rev. 114, 67

Molecular interactions between HIV and the lymphocyte—T

Phillips R E (1990) Biochem. Biophys. Acta, 1096, 10

Regulation of B-cell tolerance and triggering by macrophages and lymphoid dendritic cells

Phipps R P, Roper R L & Stein S H (1990) Immunol. Rev 117, 135

Lymphocyte subsets and abnormalities in retrovirologically infected mice

Popp D M (1990) Crit Rev. Immunol. 10, 73

Possible immunoregulatory role for CD5—B cells [Short analytical review]

Raveche E S (1990) Clin. Immunol. Immunopath. 56, 135

The generation and use of human T-cell clones

Rees A D M (1990) Mol Cell Proteol, 4, 419

MHC restricted and non-restricted killer lymphocytes

Rees R C (1990) Blood Rev. 4, 204

The body against itself

Rennie J (1990) Sci. Am. 263, No 6, 76 85

Biology and clinical relevance of human natural killer cells

Robertson M I & Ritz I (1990) Blood, 75, 7471

CD4: Collaborator in immune recognition and HIV infection [Minireview]

Robey E & Axel R (1990) Cell, 60, 697–700

Non-adaptive cellular immune responses as studied in euthymic and athymic nude rats. Spontaneous rejection of allogenic lymphoid cell grafts by natural killer (NK) cells

Rolstad B & Fossom S (1990) Anat. Embryol. 181, 215–226

Tat and rev—positive regulators of HIV gene expression [Editorial review]

Rosen C A & Pavlakis G N (1990) AIDS, 4, 499

Regulation of renal transport processes and hemodynamics by macrophages and lymphocytes [Editorial review]

Schreiber G F & Kohan D E (1990) Am. J. Physiol. 258, No 4, Pr 2, F761

Limiting dilution analysis of human T-cells — a useful clinical tool

Sharrock C E M, Kaminski E & Man S (1990) Immunol. Today, 11, 281

Roles of adhesion molecules in T-cell recognition: Fundamental similarities between four integrins on resting human T cells (LFA-1, VLA-4, VLA-5, VLA-6) in expression, binding and costimulation

Shimizu Y, Senter G A Van, Horgan K J & Shaw S (1990) Immunol. Rev, 114, 109

Mechanisms of autoimmunity in the context of T-cell tolerance — insights from natural and transgenic animal model systems

Siegel R M & others (1990) Immunol. Rev, 118, 165

Alloreactive T-cells

Simonsen M (1990) Scand. J Immunol. 32, 565

Interactions between epithelial cells and T lymphocytes: role of adhesion molecules

Singer K H (1990) J Leukocyte Biol 48, 367

T-Cell receptor-VB repertoire expression in murine models of SLE

Singer P A & Theofilopoulos A N (1990) Immunol. Rev, 118, 103

the pathobiology of HIV infection — a review

Smith R D (1990) Arch. Path. Lab. Med. 114, 235

Antigen-presenting cells for CD8+ T-cells

Sprent J & Schaefer M (1990) Immunol Rev, 117, 213

The sensation and regulation of interactions with the extracellular environment — the cell biology of lymphocyte adhesion receptors

Springer T A (1990) Annu. Rev. Cell Biol 6, 359

Functional dichotomy between Langerhans cells that present antigen to naive and to memory effector lymphocytes—T

Streibl J W, Grammer S F, YoshiKawa T, Demudem A & Vermeers M (1990) Immunol. Rev, 117, 159

Mechanisms of immune injury in rheumatoid arthritis — evidence for the involvement of T-cells and heat-shock proteins

Strober S & Holoshitz J (1990) Immunol. Rev, 118, 233

Immunoregulatory function of human autoreactive T-cell lines and clones

Strober W & James S P (1990) Immunol Rev, 116, 117

Autoreactive HLA-DR-specific autoreactive T cell clones: possible regulatory function for B lymphocytes and hematopoietic precursors

Tilkin A-F, Vinci G, Michon J & Levy J-P (1990) Immunol. Rev, 116, 171

Lymphocytes: window to the future

Torre A N de la & Antonacci A C (1990) Arch. Surg. 125, 665

Lipoprotein interactions with T-cells — an update

Traill K N, Huber L A, Wick G & Jurgens G (1990) Immunol. Today, 11, 411
Use of monoclonal antibodies specific for distinct variable or constant regions of the y8 T cell receptor in normal and pathological conditions
Triebel F (1990) Disease Markers, 8, 47

Perforin-mediated target cell lysis by cytolytic T lymphocytes
Tschopp J & Nabholtz M (1990) Annu. Rev Immunol, 8, 279

Regulation of human B-cell ontogeny
Uckun F M (1990) Blood, 76, 1908

Transmission of signals from T lymphocyte antigen receptor to the genes responsible for cell proliferation and immune function
Ullman K, Northrop J P, Verweij C L & Crabtree G R (1990) Annu. Rev. Immunol 8, 421

Cytotoxic T lymphocytes against HIV [Editorial review]
Walker B D & Plata F (1990) AIDS, 4, 177

Mechanisms of neutrophil-mediated killing of endothelial cells
Ward P A & Varani J (1990) J Leukocyte Biol. 48, 97

Leucocyte adhesion to endothelium - Review
Wardlaw A (1990) Clin. Exp. Allergy, 20, 619

Extrarenal receptor-effector mechanisms for aldosterone — the sequence of effects on the cellular electrolyte transport in human lymphocytes and their implications for disorders of the water and electrolyte balances [Mini-review]
Wehling M & Theisen K (1990) Acta Endocrinol 123, 385

Transforming properties of the HTLV-I tax gene
Weiss R A & Schulz T F (1990) Cancer Cells, 2, 281

Studies on leucocyte β-adrenergic receptors in depression: a critical appraisal [Mini-review]
Westeriuk E S, Steiner M & Burns T (1990) Life Sci 47, 85

Lymphocyte subsets in the blood — a diagnostic window on the lymphoid system
Westermann J & Pabst R (1990) Immunol. Today, 11, 406

The binary logic of antigen processing and presentation to T cells [Mini-review]
Yewdell J W & Bennink J R (1990) Cell 62, 203-206

How lymphocytes kill
Young L H Y, Liu C-C, Joag S, Rafii S & Young J D-E (1990) Annu. Rev Med. 41, 45

Gangliosides of lymphocytes-T — evidence for a role in T-cell activation
Yiwen H, Schreiber D A & Haughton A N (1990) Tissue Antigens, 36, 47

The T lymphocyte in experimental allergic encephalomyelitis
Zamvil S S & Steinman L (1990) Annu. Rev. Immunol. 8, 579

Imprint of thymic selection on autoreactive repertoires
Zauerfer M & Natarajan K (1990) Immunol Rev 116, 159

Production of pteridines during hematopoiesis and T-lymphocyte proliferation: potential participation in the control of cytokine signal transmission
Ziegler I (1990) Mol. Res. Rev. 10, 95

LYMPHOKINES
See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

LYSOSOMES
Peptide sequences that target cytosolic proteins for lysosomal proteolysis
Dice J F (1990) Trends Biochem. Sci. 15, 305

Targeting of cytosolic proteins to lysosomes for degradation
Dice J F & Terlecky S R (1990) Crit. Rev. Ther. Drug Carr. Syst. 7, 211

Lysosomal enzyme targeting [Sixth Jubilee Lecture]
Kornfeld S (1990) Biochem. Soc. Trans. 18, 367

Lysosomal cytochemistry in marine environmental monitoring [Editorial review]
Moore M (1990) Histochem. J. 22, 187

Tubular lysosomes in exocrine acinar cells: a review
Olver C (1990) Acta Histochem. Cytochem. 23, 31

MACROMOLECULES
See also: NUCLEIC ACIDS AND POLYNUCLEOTIDES POLYSACCHARIDES PROTEINS

Zinc fingers and other metal-binding domains. Elements for interactions between macromolecules [Mini-review]
Berg J M (1990) J. Biol. Chem. 265, 6513

Pulsed-field electrophoresis in the investigation of biological macromolecules
Chebotarev V Y & Rekesh A N (1989) Mol. Biol. Engl. Tr. 24, 488

Static secondary ion mass spectrometry of polymeric biomaterials
Davies M C & Lynn R A P (1990) Crit. Rev. Biocompatibility, 5, 297

The conversion of polysaccharides into polyurethanes — a review
Donnelly M J, Stanford J L & Still R H (1990) Carbohydrate Polymers, 14, 221

Thermodynamics and the structure of biological macromolecules — Rechinkes mit mendeln
Eisenberg H (1990) Eur. J. Biochem. 187, 7-22

Heteronuclear three-dimensional NMR spectroscopy of isotopically labelled biological macromolecules
Fesik S W & Zuiderweg E R P (1990) Q. Rev Biophys. 23, 97

Classification of macromolecular assemblies studied as single particles,
Frank J (1990) Q. Rev Biophys 23, 281

Crystallography of biological macromolecules at ultra-low temperature
Hope H (1990) Annu. Rev Biophys. Biophys. Chem. 19, 107

Metabolic growth rate control in Escherichia coli may be a consequence of subsaturation of the macromolecular biosynthetic apparatus with substrates and catalytic components
Jensen K F & Pedersen S (1990) Microbial Rev. 54, 89-100

Molecular dynamics simulations in biology
Karplus M & Petsko G A (1990) Nature, 347, 631

The application of polystyrene-divinylbenzene-copolymers for the preparation of biological samples in drug control [In German: English abstract]
Maass S, Wolff M & Kny L (1990) Pharmazie, 45, 549

Current approaches to macromolecular crystallization
McPherson A (1990) Eur. J Biochem. 189, 1

Qualitative characterization of reversible molecular associations via analytical centrifugation
Minton A P (1990) Anal. Biochem. 190, 1

Heteronuclear filters in two-dimensional [H,H]-NMR spectroscopy: combined use with isotope labelling for studies of macromolecular conformation and intermolecular interactions
Otting G & Wüthrich K (1990) Q. Rev. Biophys. 23, 39
Special issue — Polymers as Biomaterials
Peppas N A & others (1990) Biomaterials, 11, 611–738
Molecular recognition and biophysical organic chemistry
Rebek J (1990) Acc. Chem. Res. 23, 399
Is glomerulosclerosis a consequence of altered glomerular permeability to macromolecules? [Editorial review]
Remuzzi G & Bertani T (1990) Kidney Int. 38, 384
Electrostatic interactions in macromolecules — theory and applications
Sharp K A & Honig B (1990) Annu Rev Biophys Biophys Chem 19, 301
The myelin membrane of the central nervous system — essential macromolecular structure and function
Stoffel W (1990) Angew. Chem. 29, 958

MEDIATORS
See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS
See also: CALCIUM

MEMBRANES
See also: CELLS, CELL ADHESION AND CELL WALLS
Specific interactions of proteins with functional lipid monolayers — ways of stimulating biomembrane processes
Athers M, Muller W, Reichert A, Ringsdorf H & Venzmer I (1990) Angew. Chem. 29, 1269
Energy coupling in bacterial periplasmic permeases [Mini review]
Ames G F-L & Joshi A K (1990) J. Biol. Chem. 265, 1433–1437
Methods for expressing the characteristics of transmembrane ion transport systems [Editorial review]
Aronson J K (1990) Clin. Sci. 78, 247–254
Properties and functions of ATP-sensitive K-channels [Mini review]
Ashcroft S J H & Ashcroft F M (1990) Cell Signal. 2, 197
Water transport through membranes — a review of NMR studies of model and biological systems
Baric G, Serje R & Ratkovic S (1990) Stud Biophys 118, 95
The pellicle and the membrane of the flagellum, flagellar adhesion zone, and flagellar pocket: functionally discrete surface domains of the bloodstream form of African trypanosomes
Bader A E (1990) Crit. Rev. Immunol. 10, 177
Molecular mechanisms of sugar transport across mammalian and microbial cell membranes
Baldwin S A (1990) Biotechnol. Appl. Biochem. 12, 512
Peptide transport systems for opiates across the blood–brain barrier [Editorial review]
Banks W A & Kastin A J (1990) Am. J. Physiol. 259, No 1, Pt 1, E1
Effects of free radicals on the electrophysiological function of cardiac membranes
Barrington P L (1990) Free Radical Biol. Med. 9, 353
Spectrin-based membrane skeleton — a multipotential adaptor between plasma membrane and cytoplasm
Bennett V (1990) Physiol Rev 70, 1029
Connexin family of gap junction proteins [Topical review]
Beyer E C, Paul D L & Goodenough D A (1990) J. Membr. Biol. 116, 187
Structure and function of haemolysin B, P-glycoprotein and other members of a novel family of membrane translocators
Blight M A & Hollman J B (1990) Mol. Microbiol. 4, 873
The role of charged amino acids in the localization of secreted and membrane proteins [Mini review]
Boyd D & Beckwith J (1990) Cell, 62, 1031–1033
1990 Supelco Award Address: Role of cholesterol in the microsomal membrane
Brenner R R (1990) Lipids, 25, 581
The plasma membrane H+-ATPase of higher plant cells: biochemistry and transport function
Briskin D P (1990) Biochim. Biophys. Acta. 1019, 95
Cw-7 a-translocating ATPase of the plant plasma membrane
Briskin D P (1990) Plant Physiol. 94, 397
β-Lactamase as a probe of membrane protein assembly and protein export [Mini review]
Broome-Smith J K, Tadayon M & Zhang Y (1990) Mol. Microbiol. 4, 1037
Membrane proteins involved in phagocyte adherence to endothelium
Carlos T M & Harlan J M (1990) ImmunoL Rev. 114, 5
Membrane electrostatics
Cech G (1990) Biochim. Biophys. Acta, 1031, 311
Chemistry and biology of N-[7-nitrobenz-2-oxa-1,3-diazol-4-yl]-labeled lipids: fluorescent probes of biological and model membranes
Chattopadhyay A (1990) Chem. Phys. Lipids. 53, 1
Human mononuclear cell membrane antigens [Mini review]
Civin C I (1990) Exp. Hematol. 18, 461
Colloquium on Cellular and Molecular Biology of Normal and Abnormal Erythroid Membranes, Taos, NM, February 3–10, 1989
Cohen C M & Palek J, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 118, 339 pp.
Special issue: 22nd Lunteren Lectures on Molecular Genetics: The Stress Response in Microorganisms. A review of the role of 70kDa heat shock proteins in protein translocation across membranes
Craig E, Kang P J & Boorstein W (1990) Anton. Leeuwenhoek Int. J Gen Mol. Microbiol. 28, 157
Glycolipid anchoring of plasma membrane proteins
Cross G A M (1990) Annu. Rev. Cell Biol. 6, 1
Multi-author review: Assembly of lipids into membranes
Daum G & others (1990) Exp. Cell Res. 191, 551
Membrane and cellular properties in oscillating networks: implications for respiration [Brief review]
Dekin M S & Haddad G G (1990) J. Appl. Physiol. 69, 809
The actions of melittin on membranes
Dempsey C E (1990) Biochim. Biophys. Acta. 1031, 143
Control of the transmembrane phospholipid distribution in euakaryotic cells by aminophospholipid translocase
Devaux P F & others (1990) Biotechnol. Appl. Biochem. 12, 517
Multi-author review: Pore-forming proteins of biological membranes
Diwanch M & others (1990) Experientia. 46, 131
Biosynthesis of glycosyl pHosphatidylinositol membrane anchors [Mini review]
Doering T L, Masterson W J, Hart G W & England P T (1990) J. Biol. Chem. 265, 611
Cell membrane abnormalities and the regulation of intracellular calcium concentration in hypertension [Editorial review]
Dominiczak A F & Bohr D F (1990) Clin. Sci. 79, 415
Transmembrane signaling via phosphatidylinositol 4,5-bisphosphate hydrolysis in plants
Einspahr K J & Thompson G A (1990) Plant Physiol. 93, 361
Neisseria meningitidis outer membrane proteins — prospects of their use in the development of preparations for immunoprophylaxis [In Russian; English abstract]

Filatova T N (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR. No. 2, 86

Biomembrane, Pt U. Cellular and subcellular transport: eukaryotic (nonepithelial) cells

Fleischer S S Fleischer B, eds (1989) Methods Enzymol. 174, 725 pp.

On the translocation of proteins across the chloroplast envelope [Minireview]

Fluge U I (1990) J. Bioenerget. Biomembr. 22, 769

Chloride channels of biological membranes

Fluckei E & Petti A (1990) Biophys. Biophys. Acta, 1031, 247

Predictions of diffusion models for one-ion membrane channels

Gaates P, Cooper K, Rae J & Eisenberg R (1990) Progr Biophys Mol Biol. 53, 153

Special issue: Signals and Signal Processing. 6. Receptor Expression and Release — Regulatory Role of Membrane Bound and Soluble Receptors

Gerelny J & others (1990) Mol. Immunol. 27, 1161–1355

Membrane topology, structure, and functions of the penicillin-interactive proteins

Ghuyen J M (1990) Biochem. Appl. Biochem. 12, 468

Alterations caused by the intraerythrocytic malaria parasite in the permeability of its host cell membrane [Minireview]

Ginsberg H (1990) Comp. Biochem. Physiol. Pt A. 95, 31

Prenyl proteins in eukaryotic cells: a new type of membrane anchor

Ghomst S A, Gelb M H & Farnsworth C C (1990) Trends Biochem. Sci. 15, 139

Membrane-associated cytoskeleton and transbilayer phospholipid asymmetry [Minireview]

Gupta C M (1990) Ind J. Biochem. Biophys. 27, 365

Outer membrane proteins of Pseudomonas [Microreview]

Hancock R E W, Siehnel R & Martin N (1990) Mol. Microbiol. 4, 1069

Mechanisms of membrane protein turnover

Hare J F (1990) Biochim. Biophys. Acta, 1031, 71

Membranes and bioreactors [Minireview]

Heath C & Belfort G (1990) Int. J. Biochem. 22, 823

The signal peptide [Topical review]

Hejne G von (1990) J Membr. Biol. 115, 195

The LDL receptor locus in familial hypercholesterolemia — mutational analysis of a membrane protein

Hobbs H II, Russell D W, Brown M S & Goldstein J L (1990) Annu. Rev. Genet. 24, 133

Membrane fusion of enveloped viruses: especially a matter of proteins [Minireview]

Hockstra D (1990) J. Bioenerget. Biomembr. 22, 121

Heinrich Wieland Prize Lecture. Mixed-chain phospholipids and interdigitated bilayer systems

Huang C (1990) Kin. Wochenschr. 68, 149

Evasive strategies of trophoblast cells: selective expression of membrane antigens

Hunt J S & Hsi B L (1990) Am. J. Reprod. Immunol. 23, 57

Rough thylakoids — translation on photosynthetic membranes

Jagendorf A T & Michaels A (1990) Plant Sci. 71, 137

Biophysics of the structure and function of porins

Jap B K & Walian P J (1990) Q. Rev. Biophys. 23, 367

Purple membrane — surface charge density and the multiple effect of pH and cations

Jonas R, Koutalos Y & Ebrey T G (1990) Photochim. Photobiol. 52, 1163

Vitamin-B12 transport in Escherichia coli — energy coupling between membranes [Microreview]

Kadner R J (1990) Mol. Microbiol. 4, 207

Transmembrane 36Cl- flux measurements and desensitization of the y-aminobutyric acidA receptor [Short review]

Kardos J & Cash D J (1990) J. Neurochem. 55, 1995

Microtubules, membrane traffic, and cell organization [Minireview]

Kelly R B (1990) Cell. 61, 5–7

The pathogenesis of membranous glomerulonephritis: from morphology to molecules

Kerjaschki D (1990) Virchows Arch. 58, 253

Platelet membrane glycoproteins — functions in cellular interactions

Kieffer N & Phillips D R (1990) Annu. Rev. Cell Biol. 6, 329

Membrane potentials and the mechanism of intestinal Na+-dependent sugar transport

Kimich G A (1990) J. Membr. Biol. 114, 1

Calcium channels in cellular membranes

Kostyuk P G (1990) J. Mol. Neurosci. 2, 123

Modulation of calcium channel function in nerve cell membrane [Minireview]

Kostyuk P G & Doroshenko P A (1990) Gen. Physiol Biophys. 9, 433

Cell growth and abrupt doubling of membrane proteins in Escherichia coli during the division cycle

Kubitschek H E (1990) J. Gen Microbiol. 136, 599

Insertion and translocation of proteins into and through membranes [Minireview]

Lazdunski C J & Benedett (H) (1990) FEBS Lett. 268, 408-414

International Meeting on Biomembranes and Nutrition: Nutrients Affecting Lipid Composition and Properties of Cell Membranes, Paris, France, June 12–14, 1989

Leger C L & Bereziat G, eds. (1989) Lipid Membrane Interaction — Affecting Lipid Composition and Properties of Cell Membranes. Paris, France, June 12–14, 1989

Malewicz B. Kumar V V, Johnson R G & Baumann W J (1990) Biochim. Biophys. Acta, 1031, 291

Glycophospholipid membrane anchoring provides clues to the mechanism of protein sorting in polarized epithelial cells

Lisanti M P & Rodriguez-Boulan E (1990) Trends Biochem. Sci. 15, 113

Emerging functional roles for the glycosyl-phosphatidylinositol membrane protein anchor [Topical review]

Lisanti M P, Rodriguez-Boulan E & Saltiel A R (1990) J. Membr. Biol. 117, 1

The homoviscous theory of adaptation applied to excitable membranes — a critical evaluation

Macdonald A G (1990) Biochim. Biophys. Acta, 1031, 291

Lipids in gap junction assembly and function

Malewicz B, Kumar V V, Johnson R G & Baumann W J (1990) Lipids, 25, 419

Lipid-protein interactions in membranes [Minireview]

Marsh D (1990) FEBS Lett. 268, 371–375

Transforming growth factor-alpha — a model for membrane-anchored growth factors [Minireview]

Massague J (1990) J. Biol. Chem. 265, 21393

Type-IV collagen, major component of basement membranes — current knowledge [In French; English abstract]

Mercier P & Ekjindjian O G (1990) Ann. Biol. Clin. Paris, 48, 695
Regulation of the plasma membrane potential in hepatocytes — mechanism and physiological significance

Moule S K & McGivan J D (1990) Biochim. Biophys. Acta. 1031, 383

Dietary fatty acids and membrane protein function

Murphy M G (1990) J. Natl. Biochem. 1, 68

Calcium channels, potassium channels, and voltage dependence of arterial smooth muscle tone [Brief review]

Nelson M T, Patlak J B, Worley J F & Standen N B (1990) Am. J. Physiol. 259, No. 1, Pt. 1, C3

How do polypeptides cross the mitochondrial membranes [Minireview]

Neupert W, Harty F U, Craig E A & Pfanner N (1990) Cell. 65, 447

3rd International Meeting on Membrane Biotechnology, Texas A&M University, College Station, TX, September 17-20, 1989

Nicolau C & Chapman D, eds (1990) Progr. Clin. Biol. Res. 343, 312 pp.

Studies on the transmembrane signalling mechanism of the brain using Xenopus oocytes

Nomura Y (1990) Yakugaku Zasshi, 110, 304

Vinculin

Otto J J (1990) Cell Motil. Cytoskel. 16, 1–6

The role of the blood–brain barrier in movement disorders

Paillelogos N A & Groothuis D R (1990) Clin. Neuropharmacol. 13, 129

Molecular mechanisms of calcium-induced membrane fusion [Minireview]

Papahadjopoulos D, Nir S & Dutzgunes N (1990) J. Bioenerget. Biomembr. 22, 157

Transmembrane communication and disease [Minireview]

Pasternak C A (1990) Int. J. Biochem. Biophys. 27, 363

Clathrin, adaptors, and sorting

Pearse B M F & Robinson M S (1990) Annu. Rev. Cell Biol. 6, 151

Microangiopathy, the vascular basement membrane and Alzheimer’s disease

Perlmuter L S & Chui H C (1990) Brain Res. Bull. 24, 677

Lipoxynenbiosynthesis of arachidonic acid in neuronal transmembrane signalling

Piomelli D & Greengard P (1990) Trends Pharmacol. Sci. 11, 367

Regulation of membrane fusion during exocytosis

Plattner H (1989) Int. Rev. Cytol. 119, 197

Synexin (Annexin VII); a cytosolic calcium–binding protein which promotes membrane fusion and forms calcium channels in artificial bilayer and natural membranes [Topical review]

Pollard H B, Burns A L & Rojas E (1990) J. Membr. Biol. 117, 101

The plasma membrane and thyroid hormone entry into cells [Brief review]

Pontecorvi A & Robbins J (1989) Trends Endocrinol. Metab. 1, 90

On the microassembly of integral membrane proteins

Popot J L & Devitry C (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 369

Role of phosphoinositides in transmembrane signaling

Rana R S & Hokin L E (1990) Physiol. Rev. 70, 115

Protein transport across the ER membrane

Kapoor G T A (1990) Trends Biochem. Sci. 15, 355

13th International Conference on Biological Membranes — Control of Membrane Function, Short-term and Long-term, Cernier Secr. Switzerland, June 19–22, 1989

Richie J M, Magistretti P J & Bolis L, eds (1990) Progr. Cell Res. 1, 315 pp.

Resonance Raman studies of bacterial reaction centers [Review]

Robert B (1990) Biochim. Biophys. Acta. 1017, 99

Kinetic modeling of plant and fungal membrane transport systems

Sanders D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 77–107

The membrane skeleton of erythrocytes: models of its effect on lateral diffusion [Minireview]

Sastry M J (1990) Int. J. Biochem. 22, 801

Desmosomes and hemidesmosomes — constitutive molecular components

Schwarz M A, Owarike K, Kartenbeck J & Franke W W (1990) Annu. Rev. Cell Biol. 6, 461

Use of Xenopus oocytes for the functional expression of plasma membrane proteins [Topical review]

Siegel E (1990) J. Membr. Biol. 117, 201

The structure and insertion of integral proteins in membranes

Singer S J (1990) Annu. Rev. Cell Biol. 6, 247

Fourth Datta Lecture: The energy coupled exchange of Na+ for K+ across the cell membrane — the Na+,K+-pump

Skou J C (1990) FEBS Lett. 268, 314–324

Power transmission along biological membranes [Topical review]

Skulachev V P (1990) J. Membr. Biol. 114, 97

Potential-sensitive molecular probes in membranes of bioenergetic relevance

Smith J C (1990) Biochim. Biophys. Acta. 1016, 1

Relationship between the regulation of membrane enzyme activities by gangliosides and a possible ganglioside segregation in membrane microdomains [Minireview]

Sonnino S & others (1990) Int, J. Biochem. Biophys. 27, 353

Sensitivity to endotoxin is induced by increased membrane fatty-acid unsaturation and oxidant stress

Stark J M & Jackson S K (1990) J. Med. Microbiol. 32, 217

The myelin membrane of the central nervous system — essential macromolecular structure and function

Stoffel W (1990) Angew. Chem. 29, 958

A membrane anti-oncoprotein implied in colorectal cancer [Minireview]

Thomas G (1990) M/S Méd. Sc 6, 292

Self assembling bilayer lipid membranes on solid support

Tien H T & Salamon Z (1990) Biotechnol. Appl. Biochem. 12, 478

Ionization of phospholipids and phospholipid-supported interfacial lateral diffusion of protons in membrane model systems

Toccani J-F & Tessoé J (1990) Biochim. Biophys. Acta. 1031, 111

From cell membrane to nucleotides: the phosphate regulon in Escherichia coli

Torriani J-A (1990) BioEssays. 12, 371

How to kill cancer cells: membranes and cell signaling as targets in cancer chemotherapy

Tritton T R & Hickman J A (1990) Cancer Cells. 2, 95

Electrochemical modulation of membrane proteins — enforced conformational oscillations and biological energy and signal transductions

Tsung T Y (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 83

Lipid polymorphism of the model and biological membranes [In Russian; English abstract]

Vasilenko I A & Borovoygin V L (1990) Biol. Membran. 7, 677

Goblet cell secretion and mucogenesis

Verdugo P (1990) Annu. Rev. Physiol. 52, 157
International Symposium on Membrane Technology, Rome, Italy, June 19–24, 1989.
Verna R, ed. (1989) Serono Sympl. Pubb. 64, 155 pp.
Reconstitution of ion-motive transport ATPases in artificial lipid membranes
Villalegros A (1990) Biochim. Biophys. Acta, 1017, 1
Membrane proteins — from sequence to structure
Vonheijne G & Manoil C (1990) Protein Eng. 4, 109
Viral and cellular membrane fusion proteins
White J M (1990) Annu. Rev. Physiol. 52, 675
Excitatory amino acid receptors in the brain — membrane binding and receptor autoradiographic approaches — EAA pharmacology
Young A B & Fagg G E (1990) Trends Pharmacol. Sci. 11, 126
Molecular architecture of basement membranes
Yurchenco P D & Schitthen J C (1990) FASEB J 4, 1577
Evaluation of the annexins as potential mediators of membrane fusion in exocytosis [Minireview]
Zaks W J & Creutz C E (1990) J. Bioenerget. Biomembr. 22, 97
Mini-review series: Protein transport in membranes of eukaryotes
Zimmermann R & others (1990) J. Bioenerget. Biomembr. 22, 711–789

MEMORY

Specificity of molecular changes in neurons involved in memory storage
Alkon D L & Nelson T J (1990) FASEB J. 4, 1567
Immunological memory
Colle J-H, Le Moal M A & Truffa-Bachi P (1990) Crit Rev Immunol 10, 259
Face agnosia and the neural substrates of memory
Damasio A R, Tranel D & Thompson H (1988) Annu. Rev Neurosci. 11, 89
Benzodiazepines and human memory: a review
Ghosein M M & Mewaldt S P (1990) Anesthesiology, 72, 926
Influences of cholosterylkinin and analogues on memory processes
Itoh S & Lai H (1990) Drug Dev. Res. 21, 257
Endogenous benzodiazepine modulation of memory processes
Izquierdo I, Cunha C & Medina J H (1990) Neurosci. Biobehav. Rev. 14, 419
International Symposium on Fundamentals of Memory Formation: Neuronal Plasticity and Brain Function, Mainz, FRG, October 27–29, 1988
Rahmann H, ed. (1989) Fortschr. Zool. 37, 431 pp.
An ethological model for the study of activation and interaction of pain, memory and defensive systems in the attacked mouse — role of endogenous opioids
Siegfried B, Frischknecht H R & Desouza R L N (1990) Neurosci. Biobehav. Rev. 14, 481
Memory traces in spinal cord
Wolpaw J R & Carpi J S (1990) Trends Neurosci. 13, 137

METABOLISM AND METABOLIC CONTROL

See also: GENETIC AND METABOLIC DISEASES

HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

Growth regulation of the vascular system: evidence for a metabolic hypothesis [Editorial review]
Adair T H, Guy W J & Montani J-P (1990) Am. J. Physiol. 259, No 3, Pt 2, R393
Positive control [Minireview]
Adhya S & Garges S (1990) J. Biol. Chem. 265, 10797–10800
Respiratory efficiency and metabolite partitioning as regulatory phenomena in yeasts
Alexander M A & Jeffries T W (1990) Enzyme Microb. Technol. 12, 450
Occurrence, metabolism, metabolic role, and industrial uses of bacterial polyhydroxyalkanoates
Anderson A J & Dawes E A (1990) Microbiol. Rev. 54, 450
Bryozoan secondary metabolites: a chemotaxonomical challenge [Mini-review]
Anthoni U, Nielsen P H, Pereira M & Christophersen C (1990) Comp. Biochem. Physiol. Pt B, 96, 431
The use of cultured epithelial and endothelial cells for drug transport and metabolism studies
Audus K L, Bartel R L, Hidalgo I J & Borchardt R T (1990) Pharmacol. Res. 7, 435
Biological antifreezes and the mechanism of their activity
Avanov A Y (1990) Mol. Biol. Engl. Tr, 24, 473
Pathobiology of chemical hepatocarcinogenesis. Part II. Metabolic and molecular changes
Bennnasch P (1990) J. Gastroenterol. Hepatol. 5, 310
Abnormalities of the erythrocyte membrane in chronic myelogenous leukemia
Basu J, Kundu M, Rakshit M M & Chakrabarti P (1990) Biochemical. Appl. Biochem. 12, 501
Regulation of carbohydrate metabolism by glucose 1,6-bisphosphate in extrahepatic tissues; comparison with fructose 2,6-bisphosphate [Mini-review]
Beitner R (1990) Int. J. Biochem. 22, 553
The Shikimate pathway — a metabolic tree with many branches
Bentley R (1990) Crit. Rev. Biochem Mol. Biol. 25, 307–384
The regulation and cellular functions of phosphatidylcholine hydrolysis
Bittiger M & Antkiewicz J C (1990) Biochem. J. 260, 281–289
Metabolism of carotenoid pigments in birds
Brush A H (1990) FASEB J. 4, 2969
Cerebral blood flow and energy metabolism during stress
Bryan R M (1990) Am. J. Physiol. 259, No 2, Pt 2, H269
Unusual aspects of calcium metabolism in aquatic animals
Cameron J N (1990) Annu. Rev. Physiol. 52, 77
Do hormonal factors mediate cancer chemotherapy-induced emesis?
Carr P L, Cubeddu L X, Lindley C, Myers R D & Rezvani A H (1989) Drug Metab. Rev. 21, 319
Short chain diol metabolism in human disease states
Casazza J P, Song B J & Veech R L (1990) Trends Biochem. Sci 15, 26

METABOLIC DISEASES

See: GENETIC AND METABOLIC DISEASES

Short chain diol metabolism in human disease states
Casazza J P, Song B J & Veech R L (1990) Trends Biochem. Sci 15, 26

METABOLIC DISEASES

See: GENETIC AND METABOLIC DISEASES

Short chain diol metabolism in human disease states
Casazza J P, Song B J & Veech R L (1990) Trends Biochem. Sci 15, 26
Effects of melatonin on vertebrate circadian systems
Cassone V M (1990) Trends Neurosci. 13, 457

NMR studies of metabolism
Cerdan S & Seelig J (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 43
The genetics of human alcohol metabolism [Minireview]
Chambers G K (1990) Gen. Pharmacol. 21, 267
Role of amino acid transport and countertransport in nutrition and metabolism
Christensen H N (1990) Physiol. Rev 70, 43
Is the endogenous digitalis-like factor the link between hypertension and metabolic disorders as diabetes mellitus, obesity and acromegaly?
Clerico A & Giampietro O (1990) Clin. Physiol. Biochem. 8, 153
The relation of clinical catastrophes, endogenous oxalate production, and urolithiasis
Conyers R A J, Bais R & Rofe A M (1990) Clin. Chem. 36, 1717

Hemodynamic and metabolic correlates in adipose tissue: pathophysiological considerations
Crandall D L & DiGirolamo M (1990) FASEB J. 4, 141

Biochemistry of fish anti-freeze proteins
Davies P L & How C I (1990) FASEB J. 4, 7460

Leukotriene-B4 hydroxylase characterization — comparison between hepatic cytochrome-P-450 and polymorphismolecular leukocytes
Delafarge M, Boucher J L & Leclaire J (1990) Acta Pharmaceut Jugoslav. 40, 461

Structure-activity relationships (SAR) and structure-metabolism relationships (SMR) affecting the teratogenicity of carboxylic acids
Dicarlo F J (1990) Drug Metab. Rev 22, 411

The metabolism and mode of action of gentian violet
Docampo R & Moreno S N J (1990) Drug Metab. Rev 22, 161

Ringsynthesis of glyceryl phosphatidlyinositol membrane anchors [Minireview]
Doering T L, Masterson W J, Hart G W & England P T (1990) J Biol Chem. 265, 611

Metabolic effects of cancer
Douglas R G & Shaw J H F (1990) Br. J. Surg. 77, 246

myo-inositol metabolites as cellular signals
Dowees C P & Maephew C H (1990) Eur J. Biochem. 193, 118
A review of recent studies on the metabolism of exogenous and endogenous malondialdehyde
Draper H H & Hadley M (1990) Xenobiotica, 20, 901

15th European Symposium on Hormones and Cell Regulation. Mt St Odile, France, September 24-27, 1990
Dumont J E, Nunez J & King R J B, eds (1990) Colloq INSERM, 210, 117 pp.

Hepatic drug metabolism and aging
Durnas C, Loi C M & Cusack C J (1990) Clin. Pharmacokinet. 19, 359
The pharmacology, metabolism, analysis, and application of coumarin and coumarin-related compounds
Egan D & others (1990) Drug Metab. Rev. 22, 503
Transmembrane signaling via phosphatidylinositol 4,5-bisphosphate hydrolysis in plants
Einspahr K J & Thompson G A (1990) Plant Physiol. 93, 361

Signaling through phosphatidylcholine breakdown [Minireview]
Eaton J H (1990) J. Biol. Chem. 265, 1

Regulation of phosphoinoside-specific phospholipase C
[Minireview]
Fain J N (1990) Biochim. Biophys. Acta, 1053, 81
Lipid metabolism in bile and malabsorption
Fäkkiilä M & Miettinen T A (1990) Ann Med. 22, 5
Regulation of cholesterol metabolism in the intestine
Field F J, Kami N T P & Mathur S N (1990) Gastroenterology, 99, 539

Methionine metabolism in mammals
Finkelstein J D (1990) J. Nutr Biochem. 1, 228

Metabolism of nitro-polycyclic aromatic hydrocarbons
Fu P P (1990) Drug Metab. Rev 77, 304

Interspecies metabolism and pharmacokinetic scaling of theophylline disposition
Gaspari F & Bonati M (1990) Drug Metab. Rev 22, 179

The new metabolism: molecular genetics in the analysis of metabolic regulation
Goodridge A G (1990) FASEB J. 4, 3099

The genes of hepatic glucose metabolism [Minireview]
Granner D & Piliks S (1990) J. Biol. Chem. 265, 10173

Metabolism of l-1-alpha-ethyl-nitrostilbadiol in humans [Minireview]
Guengerich F P (1990) Life Sci. 47, 1981

Characterization of roles of human cytochrome P-450 enzymes in carcinogen metabolism
Guengerich F P (1990) Asa Pacific J. Pharmoc. & Toxicol. 12, 506

Is there any role of membrane bilayer skeleton interaction in maintaining the transmembrane phospholipid asymmetry in erythrocytes
Gupta C M (1990) Biotechnol. Appl Biochem 12, 506

Cellular energy metabolism — recent advances in the study of the diaphragm with magnetic resonance spectroscopy
Guitterez G, Paluros F & Marini C F (1990) Chest. 97, 975

Cold acclimation and freezing stress tolerance. role of protein metabolism
Guy C L (1990) Annu. Rev Plant Physiol. Plant Mol. Biol 41, 187-223

Role of metabolism in dimethylnitrosamine-induced immunosuppression: a review
Haggerty H G & Holsapple M P (1990) Toxicology, 63, 1-23

Metabolism and toxicity of xenobiotics in the adrenal cortex, with particular reference to 7,12-dimethylbenz(a)anthracene
Hallberg E (1990) Biochem. J. 267, 281-290

Metabolism of nitrogen-methylpolycyclic aromatic hydrocarbons
Hart R W & others (1990) J. Nutr. Biochem. 1, 396

Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr Biochem. 20, 291

Lipid metabolism in algae
Harwood J L & Jones A L (1989) Advan. Bot Res 16, 1

Nitrogen metabolism in liver: structural and functional organization and physiological relevance
Haussinger D (1990) Biochem. J. 267, 281-290

Intestinal glutamine metabolism during critical illness: a surgical perspective
Herskowitz K & Souba W W (1990) Nutrition, 6, 199

Metabolism and toxicity of chemicals in diabetes
Ioannides C (1990) Acta Physiol. Jugoslav. 40, 423

The cytochrome-P450-I gene family of microsomal hemoproteins and their role in the metabolic activation of chemicals
Ioannides C & Parke D V (1990) Drug Metab. Rev 22, 1
Normal and abnormal central nervous system GABA metabolism in childhood — review
Jaeken J, Casper P, Haeghele K D & Schechter P J (1990) J. Inher. Metab. Dis. 13, 793

Stable isotope methods for studies of mineral and trace element metabolism
Janghorbani M & Ting B T G (1990) J. Nutr. Biochem. 1, 4

26-Hydroxycholesterol: synthesis, metabolism, and biologic activities
Javitt N B (1990) FASEB J. 4, 161

Metabolic growth rate control in Escherichia coli may be a consequence of subsaturation of the macromolecular biosynthetic apparatus with substrates and catalytic components
Jensen K F & Pedersen S (1990) Microbiol. Rev. 54, 89–100

Calpains (intracellular calcium-activated cysteine proteinases): structure-activity relationships and involvement in normal and abnormal cellular metabolism [Minireview]
Johnson P (1990) Int. J. Biochem. 22, 811

Cutaneous metabolism of xenobiotics
Kao J & Carver M P (1990) Drug Metab. Rev. 22, 363

Inositol phosphates in receptor-mediated cell signaling — metabolic origins and interrelationships
Kirk C J, Maccallum S H, Michell R H & Barker C J (1990) Biotechnol. Appl. Biochem. 12, 489

Regulatory mechanism of the cytoplasmic pH by H+-adenosinetriphosphatase [In Japanese; English abstract]
Kobayashi H (1990) Yakugaku Zasshi, 110, 703

Symposium on Metabolic Control of Food Intake
Koopmans H S & others (1990) Int. J. Obesity, 14. Suppl. 3, 11–135

Lactography as an approach to monitor glucose metabolism on-line in brain and muscle [Minireview]
Korf J & Deboer J (1990) Int. J. Biochem. 22, 1371

Rat fetal hepatocytes in culture — a model for metabolic and toxicological studies
Kremers P, Negro L & Gielen J E (1990) Acta Pharmaceut. Jugoslav. 40, 383

Protein phosphorylation and inositol phospholipid metabolism in activated mast cells
Kurosawa M (1990) Clin. Exp. Allergy, 20, 7

Circadian rhythms in Neurospora crassa — biochemistry and genetics
Lakinthomas P L, Cote G G & Brody S (1990) Curr. Rev. Microbiol. 17, 365

Glucose metabolism, 2nd messengers and insulin secretion [Minireview]
Laychock S G (1990) Life Sci. 47, 2307

Septic shock and metabolism disturbances [In French; English abstract]
Lefèvre G, Dhainaut J F, Tallet F & Raichvarg D (1990) Path. Biol. 38, 650

The relationship between metabolite production and the growth efficiency of the producing organism
Linton J D (1990) FEMS Microbiol. Rev. 75, 1

Diet and metabolic development
Little M-T E & Hahn P (1990) FASEB J. 4, 2605

Arachidonic acid metabolism in filarial parasites [Minireview]
Liu L X & Weller P F (1990) Exp. Parasitol. 71, 496

Prediction of xenobiotic metabolism by non-invasive methods [Minireview]
Loft S & Poulsen H E (1990) Pharmacol. Toxicol. 67, 101

Nuclear magnetic resonance studies of cellular metabolism
Lundberg P, Harnsen E, Ho C & Vogel H J (1990) Anal. Biochem. 191, 193

An introduction to the study of xenobiotic metabolism using electroanalytical techniques
Lunte S M, Radzik D M & Kissinger P T (1990) J. Pharmaceut. Sci. 79, 557

Role of calcium ions in regulation of mammalian intramitochondrial metabolism
McCormack J G, Halaestrup A P & Denton K M (1990) Physiol. Rev. 70, 391

Fluorine-19 nuclear magnetic resonance spectroscopy — a privileged tool for metabolism and pharmacokinetic studies of fluoropyrimidines [In French; English abstract]
Maitemartino M C, Martino R & Armand J P (1990) Bull. Cancer, 77, 1223

Stratton Lecture 1989 — Thrombosis and inflammation as multicellular processes: pathophysiologic significance of transcellular metabolism
Marcus A J (1990) Blood, 76, 1903

Glutaminolysis and glycolysis interactions in proliferant cells [Minireview]
Medina M A & Castro I N de (1990) Int. J. Biochem. 22, 681

Nitrogen metabolism and ornithine cycle function
Meijer A J, Lamers W H & Chamuleau R A F M (1990) Physiol. Rev. 70, 701

An update of the enzymology and regulation of sphingomyelin metabolism
Merrill A H jr & Jones D D (1990) Biochim. Biophys. Acta, 1044, 1

Holobiochemistry: the effect of local environment upon the equilibria and rates of biochemical reactions [Minireview]
Minton A P (1990) Int. J. Biochem. 22, 1063

Metabolic activation of carcinogenic N-nitrosodialkylamines [In Japanese; English abstract]
Mochizuki M (1990) Yakugaku Zasshi, 110, 359

Glutamine metabolism and cycling in Neurospora crassa
Mora J (1990) Microbiol. Rev. 54, 293–304

Gut microflora and tissue protein turnover in vivo in animals [Minireview]
Muramatsu T (1990) Int. J. Biochem. 22, 793

Metabolism, enzymology and possible roles of 4-aminoxybutyrate in higher plants
Narayan V S & Nair P M (1990) Phytochemistry, 29, 367

The biodegradation of halogenated organic compounds
Neilson A H (1990) J. Appl. Bact. 69, 445

Effects of N-3 fatty acids on lipid metabolism
Nestel P J (1990) Annu. Rev. Nutr. 10, 149

Pharmacology of nootropics and metabolically active compounds in relation to their use in dementia
Nicholson C D (1990) Psychopharmacology, 101, 147

Transdermal absorption and skin metabolism of viprostol, a synthetic prostaglandin E2 analogue
Nicolau G & Yacobi A (1990) Drug Metab. Rev. 21, 401

Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part I)
O’Byrne S & Feely J (1990) Drugs. 40, 6–18
Effects of drugs on glucose tolerance in non-insulin-dependent diabetics (Part II)
O’Byrne S & Feely J (1990) Drugs, 40, 203-219
Phosphorylation of cytochrome-P450 isoenzymes in intact hepatocytes and its importance for their function in metabolic processes
Oeschbartlomowicz B & Oesch F (1990) Arch Toxicol. 64, 257
Magnesium and glucose homeostasis
Paulisso G, Scheen A, Donofrio F & Lefebvre P (1990) Diabetologia, 33, 511

Central effects of CRF on metabolism and energy balance
Rothwell N J (1990) Neurosci Biobehav Rev 14, 263

Reflex control of the circulation during exercise: chemoreflexes and mechanoreflexes [Brief review]
Rowell L B & O'Leary D S (1990) J. Appl. Physiol. 69, 407

Metabolic Problems of the Newborn — Proceedings of the Fourth International Symposium on Neonatology. an Update, Venice, 29—31 March 1990
Rubaltelli F F & others (1990) Biol. Neonate, 58, Suppl 1, 1–93

Abnormal oxygen-dependent processes in burn disease: present status and possible mechanism [In Russian; English abstract]
Ryabintn V E & Lifshits R I (1990) Vopr Med. Khim. 36, 7

Dynamics of insect lipophorin metabolism
Ryan R O (1990) J Lipid Res. 31, 1725

Postprandial Lipid Metabolism and Atherosclerosis — an International Symposium, Frankfurt, March 10, 1990
Schettler G & others (1990) Klin. Wochenschr. 68, Suppl. 22, R7, 1–124

Plasmin reactivity and arachidonic acid metabolism in type II hyperlipoproteinaemia and its modification by cholesterol-lowering agents
SchröK K (1990) Emamost. 3, 67

Symposium on Structural and Organizational Aspects of Metabolic Regulation, Keystone, CO, April 17-24, 1989
Serre P A, Jones M E & Mathews C K, eds (1990) UCLA Symp. Mol. Cell Biol. NS 133, 416 pp.

Enzyme-enzyme interactions and their metabolic role [Mimireview]
Serre P A & Ovadi J (1990) FEBS Lett. 268, 360–364

Caffeine metabolism — a problem in extrapolating results from animal studies to humans
Stavric B & Gilbert S G (1990) Acta Pharmaceut Jugoslav 40, 475

Nutrient partitioning by transgenic animals
Steele N C & Pursel V G (1990) Annu. Rev. Nutr. 10, 213

Neuroendocrine mechanisms involved in regulation of body weight, food intake and metabolism
Steifens A B, Strubbe J H, Balkan B & Scheurink A J W (1990) Neureurosci Biobehav Rev 14, 305

Fructose-2,6-bisphosphate as a regulatory molecule in plants
Stitt M (1990) Annu. Rev. Plant Physiol Plant Mol. Biol. 41, 153–185

The Ayerst Award Lecture 1989. Biochemistry of natural freeze tolerance in animals: molecular adaptations and applications to cryopreservation
Storey K B (1990) Biochem. Cell Biol. 68, 687-698

Porphyria and porphyrin metabolism
Straka J G, Rank J M & Bloomer J R (1990) Annu. Rev Med 41, 457

Biotransformation of exogenous substrates by plant cell cultures
Suga T & Hirata T (1990) Phytochemistry, 29, 2393

Pharmacodynamics: Changes in homeostatic mechanisms, receptor and target organ sensitivity in the elderly
Swift C G (1990) Br. Med. Bull. 46, 36–52

In vitro techniques for metabolism studies during drug development
Thenot J P, Durand A & Morselli P L (1990) Acta Pharmaceut Jugoslav 40, 395

NMR spectroscopy: its basis, biological application and use in studies of insect metabolism [Mimireview]
Thompson S N (1990) Insect Biochem. 20, 223

The glyoxalase system: new developments towards functional characterization of a metabolic pathway fundamental to biological life
Thornalley P J (1990) Biochem. J 269, 1–11
METALS

See. TRACE ELEMENTS

METHYLATION

DNA methylation. The effect of minor bases on DNA-protein interactions

Adams R L P (1990) Biochem. J. 265, 309–320

Minireview: The function of protein carboxymethyltransferase in eukaryotic cells

Burien D M & O'Dea R F (1990) Life Sci. 47, 181

DNA methylation and development

Cedar H & Razin A (1990) Biochim. Biophys. Acta. 1049, 1

Colloquium on Nucleic Acid Methylation, Frisco, CO, March 31–April 7, 1989

Clawson G A, Willis D B, Weissbach A & Jones P A, eds (1990)

UCLA Symp. Mol. Cell Biol. NS. 128, 425 pp.

Membrane and cellular properties in oscillating networks: implications for respiration [Brief review]

Deakin M S & Haddad G G (1990) J. Appl. Physiol. 69, 809

Patterns of DNA methylation in the mammalian genome (review)

Doerfler W (1980) Bioch. Hoppe-Seyl. 371, 455

Eukaryotic DNA methylation: facts and problems [Minireview]

Doerfler W & others (1990) FEBS Lett. 268, 329–333

Effect of enzymatic methylation of cytochrome c on its function and synthesis [Minireview]

Frost B, Syed S K, Kim S & Paik W K (1990) Int. J. Biochem. 22, 1069

Unbalanced transmethylation and the perturbation of the differentiated state leading to cancer

Hoffman R M (1990) BioEssays, 12, 163

DNA methylation and chromatin structure: a view from below

Selker E (1990) Trends Biochem. Sci. 15, 103

A role for DNA methylation in vertebrate gene expression?

[Minireview]

Strobl J S (1990) Mol. Endocrinol. 4, 181

Eukaryotic DNA methylation and gene expression

Weissbach A, Ward C & Bolden A (1989) Curr. Top. Cell. Regul. 20, 1

MICROFILAMENTS

See. ORGANELLES AND SUBCELLULAR STRUCTURES

MICROORGANISMS

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BACTERIA

FUNGI

PROTOZOA

RICKETTSIAE

The use of microbial and enzymatic function in organic synthesis — total synthesis of the aglycone of venturicidin-A and venturicidin-B

[In Japanese: English abstract]

Akita H (1990) Yakugaku Zusshi, 110, 789

Codon preferences in free-living microorganisms

Andersson S G E & Kurland C G (1990) Microbiol Rev. 54, 198–210

Papers Presented at the Sixth International Symposium on Microbial Growth on C1-Compounds, Göttingen, FRG, 20-25 August, 1989

Andersen J R & Bowien B, eds (1990) FEMS Microbiol. Rev 87, 189–445
Multi-author review: Microorganisms in nuclear waste disposal — Part I
Bachofer R & others (1990) *Experientia*, 46, 777–876

Molecular mechanisms of sugar transport across mammalian and microbial cell membranes
Baldwin S A (1990) *Biotechnol. Appl. Biochem.* 12, 512

Antigenic variation of a relapsing fever *Borrelia* species
Barbour A G (1990) *Annu. Rev. Microbiol.* 44, 155

*Cryptosporidium* and water
Barrer M R & Wright A E (1990) *Lett. Appl. Microbiol.* 11, 271

Current status of *Azospirillum* inoculation technology: *Azospirillum* as a challenge for agriculture
Bashan Y & Levanony H (1990) *Can. J. Microbiol.* 36, 591–608

From micrococcus to moraxella — the reemergence of Branhamella catarrhalis
Berk S L (1990) *Arch. Intern. Med.* 150, 2254

Branhamella catarrhalis — an organism gaining respect as a pathogen
Catlin B W (1990) *Clin. Microbiol. Rev.* 3, 293

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) *Angew. Chem.* 20, 759

Self-splicing and enzymatic activity of an intervening sequence RNA from *Tetrahymena*
Cech T R (1990) *Biosci. Rep.* 10, 239

Molecular determinants of *Leishmania* virulence
Chang K P, Chaudhuri G & Fong D (1990) *Annu. Rev. Microbiol.* 44, 499

The improving prospects for yield increase by genetic engineering in antibiotic producing streptomycetes
Chater K F (1990) *BioTechnology*, 8, 115

Special issue: 22nd Lunteren Lectures on Molecular Genetics: The Stress Response in Microorganisms: A review of the role of 70kDa heat shock proteins in protein translocation across membranes
Craig E, Kang P J & Boorstoen W (1990) *Anton.Leeuwenhoek Int. J. Gen. Mol. Microbiol.* 38, 131

Stable carbon isotope fractionation by marine phytoplankton during photosynthesis: commissioned review
Descolas-Gros C & Fontugne M (1990) *Plant Cell Environ.* 13, 207

Molecular communication in interactions between plants and microbial pathogens
Dixon R A & Lamb C J (1990) *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 41, 339–367

Closely watched clocks: molecular analysis of circadian rhythms in *Neurospora* and *Drosophila*
Dunlap J C (1990) *Trends Genet.* 6, 159

RNA editing in kinetoplastid mitochondria [Minireview]
Feigin J E (1990) *J. Biol. Chem.* 265, 19373

Exopolysaccharide production in *Rhizobium* and its role in invasion [Microreview]
Gray J X & Rolfe B G (1990) *Mol. Microbiol.* 4, 1425

Phagocytosis of *Legionella pneumophila*
Halablab M A, Richards L & Bazin M J (1990) *J. Med. Microbiol.* 33, 75

To shape a cell — an inquiry into the causes of morphogenesis of microorganisms
Harold F M (1990) *Microbiol. Rev.* 54, 381

DNA hybridization for the diagnosis of microbial disease
Hopkin J M & Wakefield A E (1990) *Q. J. Med.* 75, 415

Genetic approaches to ciliate pattern formation: from self assembly to morphogenesis
Jerka-Dziadosz M & Beisson J (1990) *Trends Genet.* 6, 41–45

Microbial degradation of hydrocarbons in the environment
Leahy J G & Colwell R R (1990) *Microbiol. Rev.* 54, 305–315

The relationship between metabolite production and the growth efficiency of the producing organism
Linton J D (1990) *FEMS Microbiol. Rev.* 75, 1

*Helicobacter pylori* in gastroduodenal disease
Loeffel R J L F (1990) *Pharmaceut. Weekbl. Sci. Ed.* 12, 46

Influence of interfaces on microbial activity
Loosdrecht M C M van, Lyklema J, Norde W & Zehnder A J B (1990) *Microbiol. Rev.* 54, 75–87

Surface-induced swarmer cell differentiation of *Vibrio parahaemolyticus* [Microreview]
McCartor L I & Silverman M (1990) *Mol. Microbiol.* 4, 1057

Bactericidal effects of photoactivated porphyrins — an alternative approach to antimicrobial drugs
Malik Z, Hanania J & Nitzan Y (1990) *J. Photochem. Photobiol. B: Biol.* 5, 281

Variation and control of protein expression in *Neisseria*
Meyer T F, Gibbs C P & Haas R (1990) *Annu. Rev. Microbiol.* 44, 451

General microbiology of *recA* environmental and evolutionary significance
Miller R V & Kokjohn T A (1990) *Annu. Rev. Microbiol.* 44, 365

Microbial “superantigens” [Minireview]
Misfeldt L (1990) *Infection Immunology*, 38, 2409–2413

Bioactive microbial products: focus upon mechanism of action
Monaghan R L & Tkac J S (1990) *Annu. Rev. Microbiol.* 44, 271

Gut microflora and tissue protein turnover *in vivo* in animals [Minireview]
Muramatsu T (1990) *J. Biochem.* 22, 793

High-level gentamicin resistance in *Enterococcus*: microbiology, genetic basis, and epidemiology
Patterson J E & Zervos M J (1990) *J. Infect. Dis.* 162, 644

Genetic dissection of Ca²⁺-dependent ion channel function in *Paramecium*
Preston R R (1990) *BioEssays*, 12, 269

Adaptation of microorganisms to extreme environments — a collection of reviews from a meeting in Haren, The Netherlands, June 1989
Prins R A & others (1990) *FEMS Microbiol. Rev.* 75, 103–335

Research into biogenesis of biologically active microbial metabolites in Czechoslovakia — a review
Rehacek Z (1990) *Process Biochem. Int.* 25, 197

Lectins and their application to clinical microbiology
Sliifkin M & Doyle R J (1990) *Clin. Microbiol. Rev.* 3, 197–218

The 1989 Fred Griffith Review Lecture. Pathogenicity and the microbe *in vivo*
Smith H (1990) *J. Gen. Microbiol.* 136, 377

Environmental aspects of *Cryptosporidium* species: a review
Smith H V (1990) *J. Roy. Soc. Med.* 83, 629

*In vivo* bioluminescence: new potentials for microbiology
Stewart G S A B (1990) *Lett. Appl. Microbiol.* 10, 1

A review: Agitation effects on microbial cell–cell interactions
Stratford M & Wilson P D G (1990) *Lett. Appl. Microbiol.* 11, 1

Potent and specific inhibitors of protein kinase C of microbial origin
Tamaoki T & Nakano H (1990) *BioTechnology*, 8, 732
Cytochrome bc1 complexes of microorganisms
Trumper B L (1990) Microbiol. Rev. 54, 101–129

Functions of secondary metabolites
Vining L C (1990) Annu. Rev. Microbiol. 44, 395

Dynamics of microbial growth and cell composition in batch culture
Wanner U & Egli T (1990) FEMS Microbiol. Rev. 75, 19

Induction of a phosphomannosyl binding lectin activity in Giardia
Ward H D, Keusch G I & Pereira M E (1990) BioEssays, 12, 211

Microbial DNA topoisomerases and their inhibition by antibiotics
Zimmer C, Storti K & Storti J (1990) J. Basic Microbiol. 30, 209

MICROTUBULES
See: ORGANELLES AND SUBCELLULAR STRUCTURES

MIGRAINE
See: BRAIN AND NERVOUS SYSTEM

MITOCHONDRIA

The laboratory diagnosis of inborn errors of mitochondrial fatty acid oxidation
Bennett M J (1990) Annu Clin Biochem. 27, 510

Nuclear–mitochondrial interrelation in angiosperms
Breiman A & Galun E (1990) Plant Sci. 71, 3

Is the mitochondrial genome involved in carcinogenesis?
Corral M, Defer N & Kruh J (1990) M/S Méd. Sci. 6, 359

Control of mitochondrial gene expression in Saccharomyces cerevisiae
Costanzo M C & Fox T D (1990) Annu. Rev. Genet. 24, 91

Mitochondrial protein import [Minireview]
Geli V & Glick B (1990) J. Bioenerget. Biomembr. 22, 725

Biogenesis of mitochondrial c-type cytochromes [Minireview]
Gonzales D H & Neupert W (1990) J. Bioenerget. Biomembr. 22, 753

Phylogenetic distribution of superoxide dismutase supports an endosymbiotic origin for chloroplasts and mitochondria [Minireview]
Grace S C (1990) Life Sci. 47, 1875

Mechanisms by which mitochondria transport calcium
Gunter T E & Pleifker D R (1990) Am J. Physiol. 258, No 5, Pt 1, C755

Control of mitochondrial respiration in the heart in vivo
Heinemann F W & Balaban R S (1990) Annu. Rev. Physiol. 52, 523

Regulation of mitochondrial ATP synthesis in mammalian cells by transcriptional control [Minireview]
Kagawa Y & Ohita S (1989) Int. J. Biochem. 22, 219

Mitochondrial diseases: gene mapping and gene therapy [Minireview]
Landers E S & Lodish H (1990) Cell, 61, 925–926

Ca\textsuperscript{2+} as a second messenger within mitochondria of the heart and other tissues
McCormack J G & Denton R M (1990) Annu. Rev. Physiol. 52, 451

Role of calcium ions in regulation of mammalian intramitochondrial metabolism
McCormack J G, Halestrap A P & Denton R M (1990) Physiol. Rev. 70, 391

The intracellular site of action of insulin — the mitochondrial Krebs cycle
Mohan C, Geiger P J & Bessman S P (1989) Curr. Top. Cell. Regul. 30, 105

How do polypeptides cross the mitochondrial membranes
[Minireview]
Neupert W, Hartl F U, Craig E A & Pfanner N (1990) Cell, 63, 447

Distinctive properties of adrenal cortex mitochondria
Ormejohnson N R (1990) Biochim. Biophys. Acta, 1020, 213

Photosensitization of mitochondria. Molecular and cellular aspects
Salez C & Moreno G (1990) J. Photochem. Photobiol. B-Biol. 5, 133

Mitochondrial import: properties of precursor proteins
Skriver I (1990) Biochim. Cell Biol. 68, 9–16

Evaluation of procedures for assaying oxidative phosphorylation enzyme activities in mitochondrial myopathy muscle biopsies
Zheng X, Shoffner J M, Voljavac A S & Wallace D C (1990) Biochim. Biophys. Acta, 1019, 1

MOLYBDENUM

Biogenesis of molybdenum cofactors
Hinton S M & Dean D (1990) Crit. Rev. Microbiol. 17, 169

MORPHOGENESIS
See: GROWTH, GROWTH FACTORS AND DEVELOPMENT

MUCOPOLYSACCHARIDES
See: POLYSACCHARIDES

MUCUS

Regulation of intracellular pH and its role in vascular smooth muscle function [Editorial review]
Aalkjaer C (1990) J. Hypertension, 8, 197

Muscular dysgenesis in mice: a model system for studying excitation–contraction coupling
Adams B A & Beam K G (1990) FASEB J. 4, 2809

Specific myogenic regulation factors [In French; English abstract]
Alonzo S (1990) M/S Méd. Sci. 6, 635

2nd World Congress of Neuroscience (Ibro): Chloride Channels and Carriers in Nerve, Muscle, and Glial Cells, Budapest, Hungary, August 1987
Alvarez-Leefmans F J & Russell J M, eds (1990) Wild. Congr. Neurosci. 2, 425 pp.

Oxidative muscular injury and its relevance to hyperthyroidism
Asayama K & Kato K (1990) Free Radical Biol. Med. 8, 293

Disorders of the inhibitory glycine receptor: the spastic mouse
Becker C-M (1990) FASEB J. 4, 2761

Significance of Na"-K" pump regulation in skeletal muscle
Claussen T (1990) Neurosci. Lett. 135

Muscle and muscle proteins

Clausen T (1990) News Mol. Cytoskel. 15, 7

MUSCAL AND MUSCLE PROTEINS

Regulation of intracellular pH and its role in vascular smooth muscle function [Editorial review]
Aalkjaer C (1990) J. Hypertension, 8, 197

Muscular dysgenesis in mice: a model system for studying excitation–contraction coupling
Adams B A & Beam K G (1990) FASEB J. 4, 2809

Specific myogenic regulation factors [In French; English abstract]
Alonzo S (1990) M/S Méd. Sci. 6, 635

The macrostructure of mucus glycoproteins in solution
Harding S E (1989) Advan. Carbohydr. Chem. Biochem. 47, 345

Goblet cell secretion and muco genesis
Verdugo F (1990) Annu. Rev. Physiol. 52, 157

See: POLYSACCHARIDES
Wellcome Prize Lecture. Intracellular sodium in cardiac muscle: effects on contraction
Eisner D A (1990) Exp. Physiol. 75, 437

The genetics of idiopathic torsion dystonia
Fletcher N A (1990) J. Med. Genet. 27, 409

Genetic approaches to myofibril form and function in Drosophila
Fyrberg E & Bell C (1990) Trends Genet. 6, 126

Disorder of the inhibitory glycine receptor: inherited myoclonus in Poll Hereford calves
GrafWahl A T (1990) FEBS Lett. 276, 7761

Structure and function of profilin
Hassellbach H (1990) Eur. J. Haematol. 45, 65

Caged compounds and striated muscle contraction
Homsher E & Millar N C (1990) Annu. Rev. Physiol. 52, 875

Mammalian muscle spindle, peripheral mechanisms
Hunt C C (1990) Physiol. Rev. 70, 643

Sliding filaments and molecular motor systems [Minireview]
Huxley H E (1990) J. Biol. Chem. 265, 8347

Calcium release mechanisms in smooth muscle
Iino M (1990) Jap. J. Pharmacol. 34, 345

The perinatal reorganization of the innervation of skeletal muscle in mammals
Jansen J K S & Flodby T (1990) Progr. Neurobiol. 34, 39

Muscle assembly in simple systems
Jellis J (1990) Trends Neurosci. 13, 126

Calcium regulation of smooth muscle contractility [In Japanese; English abstract]
Karaki H (1990) Folia Pharmacol. Jap. 96, 289

Molecular genetic dissection of myosin heavy chain function [Minireview]
Kiehart D P (1990) Cell. 60, 347–350

Intracellular calcium ion mobilization and nicotinic acetylcholine receptor-mediated signal transduction in neuro-skeletal muscle synapse [In Japanese; English abstract]
Kimura I (1990) Yakugakukan Zasshi, 110, 163

Lactography as an approach to monitor glucose metabolism on-line in brain and muscle [Minireview]
Korf J & Deboer J (1990) Int. J. Biochem. 22, 1371

DNA cytometry of musculoskeletal tumors – a review
Kreiersberg A (1990) Acta Orthopaed. Scand. 61, 282

α2-Adrenergic receptors and calcium. α2-receptor blockade in vascular smooth muscle as an approach to the treatment of hypertension
Lee J Y & DeBernardis J F (1990) Methods Findings Exp. Clin Pharmacol. 12, 213

Tropomyosins [In French; English abstract]
Lemonnier M, Libri D, Moully V & Fiszman M Y (1990) M/S Méd. Sci. 6, 645

Molecular tools to elucidate problems in excitation-contraction coupling [International lecture]
Maclennan D H (1990) Biophys. J. 58, 1355

Emerging views on the structure and dynamics in the Ca²⁺-ATPase is sarcoplasmic reticulum [Minireview]
Martonosi A N & others (1990) FEBS Lett. 268, 365–370

Diversity of plant actins
Meagher R B & McLean B G (1990) Cell Motil. Cytoskel. 16, 164

The genetics of primary torsion dystonia
Müller U & Kupke K G (1990) Hum. Genet. 84, 107

Cellular and biochemical aspects of muscle differentiation
Muntau L (1990) Comp. Biochem. Physiol. Pt B, 97, 215

The dihydropyridine-sensitive calcium channel of the skeletal muscle — biochemistry and structure [Minireview]
Nastauczynyk W, Ludwig A & Hofmann F (1990) Gen. Physiol. Biophys. 9, 321

Effects of cooling on smooth muscle contraction [Minireview]
Nasu T (1990) Comp. Biochem. Physiol. Pt A, 85, 201

Calcium channels, potassium channels, and voltage dependence of arterial smooth muscle tone [Brief review]
Nelson M T, Patlak J B, Worley J F & Standen N B (1990) Am. J. Physiol. 259, No 1, Pt 1, C3

Effects of changes of pH on the contractile function of cardiac muscle
Orchard C H & Kentish J C (1990) Am. J. Physiol. 258, No 6, Pt 1, C967

Prostaglandins and the control of muscle protein synthesis and degradation
Palmer R M (1990) Prostagland. Leuk. Essent. Fatty Acids. 39, 95

The Kugelberg lecture — Brain mechanisms of voluntary motor development
Pringle T G (1990) J. Physiol. 422, 272

Ultrastructure of myofibers and cells synthesizing DNA in the developing and regenerating lymph-heart muscles
Rumiantshev P V & Krylova M I (1990) Int. Rev. Cytol. 120, 1

Myosin, from the gene to the circulating forms [Plenary lecture]
Schwartz K (1990) Nucl. Med. Biol. Int. J. Rad. Appl. Instrum. Pt B, 17, 615

Conference Science Award Lecture. Uncultured lobster muscle, cultured neurons and brain slices, the neurophysiology of zinc
Smart T G (1990) J. Physiol. 422, 272

Endomyocardial fibrosis — the possible connexion with myocardial levels of magnesium and cerium
Valiathan S M & Kartha C C (1990) Int. J. Cardiol. 28, 1

Cellular mechanisms in excitation-contraction coupling
Verrijck R, Pijnenburg R M M, Vanrooij H H, Werner J & Porsius A J (1990) Pharmac. 45, 818

Diversity of actin filaments in mammalian spermatogenic cells and Sertoli cells
Vogl A W (1989) Int. Rev. Cytol. 119, 1
Paramyosin and the catch mechanism [Minireview]
Watabe S & Hartshorne D J (1990) Comp. Biochem. Physiol. Pt B, 96, 639

Evaluation of procedures for assaying oxidative phosphorylation enzyme activities in mitochondrial myopathy muscle biopsies
Zheng X, Schoflner J M, Voljavec A S & Wallace D C (1990) Biochim. Biophys. Acta, 1019, 1

MUTAGENS AND MUTAGENESIS
See also: DNA
In vivo somatic mutations in humans — measurement and analysis
Albertini R J, Nicklas J A, Neriell J P & Rohison S H (1990) Annu Rev Genet. 24, 305

Molecular mechanisms of oxygen radical carcinogenesis and mutagenesis: the role of DNA base damage
Breimer L H (1990) Mol. Carcinogen. 3, 188

Consideration of both genotoxic and nongenotoxic mechanisms in predicting carcinogenic potential
Butterworth B E (1990) Mutat. Res. 239, 117

Review of the mutagenicity of ethylene oxide
Dallalco V L, Generoso W M, Seaga G A, Fowle Jr III & Jacobson-Kram D (1990) Envir. Mol. Mutagen. 16, 85

The role of germline gene expression and somatic mutation in the generation of autoantibodies to DNA
Ellat D (1990) Mol. Immunol. 27, 203

Gametocidal chromosomes and their induction of chromosome mutations in wheat
Endo T R (1990) Jap J Genet 65, 135

The effect of alkoy substituents on the mutagenicity of some aminoazobenzene dyes and their reductive cleavage products
Esancy J F, Freeman H S & Claxton L D (1990) Mutat. Res. 238, 1

The effect of alkoy substituents on the mutagenicity of some phenylenediamine-based disazo dyes
Esancy J F, Freeman H S & Claxton L D (1990) Mutat. Res. 238, 23

Frameshift mutagenesis by acridines and other reversibly-binding DNA ligands
Ferguson L R & Denny W A (1990) Mutagenesis, 5, 529

Study of mutational specificity in the lacZ gene of Escherichia coli as a window on the mechanisms of mutation
Glickman B W (1990) Envi. Mol. Mutagen. 16, 48

Antimutagens and anticarcinogens: a survey of putative interceptor molecules
Hartman P E & Shankel D M (1990) Envi. Mol. Mutagen. 15, 145

Tissue plasminogen activator: the biochemistry and pharmacology of variants produced by mutagenesis
Higgins D L & Bennett W F (1990) Annu. Rev. Pharmacol. Toxicol. 30, 91-121

The tryptophan synthase multienzyme complex — exploring structure-function relationships with X-ray crystallography and mutagenesis
Hyde C C & Miles E W (1990) Biotechnology, 8, 27

Special issue: The Possible Involvement of Somatic Mutations in the Development of Atherosclerotic Plaques — Report of the ICPEMC Subcommittee 7/1
Jansen J D & others (1990) Mutat. Res. 239, 143-181

Studies on mammalian mutants defective in rejoining double-strand breaks in DNA
Jeggo P A (1990) Mutat. Res. 259, 1
Mutations that alter the primary structure of type I collagen. The perils of a system for generating large structures by the principle of nucleated growth [Minireview]

Prockop D J (1990) J. Biol. Chem. 265, 15349

Frameshift mutation — determinants of specificity

Ripley L S (1990) Annu. Rev. Genet. 24, 189

Molecular scanning methods of mutation detection [Minireview]

Rossiter B J F & Caskey C T (1990) J. Biol Chem. 265, 12753

Mouse T-locus cloning — a known development mutation enters the age of molecular biology [Minireview] [In French; English abstract]

Silver I M & Babinet C (1990) M/S Méd. Sci. 6, 574

Fundamental and Molecular Mechanisms of Mutagenesis. Special issue: Alkylation, Mutagenesis and Repair

Singer B & others (1990) Mutat. Res. 233, 1–265

Endogenous gene systems for the study of mutational specificity in mammalian cells

Skandalis A & Glickman B W (1990) Cancer Cells, 2, 70–83

Lessons learned from molecular biology of insulin-gene mutations

Steiner D F & others (1990) Diabetes Care, 13, 600

Mutations of the human insulin receptor gene [Brief review]

Taylor S I, Cama A, Kadowaki H, Kadowaki T & Accili D (1990) Trends Endocrinol. Metab. 1, 134

Mutagenicity of ethyleneimine

Verschaeve L & Kirsch-Volders M (1990) Mutat. Res. 228, 39

Antimutagenicity profiles for some model compounds

Waters M D, Brady A L, Stack H F & Brockman H E (1990) Mutat. Res. 238, 57

Hybrid insulin receptors — molecular mechanisms of negative dominant mutations in receptor-mediated insulin resistance

Whittaker J, Soos M A & Siddle K (1990) Diabetes Care, 13, 576

Impact of physiological body’s status on mutagenic activity of drugs and other xenobiotics [In Russian]

Zolotareva G N, Radchenko L U, Loginova N S & Faddeeva I N (1990) Khim. Farm. Zh. SSSR, 24, No 12, 4

MYCOPLASMAS

Mycoplasmal genetics

Dybvig K (1990) Annu. Rev. Microbiol. 44, 81

Ureaplasmas and human disease

O’Leary W M (1990) Crit Rev Microbiol 17, 161

MYELIN

Ion channel organization of the myelinated fiber

Black J A, Kocsis J D & Waxman S G (1990) Trends Neurosci. 13, 48

The cellular and molecular events of central nervous system remyelination

Duboisdalque M & Armstrong R (1990) BioEssays, 12, 569

Symposium on Dynamic Interactions of Myelin Proteins, Chicago, IL, April 5–10, 1989

Hashim G A & Moscarello M eds (1990) Progr Clin. Biol. Res. 336, 196 pp.

Autoimmunity to collagen-II and myelin basic protein — comparative studies in humans and rodents

Klareksog L & Olsson T (1990) Immunol. Rev. 118, 285

Myelin-associated inhibitors of neurite growth

Schwab M E (1990) Exp. Neurol. 106, 2

Myelin-associated inhibitors of neurite growth and regeneration in the CNS

Schwab M E (1990) Trends Neurosci. 13, 452

NEURONS

See: BRAIN AND NERVOUS SYSTEM

NEUROTRANSMITTERS AND RECEPTORS

See also: CATECHOLAMINES AND RECEPTORS

Transmitter release from synapses: does a preassembled fusion pore initiate exocytosis?

Almers W & Tse F W (1990) Neuron, 4, 813–818

Heterogeneity of the GABA-benzodiazepine receptor complex [In French; English abstract]

Bacon E & Viennot F (1990) M/S Méd. Sci. 6, 770

The synapsins and the regulation of synaptic function

Bühler M, Benfenati F, Valtorta F & Greengard P (1990) BioEssays, 12, 259

The non-NMDA receptors — types, protein structure and molecular biology

Barndt E A & Henley J M (1990) Trends Pharmacol. Sci. 11, 500

Muscarinic receptors in airways: recent developments [Brief review]

Barnes P J (1990) J. Appl. Physiol. 68, 1777

Disorders of the inhibitory glycine receptor: the spastic mouse

Becker C-M (1990) TASED J. 4, 2767

Anticonvulsant steroids and the GABA/benzodiazepine receptor-chloride ionophore complex

Beelli D, Lan N C & Gee K W (1990) Neurosci. Biobehav. Rev. 14, 315

Ligand-gated ion channels in the brain: the amino acid receptor superfamily

Betz H (1990) Neuron, 5, 383–392

GABA and Benzodiazepine Receptor Subtypes: Molecular Biology, Pharmacology, and Clinical Aspects. 6th Capo Boi Conference on Neuroscience, Villasimius, Italy, June 1989

Biggio G & Costa E, eds (1990) Advan. Biochem. Psychopharmacol. 46, 239 pp.

Ion conductances affected by 5-HT receptor subtypes in mammalian neurons

Bobker D H & Williams J T (1990) Trends Neurosci. 13, 169

Hebbian synapses: biophysical mechanisms and algorithms

Brown T H, Kairiss E W & Keenan C L (1990) Annu. Rev. Neurosci. 13, 475

Quantum mechanics of synapses [Minireview]

Burden S J & McKay R D G (1990) Cell, 63, 7–8

The Fifth Heymans Memorial Lecture. Co-transmission

Burnstock G (1990) Arch. Int. Pharmacodyn. Thér. 304, 7–33

Interactions between glutamatergic and monoaminergic systems within the basal ganglia — implications for schizophrenia and Parkinson’s disease

Carlsson M & Carlsson A (1990) Trends Neurosci. 13, 272

Multiple roles of a histaminergic afferent neuron in the feeding behavior of Aplysia

Chiel H J, Weiss K R & Kupfermann I (1990) Trends Neurosci. 13, 223

Anticonvulsant actions of phencyclidine receptor ligands: correlation with N-methylaspartate antagonism in vivo [Minireview]

Church J & Lodge D (1990) Gen. Pharmacol. 21, 165
EAA pharmacology: excitatory amino acid receptors and synaptic plasticity
Collingridge G L & Singer W (1990) Trends Pharmacol. Sci. 11, 290

Patterned activity, synaptic convergence, and the NMDA receptor in developing visual pathways
Constantine-Paton M, Cline H T & Debski E (1990) Annu. Rev. Neurosci. 13, 129

Opioids can evoke direct receptor-mediated excitatory effects on sensory neurons
Crain S M & Shen K-F (1990) Trends Pharmacol. Sci. 11, 77

Chemosensory physiology in an age of transmission
Dethier V G (1990) Annu. Rev. Neurosci. 13, 1

In vivo brain dialysis of neurotransmitters
Dichiaro G (1990) Trends Pharmacol. Sci. 11, 116

EAA pharmacology: excitatory amino acid receptors in epilepsy
Dingledine R, McBain C J & McNamara J O (1990) Trends Pharmacol. Sci. 11, 334

Molecular and cellular basis of mechano-electrical transduction in the inner ear [In French; English abstract]
Duron D & Aran J M (1990) M/S Méd. Sci. 6, 744

Acetylcholine and neuronal plasticity [In French; English abstract]
Dykes R W (1990) M/S Méd. Sci. 6, 870

Extracerebral manifestations in migraine — a peptidergic involvement
Edvinsson L & Godsbly P J (1990) J. Intern. Med. 228, 299

Stochastic approaches to the study of synaptic function
Fesce R (1990) Progr. Neurobiol. 35, 85

Modulation of vasopressin antidiuretic action by renal a2-adrenoreceptors [Editorial review]
Geisler M (1990) Am. J. Physiol. 259, No 1, Pt 2, F1

Overexcitement and disinhibition — dynamic neurotransmitter interactions in alcohol withdrawal
Glines P & Nutt J (1990) Re. J. Psychiatr. 157, 491

5-HT1A Receptors in the Brain: a Subtype of Serotonin Receptors Involved in Blood Pressure Reduction — International Symposium, Bonn, 18 November 1989
Gothert M & others (1990) J. Cardiovasc. Pharmacol. 15, Suppl. 7, S1–S86

Behavioral effects of 5-HT receptor ligands in the aversive brain stimulation, elevated plus maze and learned helplessness tests
Greffe F G, Audi E A, Almeida S S, Greffe E O & Hunziker M H L (1990) Neurosci. Biobehav. Rev. 14, 501

Neurotransmitters and neuromodulators in the basal ganglia
Graybiel A M (1990) Trends Neurosci. 13, 244

Disorder of the inhibitory glycine receptor: inherited myoclonus in Poli Hereford calves
Gundlach A L (1990) FASEB J. 4, 2761

Novel anxiolytics that act as partial agonists at benzodiazepine receptors
Haffely W, Martin J R & Schoch P (1990) Trends Pharmacol. Sci. 11, 452

Pharmacology of β-blockers — classical aspects and recent developments
Hausler G (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 5, S1

Structural, conformational, and stereochemical requirements of central excitatory amino acid receptors
Hansen J J & Krogsgaard-Larsen P (1990) Med. Res. Rev. 10, 55

The molecular biology of serotonin receptors — an overview
Hartig P & others (1990) Neuropeychopharmacology, 3, 335

EAA pharmacology: excitatory amino acids and synaptic transmission: the evidence for a physiological function
Headley P M & Griller S (1990) Trends Pharmacol. Sci. 11, 205

The cannabinoid receptor: biochemical, anatomical and behavioral characterization
Howlett A C & others (1990) Trends Neurosci. 13, 420

Pharmacological activity of adenosine dinucleotides in the periphery: possible receptor classes and transmitter function
Hoyle C H V (1990) Gen. Pharmacol. 21, 827

Regulation of neurotransmitter receptor desensitization by protein phosphorylation
Huganir R L & Greengard P (1990) Neuron, 5, 555

Muscarinic receptor subtypes
Hulme E C, Birdsall N J M & Buckley N J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 633–673

Normal and abnormal central nervous system GABA metabolism in childhood — review
Jaeken J, Casaer P, Haegele K D & Schechter P J (1990) J. Inher. Metab. Dis. 13, 793

Eating disorders and depression: is there a serotonin connection?
Jimerson D C, Lesem M D, Kaye W H, Hegg A P & Brewerton T D (1990) Biol. Psychiat. 28, 443

Tryptamine may couple dopaminergic and serotonergic transmission in the brain [Mini review]
Juorio A V & Paterson I A (1990) Gen. Pharmacol. 21, 613

Transmembrane 3HCl flux measurements and desensitization of the γ-aminobutyric acidA receptor [Short review]
Kardos J & Cash D J (1990) J. Neurochem. 55, 1095

Intracellular calcium ion mobilization and nicotinic acetylcholine receptor-mediated signal transduction in neuro-skeletal muscle synapse [In Japanese; English abstract]
Kimura I (1990) Yakugaku Zasshi, 110, 163

Transmitter release — prepackaging and random mechanism or dynamic and deterministic process
Kriebel M E, Vautrin J & Holsapple J (1990) Brain Res. Rev. 15, 167

Target regulation of neurotransmitter phenotype
Lands S C (1990) Trends Neurosci. 13, 344

The inhibitory glycine receptor — a ligand-gated chloride channel of the central nervous system
Langosch D, Becker C M & Betz H (1990) Eur. J. Biochem. 194, 1

Neuropeptide Y: an overview
Lohmann J (1990) Drug Dev. Rev. 10, 779

Les agents provocateurs: a series on the pharmacology of excitatory amino acids
Lodge D & Collingridge G (1990) Trends Pharmacol. Sci. 11, 22

EAA Pharmacology: Noncompetitive excitatory amino acid receptor antagonists
Lodge D & Johnson K M (1990) Trends Pharmacol. Sci. 11, 81

Nicotine receptors in the mammalian brain
Luettje C W, Patrick J & Seguela, P (1990) FASEB J. 4, 2753

GABA receptors in insects [Mini review]
Lumins S C R (1990) Comp. Biochem. Physiol. Pt C, 95, 1

EAA pharmacology: Mechanisms of blockade of excitatory amino acid receptor channels
MacDonald J F & Nowak L M (1990) Trends Pharmacol. Sci. 11, 167

VIP neurons in the cerebral cortex
Magistretti P J (1990) Trends Pharmacol. Sci. 11, 250
Abusive stimulation of excitatory amino acid receptors: a strategy to limit neurotoxicity
Manev H, Costa E, Wroblewski J T & Guidotti A (1990) FASEB J 4, 7289

EAA pharmacology: excitatory amino acid receptors, second messengers and regulation of intracellular Ca\(^2\+) in mammalian neurons
Mayer M L & Miller R J (1990) Trends Pharmacol. Sci. 11, 254

Synaptic mechanisms regulating cardiovascular afferent inputs to solitary tract nucleus [Brief review]
Millhn S W & Felder R B (1990) Am J. Physiol 259, No 5, Pt 2, H653

Receptor-mediated regulation of calcium channels and neurotransmitter release
Miller R J (1990) FASEB J 4, 3291

The release and uptake of excitatory amino acids
Nicholls D & Attwell D (1990) Trends Pharmacol. Sci. 11, 462

Functional comparison of neurotransmitter receptor subtypes in mammalian central nervous system
Nicoll R A, Malenka R C & Kauer J A (1990) Physiol. Rev 70, 513

Pharmacology and physiology of GABAB receptors [Minireview]
Ogata N (1990) Gen. Pharmacol. 21, 395

Molecular biology of GABA receptors
Olesen R W & Tobin A J (1990) FASEB J 4, 1469

Pain and neurotransmitters
Otaka M & Yanagisawa M (1990) Cell. Mol. Neurobiol. 10, 293

Is the neuronal basis of Alzheimer’s disease cholinergic or glutamatergic?
Palmer A M & Gershon S (1990) FASEB J 4, 2745

5-Hydroxytryptamine receptor subtypes [Minireview]
Peroutka S J (1990) Pharmacol. Toxicol. 67, 373

An inverse neurotransmitter to prolong excitation? [Minireview]
Peschanski M (1990) A/S Med. Sci. 6, 295

Clinical studies of 5-HT function using i.v. L-tryptophan
Price L H & others (1990) Progr Neuro-Psychopharmacol Biol. Psychiat. 14, 459

Lithium and serotonin function: implications for the serotonin hypothesis of depression
Price L H, Charney D S, Delgado P L & Heninger G R (1990) Psychopharmacology, 100, 3

Pharmacological and biochemical properties of insect GABA receptors
Rauh J J, Lummis S C R & Sattelle D B (1990) Trends Pharmacol. Sci 11, 325

The patterns of neurotransmitter and neuropeptide co-occurrence among striatal projection neurons — conclusions based on recent findings
Reiner A & Anderson K D (1990) Brain Res. Rev. 15, 251

GABA as a presumptive paracrine signal in the pineal gland. Evidence on an intrapineal GABAergic system
Rosenstein R E, Chuluwan H E, Diaz M C & Cardinali D P (1990) Brain Res. Bull. 25, 339

Neurotransmitters in the mammalian circadian system
Rusak B & Bina K G (1990) Annu. Rev. Neurosci. 13, 387

Regulation of choline acetyltransferase
Salvaterra P M & Vaughn J E (1989) Int. Rev. Neurobiol. 31, 81

The neuropeptide saga [Plenary lecture]
Scharrier B (1990) Am. Zool. 30, 887

Retinal dopamine D1 and D2 receptors: characterization by binding or pharmacological studies and physiological functions
Schorderet M & Nowak J Z (1990) Cell. Mol. Neurobiol. 10, 303

Eicosanoids and peripheral neurotransmission
Serio R & Daniel E E (1989) Prostagland. Leuk. Essent. Fatty Acids. 38, 237

Pre-synaptic and post-synaptic cholinergic dysfunction in aged rodent brain regions — new findings and an interpretative review
Sherman K A & Friedman E (1990) Int. J. Dev. Neurosci. 8, 689

New insights on the mechanisms of action of ganglionic blocking agents
Skok V I (1990) News Physiol. Sci. 5, 168

Myoclonus: analysis of monoamine, GABA, and other systems
Snodgrass S R (1990) FASEB J 4, 2775

Physiological and pharmacological actions of a neuroactive dipeptide, kyotorphin, and its precursor, L-arginine, and clinical application [In Japanese; English abstract]
Takagi H (1990) Folia Pharmacol Jap 96, 85

Gangliosides and synaptic transmission
Thomas P D & Brewer G J (1990) Biochim. Biophys. Acta, 1031, 277

Glycine is a coagonist at the NMDA receptor/channel complex
Thomson A M (1990) Progr. Neurobiol 35, 53

Ionic, neuronal and endocrine influences on the proopiomelanocortin system of the hypothalamus [Minireview]
Tihgada E & Wilson J F (1990) Life Sci. 46, 81–90

Cellular and molecular mechanisms in hormone and neurotransmitter secretion
Trifaró J-M (1990) Gen. J. Physiol. Pharmacol. 60, 1–16

Excitatory amino acid receptors and their receptors in neural circuits of the cerebral neocortex
Tsumoto T (1990) Neurosci. Res. 9, 79

Progress in the study of muscarinic acetylcholine receptors: Establishment of the subtypes or subgroups [In Japanese; English abstract]
Uchida S & Yoshida H (1990) Folia Pharmacol Jap. 95, 7

Ischemia and Serotonin: Proceedings of a Satellite Symposium Presented at the 15th World Congress of Angiology, Rome, Italy, 17-22 September 1989
Vanhoucke P M & others (1990) J. Cardiovasc. Pharmacol 16, Suppl. 3, US1, S1–S81

The role of serotonin in cardiovascular diseases and their treatment
Vanzweiten P A, Blauw G J & Vanbrummelen P (1990) Cardiovasc. Drugs Ther. 4, 1443

Sex differences in neurotransmitter systems
Vries G J de (1990) J. Neuroendocrinol. 2, 1

The serotonin 5-HT1D receptor: a progress review [Minireview]
Waeber C, Schoeffter P, Hoyer D & Palacios J M (1990) Neurochem. Res. 15, 567

Sigma-receptors — biology and function
Walker J M & others (1990) Pharmacol. Rev. 42, 355

EAA pharmacology: Structure-activity relationships in the development of excitatory amino acid receptor agonists and competitive antagonists
Watts J C, Krogsgaard-Larsen P & Honoré T (1990) Trends Pharmacol. Sci. 11, 25

The behavioral pharmacology of NMDA receptor antagonists
Willetts J, Balster R L & Leander J D (1990) Trends Pharmacol. Sci. 11, 423
Recent developments in the research of opioid receptor subtype molecular characterization [Short review]
Wollemann M (1990) J. Neurochem. 54, 1095

Excitatory amino acid receptors in the brain — membrane binding and receptor autoradiographic approaches — EAA pharmacology
Young A B & Fagg G E (1990) Trends Pharmacol. Sci. 11, 126

Neurotransmitters and hypertension: Urapidil, a new antihypertensive drug. Symposium, January 13, 1989, Paris [In French; English abstract]
Zanchetti A & others (1990) Thérapie, 45, Suppl. 2, 169

Neurotransmitter release [Micoreview]
Zimmermann H (1990) FEBS Lett. 268, 394-399

5-HT-related drugs and human experimental anxiety
Zuardi A W (1990) Neurosci. Biobehav. Rev. 14, 507

NITROGEN AND NITROGEN COMPOUNDS

Genetics and molecular biology of alternative nitrogen fixation systems
Bishop P E & Joergier R D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 109-125

Nitrate reductase — a target for molecular and cellular studies in higher plants
Cabocchi M & Rouze P (1990) Trends Genes 6, 187

1-Arylpiperazines as active metabolites of (4-substituted aryl-l-piperazinyl)alkyl heterocyclic drugs
Caccia S & Garattini S (1990) Acta Pharmaceut. Jugoslav. 40, 441
Functional domains of assimilatory nitrate reductases and nitrite reductases
Campbell W H & Kinghorn J R (1990) Trends Biochem. Sci. 15, 315

Endothelium-derived relaxing factor (EDRF) and nitric oxide (NO).
Feng Q & Hedner T (1990) Clin. Physiol. 10, 407

Endothelium-derived relaxing factor (EDRF) and nitric oxide (NO).
Feng Q & Hedner T (1990) Clin. Physiol. 10, 503
Metabolism of nitro-poly cyclic aromatic hydrocarbons
Fu P P (1990) Drug Metab. Rev. 22, 209

Role of metabolism in dimethyltriazenine-induced immunosuppression: a review
Haggerty H G & Holsapple M P (1990) Toxicology, 63, 1-23

Nitrogen metabolism in liver: structural and functional organization and physiological relevance
Hattisinger D (1990) Biochem. J. 267, 285-290

Nitrogen fixation genes involved in the Bradyrhizobium japonicum-soybean symbiosis [Minireview]
Hennecke H (1990) FEBS Lett. 268, 422-426

Biosynthesis and metabolism of endothelium derived relaxing nitric oxide
Ignarro L J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 535-560

Haem-dependent activation of guanylate cyclase and cyclic GMP formation by endogenous nitric oxide: a unique transduction mechanism for transcellular signaling [Minireview]
Ignarro L J (1990) Pharmacol. Toxicol. 67, 1

Nitric oxide — a novel signal transduction for transcellular communication [Brief review]
Ignarro L J (1990) Hypertension, 16, 477
Mechanisms of nitrate tolerance: a review
Katz R J (1990) Cardiovasc. Drugs Ther. 4, 247

The vasopressin-regulated urea transporter in renal inner medullary collecting duct [Editorial review]
Knepper M A & Star R A (1990) Am. J. Physiol. 259, No 3, Pt 2, F393

Transcriptional regulatory cascade of nitrogen-fixation genes in anoxygenic photosynthetic bacteria — oxygen-responsive and nitrogen-responsive factors [Micoreview]
Kranz R G & Fosterhartnett D (1990) Mol. Microbiol. 4, 1793

Review of the genotoxicity and carcinogenicity of 4,4′-methylene-dianiline and 4,4′-methylene-bis-2-chloroaniline
McQueen C A & Williams G M (1990) Mutat. Res. 259, 133

The MPTP story — MAO activates tetrahydropyridine derivatives to toxins causing Parkinsonism
Maret G, Testa B, Jenner P, Eltayar N & Carrupt P A (1990) Drug Metab. Rev. 22, 291

Role of endothelium-formed nitric oxide on vascular responses
Marin J & Sánchez-Ferrer C F (1990) Gen. Pharmacol. 21, 575

Nitrogen metabolism and ornithine cycle function
Meier A J, Lamers W H & Chamaugeau R A F M (1990) Physiol. Rev. 70, 101

The First Robert Furchgott Lecture — From endothelium-dependent relaxation to the L-arginine:NO pathway
Moncada S (1990) Blood Vessels, 27, 208

Cyanogenesis in plants
Poulton J E (1990) Plant Physiol. 94, 401

Tetrapyrrole dependent photodynamic herbicides
Rebeiz C A, Reddy K N, Nandihalli U B & Velu J (1990) Photochem. Photobiol. 52, 1099

Mechanism of the neurotoxicity of MPTP — an update
Singer T P & Ramsay R R (1990) FEBS Lett. 274, 1-8

Tiazofurin: biological effects and clinical uses [Concise review]
Tricot G, Jayaram H N, Weber G & Hoffman R (1990) Int. J. Cell Cloning, 8, 161

Tetrapyrole assembly and modification into the ligands of biologically functional cofactors
Warren M J & Scott A I (1990) Trends Biochem. Sci. 15, 486

Choline deficiency
Zeisel S H (1990) J. Nutr. Biochem. 1, 332

NITROSAMINES

See AMINES

NUCLEI

See: ORGANELLES AND SUBCELLULAR STRUCTURES

NUCLEIC ACIDS AND POLYNUCLEOTIDES

See also: DNA
RNA

The search for octapic agent nucleic acid
Aiken J M & Marsh R F (1990) Microbiol. Rev. 54, 242-246

Nucleic acid sequence analysis software for microcomputers
Cannon G (1990) Annu. Rev. Biochem. 59, 147

Colloquium on Nucleic Acid Methylation. Frisco, CO, March 31—April 7, 1989
Clawson G A, Willis D B, Weissbach A & Jones P A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 128, 425 pp.
Local amplification of nucleic acids — a new method of analysis [Brief review]
Dehavob V G (1990) Mol. Biol. Engl. Tr. 24, No 2, Pt 1, 239

Molecular evolution: computer analysis of protein and nucleic acid sequences
Doolittle R F, ed. (1990) Methods Enzymol. 183, 736 pp.

9th International Symposium on HPLC of Proteins, Peptides and Polynucleotides, Philadelphia, PA, November 6-8, 1989
Hearn M T W & others (1990) J. Chromatogr. 512, 1-433

Specific regulation of gene expression by antisense, sense and antigene nucleic acids
Hélene C & Toulmé J-J (1990) Biochim. Biophys. Acta. 1049, 99

Electrotransfection of plant protoplasts with viral nucleic acids
Hibi I (1989) Advan. Virus Res 37, 329

High-performance electrophoresis including separation of nucleic acids and their degradation products. Interplay between theory and practical experiments [Plenary lecture]
Hjértén S (1990) Nucleosides Nucleotides, 9, 319

Methodological and ethical aspects of nucleic acid diagnostics — a review
Kessler C (1990) Arzneim. Forsch 40, 952

Tales of poly(A): a review
Monroe D & Jacobson A (1990) Gene, 91, 151-158

Two-quantum UV photochemistry of nucleic acids: Comparison with conventional low-intensity UV photochemistry and radiation chemistry
Nikogosyan D N (1990) Int. J. Radiat. Biol. 57, 233

Structural studies on nucleic acids: from nucleotides to the double helix [Plenary lecture]
Saenger W (1990) Nucleosides Nucleotides, 9, 297

Environmental application of nucleic acid hybridization
Sayler G S & Layton A C (1990) Annu. Rev. Microbiol. 44, 625

Laser-induced strand break formation in DNA and polynucleotides
Schulte-Frohlinde D, Simic M G & Gorner H (1990) Photochem Photobiol 52, 1137

Assimilatory nitrate reductase: functional properties and regulation
Solomonson L P & Barber M J (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 225-251

Structural studies of protein nucleic acid interaction: the sources of sequence-specific binding
Steitz T A (1990) Q. Rev. Biophys. 23, 205

In the beginning is the end: regulation of poly(A) addition and removal during early development
Wickens M (1990) Trends Biochem. Sci. 15, 320

International Symposium on Structure and Function of Nucleic Acids and Proteins, Acad Sinica, Inst Biomed Sci, Taipei, May 11-13, 1989
Wu F Y H & Wu C W, eds (1990) Int. Symp. Struct. Funct. Nucleic Acids Proteins, 336 pp.

NUCLEOSIDES

Adenosine — physiological and pharmacological actions [In Spanish; English abstract]
Contreras E (1990) Arch. Biol. Med. Exp. 23, 1

High-performance electrophoresis including separation of nucleic acids and their degradation products. Interplay between theory and practical experiments [Plenary lecture]
Hjértén S (1990) Nucleosides Nucleotides, 9, 319

Molecular mechanism of N9-aminocytidine mutagenesis [In Japanese; English abstract]
Negishi K (1990) Yakugaku Zasshi, 110, 293

Mass spectrometry: applications in the analysis of nucleosides, nucleotides and oligonucleotides [Plenary lecture]
Schram K H (1990) Nucleosides Nucleotides, 9, 311

NMR analyses of structures and functions of modified nucleosides in transfer ribonucleic acids [Plenary lecture]
Yokoyama S, Muramatsu T, Kawai G & Miyazawa T (1990) Nucleosides Nucleotides, 9, 303

NUCLEOTIDES

Biotinylated oligonucleotides as molecular hybridization probes [Brief review]
Badashkeeva A G & Zaryuvach V F (1989) Mol. Biol. Engl. Tr 25, No 5, Pt 1, 963

Multiple receptor regulation of cyclic nucleotides in rat pinealocytes
Chik C L & Ho A K (1989) Prog. Biophys. Mol. Biol. 53, 197

High performance electrophoresis including separation of nucleic acids and their degradation products. Interplay between theory and practical experiments [Plenary lecture]
Hjértén S (1990) Nucleosides Nucleotides, 9, 319

Transducin — a signaling switch regulated by guanine nucleotides
Ho Y K, Hingorani V N, Navon S E & Fung B K K (1989) Curr Top. Cell. Regul. 30, 171

Pharmacological activity of adenosine dinucleotides in the periphery. Possible receptor classes and transmitter function
Hoyle C H V (1990) Gen. Pharmacol. 21, 827

Coordinate interactions of cyclic nucleotide and phospholipid metabolizing pathways in calcium-dependent cellular processes
Laycock S G (1989) Curr. Top. Cell. Regul. 30, 203

Advances in science and pathology — sense and antisense oligonucleotides
Ross D W (1990) Arch. Path. Lab. Med. 114, 1296

Structural studies on nucleic acids: from nucleotides to the double helix [Plenary lecture]
Saenger W (1990) Nucleosides Nucleotides, 9, 297

Mass spectrometry: applications in the analysis of nucleosides, nucleotides and oligonucleotides [Plenary lecture]
Schram K H (1990) Nucleosides Nucleotides, 9, 311

Replication experiments with nucleotide base analogues
Strazewski P & Tamm V (1990) Angew. Chem. Int. Ed 29, 36

From cell membrane to nucleotides: the phosphate regulon in Escherichia coli
Torriani A (1990) BioEssays, 12, 371

Control of insulin secretion: a model involving Ca2+, cAMP and diacylglycerol
Zawalich W S & Rasmussen H (1990) Mol. Cell. Endocrinol. 70, 119

NUTRITION

Renal failure caused by chemicals, foods, plants, animal venoms, and misuse of drugs — an overview
Abuelo J G (1990) Arch. Intern. Med. 150, 505
Central receptors and recognition sites mediating the effects of monoamines and anorectic drugs on feeding behavior
Angel I (1990) Clin. Neuropharmacol. 13, 361

Nutritional significance of factors affecting carnitine dependent transport of fatty acids in neonates — a review
Atkins J & Claudmin M T (1990) Nutr. Res. 10, 117

Iron deficiency
Baynes R D & Bothwall T H (1990) Annu. Rev. Nutr. 10, 133

Energy contributions of volatile fatty acids from the gastrointestinal tract in various species
Bergman E N (1990) Physiol. Rev. 70, 567

The influence of dietary fat on carcinogenesis: lessons from experimental models
Birt D F (1990) Nutr. Rev. 48, 1

Food supplementation experiments with terrestrial vertebrates: patterns, problems, and the future
Boutin S (1990) Can. J Zool. 68, 203–220

Adaptation of the exocrine pancreas to diet
Branon P M (1990) Annu. Rev. Nutr. 10, 85

Nutritional factors in cataract
Bunce G E, Kinoshita J & Horwitz J (1990) Annu. Rev. Nutr. 10, 233

Multiple roles of a histaminergicafferent neuron in the feeding behavior of Aplysia
Chiel H J, Weiss K R & Kupfermann I (1990) Trends Neurosci. 13, 223

Role of amino acid transport and countertransport in nutrition and metabolism
Christensen H N (1990) Physiol. Rev. 70, 43

Effects of dietary interventions on glomerular pathophysiolog y [Brief review]
Diamond J R (1990) Am. J. Physiol. 258, No 1, Pt 2, F1

Boyd Orr Memorial Lecture: Early nutrition and later achievement
Dobbing J (1990) Proc. Nutr. Soc. 49, 103

An overview of the epidemiological evidence linking diet and cancer
Doll R (1990) Proc. Nutr. Soc. 49, 119

Isomeric trans fatty acids in the U.S. diet
Enig M G, Atal S, Keeny M & Sampugna J (1990) J. Am. Coll. Nutr. 9, 471

Dietary fat and tumor metastasis
Ericsson K I. & Hubbard N E (1990) Nutr. Rev. 48, 6

Digestion and absorption of dietary protein
Ericsson R H & Kim Y S (1990) Annu. Rev. Med. 41, 133

Aromatic amino acids and monoamine synthesis in the central nervous system — influence of the diet
Fernstrom J D (1990) J. Nutr. Biochem. 1, 508

Dietary polyunsaturated fatty acids and eicosanoid formation in humans
Fischer S (1989) Advan. Lipid Res. 23, 169

Yeasts in dairy products
Fleet G H (1990) J. Appl. Bact. 68, 199

Proximate dietary factors and lung cancer
Fontham E T H (1990) Int. J. Epidemiol. 19, Suppl. 1, S32

Analysis of dietary fat, calories, body weight, and the development of mammary tumors in rats and mice — a review
Freedman L S, Clifford C & Messina M (1990) Cancer Res. 50, 5710

Goitrogens in food and water
Gaitan E (1990) Annu. Rev. Nutr. 10, 21

Transfer of persistent chemicals in milk
Gallenberg L A & Vodicnik M J (1989) Drug Metab. Rev. 21, 277–317

Pancreatic glucagon signals postprandial satiety
Geary N (1990) Neurosci. Biobehav. Rev. 14, 323

Consumption of methylxanthine-containing beverages and risk of pancreatic cancer
Gordis L (1990) Cancer Lett. 52, 1–12

The application of compartmental analysis to research in nutrition
Green M H & Green J R (1980) Annu Rev. Nutr. 10, 41

Chemical and nutritional aspects of folate research — analytical procedures, methods of folate synthesis stability, and bioavailability of dietary folates
Gregory J F (1990) Advan. Food Nutr. Res. 33, 1

Dietary influences on serum lipids and lipoproteins
Grundy S M & Getz G (1990) J. Lipid Res. 31, 1149

Metabolic effects of dietary fructose
Hallfrisch J (1990) FASEB J. 4, 2652

Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr. Biochem. 1, 396

Regular review: Dietary fibre
Heaton K W (1990) Br Med. J. 300, 1479

Malnutrition in patients with AIDS
Hecker I R & Kotler D P (1990) Nutr. Rev. 48, 393

Overview of available data on diet and cancer mortality in France
Hill C (1990) Tumors, 76, 299

Workshop on Current Trends in Growth Related Research
— Proceedings of a meeting held in Haifa, Israel, 24–27 October, 1989
Hochberg Z & others (1990) Acta Paediat. Scand. Suppl. 367, 1–177

Oxidation of polyunsaturated fatty acids — mechanisms, products, and inhibition with emphasis on fish
Hsieh R J & Kinsella J E (1989) Advan. Food Nutr. Res. 35, 233

Eating disorders and depression: is there a serotonin connection?
Jimerson D C, Lescrn M D, Kaye W H, Iegg A P & Bresntown T D (1990) Biol. Psychiat. 28, 443

Ionic nutrition of yeast physiological mechanisms involved and implications for biotechnology
Jones R P & Gadd G M (1990) Enzyme Microb. Technol. 12, 402

Nutrition science from vitamins to molecular biology
Jukes T H (1990) Annu. Rev. Nutr. 10, 1

Nutritional aspects of AIDS
Keusch G T & Farthing M J G (1990) Annu. Rev. Nutr. 10, 475

Dietary unsaturated fatty acids — interactions and possible needs in relation to eicosanoid synthesis
Kinsella J E, Droughton K S & Wiselan J W (1990) J. Nutr. Biochem. 1, 123

Dietary n-3-polyunsaturated fatty acids and amelioration of cardiovascular disease: possible mechanisms
Kinsella J E, Lokesh B & Stone R A (1990) J. Clin. Nutr. 52, 1

Proteins in whey — chemical, physical and functional properties
Kinsella J E & Whitehead D M (1990) Advan. Food Nutr. Res. 33, 343

Symposium on Metabolic Control of Food Intake
Koopmans H S & others (1990) Int. J. Obesity, 14, Suppl. 3, 11–135

Is glutamine a conditionally essential amino acid?
Lacey J M & Wilmore D W (1990) Nutr. Rev. 48, 297
Role of vitamin E as nitrite scavenger and N-nitrosamine inhibitor: a review
Lathia D & Blum A (1990) *Int. J. Vitam. Nutr. Res.* 59, 430

New aspects of the Maillard reaction in foods and in the human body
Ledl F & Schlechter E (1990) *Angew. Chem.* 29, 565

International Meeting on Biomembranes and Nutrition: Nutrients Affecting Lipid Composition and Properties of Cell Membranes, Paris, France, June 12-14, 1989
Leger C L & Bereziat G, eds. (1989) *Colloq. INSERM*, 195, 575 pp.

Cholecystokinin — a key integrator of nutrient assimilation
Lewis L D & Williams J A (1990) *News Physiol. Sci.* 5, 163

Diet and metabolic development
Little M-T E & Hahn P (1990) *FASEB J.* 4, 2605

The importance of vitamin E in human nutrition
Lloyd J K (1990) *Acta Paediat.* Scand 79, 6

Molecular approaches to improving the nutritional and functional properties of plant seeds as food sources: developments and comments
Lumen B o de (1990) *J. Agric. Food Chem.* 38, 1779

Bombesin: potential integrative peptide for feeding and satiety
McCoy J G & Avery D D (1990) *Peptides*, 11, 595

Dietary fiber research
Madar Z & Odes S (1990) *Progr. Biochem Pharmacol* 24, 144 pp.

Aging — hypothalamic catecholamines, neuroendocrine-immune interactions, and dietary restriction [Minireview]
Mettes J (1990) *Proc. Soc. Exp. Biol. Med.* 195, 304

Histidine, histamine, and the neuroregulation of food intake — a review and hypothesis
Mercer L P, Dodds S J, Weber M D & Dunn J D (1990) *Nutrition*, 6, 273

Dietary modulation of cytokine production and biologic functions
Meydani S N (1990) *Nutr. Rev.* 48, 361

Diet and cancer — a review
Miller A B (1990) *Acta Oncol.* 29, 87

Calcium in the diet—food sources, recommended intakes, and nutritional bioavailability
Miller D D (1989) *Adv. Food Nutr. Res.* 33, 103

13th Marabou Symposium: Factors Influencing Food Intake in Man
Mogren H (1990) *Nutr Rev.* 48, 37

Appetite regulation by gut peptides
Morley J E (1990) *Annu. Rev. Nutr.* 10, 383

Dietary fatty acids and membrane protein function
Murphy M G (1990) *J. Nutr. Biochem.* 1, 68

A Gompertz age-specific mortality rate model of aging — modification by dietary restriction in rats
Nafsey P J, Boxenbaum H, Cirnulo D A & Fournier D J (1989) *Drug Metab. Rev.* 21, 351

Dietary lipids and thrombosis. Relationships to atherosclerosis
Nordøy A & Goodnight S H (1990) *Atherosclerosis*, 10, 149

A review: Recent developments in tempe research
Nout M J R & Rombouts F M (1990) *J. Appl. Bact.* 69, 609

Dietary carbohydrate source and copper bioavailability
Odell B L (1990) *Nutr. Rev.* 48, 425

Cooked-food mutagens — current knowledge of formation and biological significance
Overvik E & Gustafsson J A (1990) *Mutagenesis*, 5, 437

Mutagens and Carcinogens in the Diet. Satellite Symposium of the 5th International Conference on Environmental Mutagens, Madison, WI, July 5-7, 1989
Pariza M W, Aeschbacher H U, Felton J S & Sato S, eds (1990) *Progr. Clin. Biol. Res.* 347, 332 pp.

Dietary and biochemical aspects of vitamin-E
Parker R S (1990) *Adv. Food Nutr. Res.* 33, 157

A review: The potential for food irradiation
Patterson M F (1990) *Lett. Appl. Microbiol.* 11, 55

International Conference on Nutrition and Aging, Galveston, TX, October 5-7, 1988
Prinsley D M & Sandstead H H, eds (1990) *Progr. Clin Biol. Res.* 320, 396 pp.

A molecular biological approach to reducing dietary amino acid needs
Rees W D, Flint H J & Fuller M F (1990) *BioTechnology*, 8, 629

Dietary fiber and breast cancer
Rose D P (1990) *Nutr. Cancer*, 13, 1

Evaluation of protein digestibility—corrected amino acid score method for measuring protein quality of foods
Sarwar G & McDonough F E (1990) *J. Assoc. Offic. Anal. Chem.* 73, 347

Postprandial Lipid Metabolism and Atherosclerosis — an International Symposium, Frankfurt, March 10, 1990
Scherlitz G & others (1990) *Klin. Wochenschr.* 68, Suppl. 22, R7, 1–124

The role of nutrition in neural tube defects
Scott J M, Kirke P N & Weir D G (1990) *Annu. Rev. Nutr.* 10, 277

Selenium — essentiality, content in food, supplementation, deficiencies
[In French; English abstract]
Simonoff M (1990) *J. Pharm. Belg.* 45, 141

Nutrient partitioning by transgenic animals
Steene N C & Pursel V G (1990) *Annu. Rev. Nutr.* 10, 213

Neuroendocrine mechanisms involved in regulation of body weight, food intake and metabolism
Steffelius A B, Stolbe J II, Balkan D & Scheurink A J W (1990) *Neurosci. Biobehav. Rev.* 14, 305

Symposium: Dietary Lipids and the Central Nervous System
Stockholm, 2–3 November, 1988
Svennerholm L & others (1990) *Upsala J. Med. Sci. Suppl.* 48, 5, 267

Vitamin A prophylaxis programs in developing countries: past experiences and future prospects
Underwood B A (1990) *Nutr. Rev.* 48, 265

A review of the physiological bases of the anorexic action of phenylpropanolamine (d,l-norephedrine)
Wellman P J (1990) *Neurosci. Biobehav. Rev.* 14, 339

Iron nutrition in childhood — papers presented at the Milupa Workshop held in Athens, 10th–11th March 1989
Wharton B A & others (1989) *Acta Paediatr.* Scand Suppl. 361, 1

Choline deficiency
Zeisel S H (1990) *J. Nutr. Biochem.* 1, 332

A mechanistic hypothesis for meat enhancement of nonheme iron absorption — stimulation of gastric secretions and iron chelation
Zhang D J, Carpenter C E & Mahoney A W (1990) *Nutr. Res.* 10, 929

**OBESITY**

Obesity and diabetes
Bray G A (1990) *Acta Diabetol. Lat.* 27, 81
Symposium on Obesity: Towards a Molecular Approach, Keystone, CO, April 17–23, 1989
Bray G A, Ricquier D & Spiegelman B M, eds (1990) UCLA Symp. Mol. Cell. Biol. 58, 132, 307 pp.

Is the endogenous digitalis-like factor the link between hypertension and metabolic disorders as diabetes mellitus, obesity and aeroegaly?
Clerico A & Giampietro O (1990) Clin. Physiol. Biochem. 8, 153

The sympathetic adrenal system, obesity and hypertension: an overview
Landsberg L (1990) J. Neurosci. Methods, 34, 179

OLIGOAMINES
See: AMINES

OOGENESIS
See: GROWTH, GROWTH FACTORS AND DEVELOPMENT

ORGANELLES AND SUBCELLULAR STRUCTURES
See also: CHLOROPLASTS
LYSOSOMES
MITOCHONDRIA
PEROXISOMES
RIBOSOMES

Microtubule dynamics
Avila J (1990) FASEB J 4, 784

The structure and function of the mitotic spindle in flowering plants
Baskin T I & Cande W Z (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 277–315

Spectrin-based membrane skeleton — a multipotential adaptor between plasma membrane and cytoplasm
Bennett V (1990) Physiol. Rev. 70, 1029

Dynamic microvillar cytoskeletons in arthropod and squid photoreceptors
Blest A D & Stowe S (1990) Cell Motil Cytoskel. 17, 1

Drug and metabolite-induced perturbations in nuclear structure and function: a review
Brasch K (1990) Biochem. Cell Biol 68, 408–426

Nuclear-mitochondrial interrelation in aneuploids
Bremen A & Galan E (1990) Plant Sci. 71, 3

1990 Supelco Award Address: Role of cholesterol in the microsomal membrane
Brenner R R (1990) Lipids, 25, 581

Toward a structural and molecular definition of the kinetochore
Brinkley B R (1990) Cell Motil Cytoskel. 16, 104

Secretory vesicle-associated proteins and their role in exocytosis
Burgoyne R D (1990) Annu. Rev. Physiol. 52, 647

Organelle transformation: shoot first, ask questions later
Butow R A & Fox T D (1990) Trends Biochem. Sci 15, 465

Centromeres of budding and fission yeasts
Clarke L (1990) Trends Genet. 6, 150

Microtubule MAPping [Minireview]
Cleveland D W (1990) Cell, 60, 701–702

The mechanobiology of kinesin: a review
Cohn S A (1990) Mol. Chem. Neuropath. 12, 83

The nuclear receptors of retinoic acid
Darmon M (1990) J. Lipid Mediators, 2, 247

The nucleolonema of plant and animal cells: a comparison
Deltour R & Motte P (1990) Biol. Cell, 68, 5

Ultrastructural cytochemistry of the mammalian cell nucleus
Derenzini M, Thiry M & Goessens G (1990) J. Histochem. Cytochem. 38, 1237

Cell cycle control in eukaryotes: molecular mechanisms of cdc2 activation
Draetta G (1990) Trends Biochem. Sci. 15, 378

Non-kinetochore transport phenomena, microtubule–chromosome associations, and force transmission in nuclear division
Fuge H (1990) Prototkasma, 138, 1

The Drosophila cytoskeleton
Fyberg E A & Goldstein L S B (1990) Annu. Rev. Cell Biol. 6, 559

Studies on scaffold attachment sites and their relation to genome function
Gasser S M, Amati B B, Cardenas M E & Hofmann J F X (1989) Int. Rev. Cytol. 119, 57

Membrane-associated cytoskeleton and transbilayer phospholipid asymmetry [Minireview]
Gupta C M (1990) Ind. J. Biochem. Biophys. 27, 365

Structure and function of profilin
Haarer B K & Brown S S (1990) Cell Motil Cytoskel. 17, 71

Nuclear architecture in plants
Heslop-harrison J S & Bennett M D (1990) Trends Genet. 6, 401

Molecular machinery required for protein transport from the endoplasmic reticulum to the Golgi complex
Hice L & Schekman R (1990) BioEssays, 12, 253

Antiparallel microtubule interactions: spindle formation and anaphase B
Hogan C J & Cande W Z (1990) Cell Motil Cytoskel. 16, 99

Sliding filaments and molecular motor systems [Minireview]
Huxley H E (1990) J. Biol. Chem. 265, 9347

Localized messenger RNA and the egg cytoskeleton
Jeffers W R (1989) Int. Rev. Cytol. 119, 151

Genetic approaches to ciliate pattern formation: from self assembly to morphogenesis
Jerkka-Dziadosz M & Beisson J (1990) Trends Genet. 6, 41–45

Diversity among tubulin subunits: toward what functional end?
Joshi H C & Cleveland D W (1990) Cell Motil Cytoskel. 16, 159

Microtubules, membrane traffic, and cell organization [Minireview]
Kelly R B (1990) Cell, 61, 5–7

The T-cell antigen receptor — insights into organelle biology
Klausner R D, Lippincott-schwartz J & Boniface J S (1990) Annu. Rev. Cell Biol 6, 403

The fungal vacuole: composition, function, and biogenesis
Klionsky D J, Herman P K & Emr S D (1990) Microbiol. Rev 54, 266–292

The endoplasmic reticulum and calcium storage
Koch G L E (1990) BioEssays, 12, 527

Role of microtubules in the organization of the Golgi apparatus
Kreis T E (1990) Cell Motil Cytoskel. 15, 67

Assembly of the cell nucleus
Laskey R A & Leno G H (1990) Trends Genet. 6, 406

Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions
Leperc A, Cacau R & Verheij A (1990) Biochimie, 72, 1

Recruitment: the ins and outs of spindle cell formation
Leslie R J (1990) Cell Motil Cytoskel. 16, 225

Ca2+ as a second messenger within mitochondria of the heart and other tissues
McCormack J G & Denton R M (1990) Annu. Rev. Physiol. 52, 451
The XIVth International Symposium for Comparative Research on Leukemia and Related Diseases, Vail, Colorado, 8–12 October 1989

Yohn D S & others (1990) Cancer Res. 50, No. 17, Suppl, S5611–S5703

Ribonucleoparticle-independent transport of proteins into mammalian microsomes [Minireview]

Zimmermann R & others (1990) J. Biocener. Biomembr. 22, 711

OSMOSIS AND PERMEABILITY

Ati1 atrial natriuretic factor in edematous disorders

Cody R J (1990) Annu. Rev. Med. 41, 377

An emerging role for a cardiac peptide hormone in fish osmoregulation

Evans D H (1990) Annu. Rev. Physiol. 52, 43

Importance of organic osmolytes for osmoregulation by renal medullary cells [Brief review]

Garcia-Gonzalez A & Burg M B (1990) Hypertension, 16, 595

Signal transduction and gene regulation through the phosphorylation of two regulatory components: the molecular basis for the osmotic regulation of the porin genes [Microreview]

Mizuno T & Mizushima S (1990) Mol. Microbiol. 4, 1077

Gene expression in response to abscisic acid and osmotic stress

Skriver K & Mundy J (1990) Plant Cell, 2, 503–512

OXIDATION AND ANTIOXIDANTS

Positive control [Minireview]

Adhya S & Garg S S (1990) J. Biol. Chem. 265, 10797–10800

Oxidative muscular injury and its relevance to hyperthyroidism

Asayama K & Kato K (1990) Free Radical Biol. Med. 8, 293

The laboratory diagnosis of inborn errors of mitochondrial fatty acid oxidation

Bennett M J (1990) Annu. Clin. Biochem. 27, 519

The participation of coenzyme-Q in free radical production and antioxidation

Beyer R E (1990) Free Radical Biol. Med. 8, 545

The physiological role of zinc as an antioxidant

Bray T M & Beige R J (1990) Free Radical Biol. Med. 8, 281

Vitamin E: antioxidation activity, biokinetics, and bioavailability

Burton G W & Traber M G (1990) Annu. Rev. Nutr. 10, 357

The steady-state kinetics of cytochrome c oxidation by cytochrome oxidase

Cooper C E (1990) Biochim. Biophys. Acta, 1017, 187

Oxidative stress and abnormal cholesterol metabolism in patients with adult respiratory distress syndrome

Cross C E & others (1990) J. Lab. Clin. Med. 115, 396

Prostaglandin H synthase and xenobiotic oxidation

Elting T E, Thompson D C, Foureman G L, Curtis J F & Hughes M G (1990) Annu. Rev. Pharmacol. Toxicol. 30, 1–45

Evolution of the P450-gene superfamily — animal-plant warfare, molecular drive and human genetic differences in drug oxidation

Gonzalez F J & Nebert D W (1990) Trends Genet. 6, 182

Enzymatic oxidation of xenobiotic chemicals

Gvengerich F P (1990) Crit. Rev. Biochem. Mol. Biol. 25, 97

How to characterize a biological antioxidant

Halliwell B (1990) Free Radical Res. Commun. 9, 1

The sickle erythrocyte in double jeopardy: autoxidation and iron decompartmentalization

Hebbel R P (1990) Seminars Hematol. 27, 51

Oxidation of polyunsaturated fatty acids — mechanisms, products, and inhibition with emphasis on fish

Hsieh R J & Kinsella J E (1989) Advan. Food Nutr. Res. 33, 233

Malondialdehyde and thiobarbituric acid-reactivity as diagnostic indices of lipid peroxidation and peroxidative tissue injury

Janero D R (1990) Free Radical Biol. Med. 9, 515

Free radical generation by redox cycling of estrogens

Liehr J G & Roy D (1990) Free Radical Biol. Med. 8, 415

Sequential transduction of light into redox and acid–base energy in photosynthesis

Losada M, Guerrero M G, Rosa M A de la, Serrano A, HerrÁ & Ortega J M (1990) Bioelectrochem. Bioenerget. 22, 105

Effects of antioxidants on hemoglobin oxidation in the presence of phospholipid dispersions [In Russian]

Slobina M A & others (1990) Khim. Farm. Zh SSSR. 24, No. 12, 7

Autoxidation of oxymyoglobin — a meeting point of the stabilization and the activation of molecular oxygen

Shikama K (1990) Biol. Rev. Cambridge Phil. Soc. 65, 517

Oxidative denaturation of red blood cells in thalassemia

Stinari E & Rachmilewitz E A (1990) Seminars Hematol. 27, 70

Oxidative stress as a causal factor in differentiation and aging — a unifying hypothesis

Sohal R S & Allen R G (1990) Exp. Gerontol. 25, 499

Sensitivity to endotoxin is induced by increased membrane fatty-acid unsaturation and oxidant stress

Stark J M & Jackson S K (1990) J. Med. Microbiol. 32, 217

Role of oxidatively modified LDL in atherosclerosis

Steinbrecher U P, Zhang H F & Lougheed M (1990) Free Radical Biol. Med. 9, 155

Oxidative stress induced by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

Stohs S J (1990) Free Radical Biol. Med. 9, 79

Bacterial defenses against oxidative stress

Storz G, Tartaglia L A, Farr S B & Ames B N (1990) Trends Genet. 6, 363

Free radicals, antioxidant enzymes, and carcinogenesis

Sun Y (1990) Free Radical Biol. Med. 8, 583

Oxidation of alcohols by activated dimethyl sulfoxide and related reactions: an update

Tsudwell T T (1990) Synthesis, Stuttgart, No. 10, 85–1

Lindane-induced liver oxidative stress

Videla L A, Barros S B M & Junqueira V B C (1990) Free Radical Biol. Med. 9, 169

Mechanisms of cardiovascular drugs as antioxidants

Weglicki W B, Mak I T & Simic M G (1990) Free Radical Biol. Med. 9, 119

Inflammation and cancer — role of phagocyte-generated oxidants in carcinogenesis

Weitzman S A & Gordon L I (1990) J. Mol. Cell Cardiol. 22, 1199

Flavanoid-containing monooxygenases. enzymes adapted for multisustrate specificity

Ziegler D M (1990) Trends Pharmacol. Sci. 11, 321
OXIDATIVE PHOSPHORYLATION
Sec. BIOENERGETICS

OXGEN AND OXYGEN COMPOUNDS

Mechanisms for regulating oxygen toxicity in phytophagous insects
Ahmad S & Pardini R S (1990) Free Radical Biol. Med. 8, 401

Turning on the respiratory burst
Baggiolini M & Wynn M P (1990) Trends Biochem. Sci. 15, 69

Reactive oxygen species and airway inflammation
Barnes P J (1990) Free Radical Biol. Med. 9, 235

Molecular mechanisms of oxygen radical carcinogenesis and mutagenesis: the role of DNA base damage
Breimer L H (1990) Mol. Carcinogen. 3, 188

Recent developments in hepatic drug oxidation: implications for clinical pharmacokinetics
Brosen K (1990) Clin. Pharmacokinet. 18, 220-239

The role of glutamate neurotoxicity in hypoxic–ischemic neuronal death
Choi D W & Rothman S M (1990) Ann. Rev Neurosci. 13, 171

Allosteric regulators of reversible haemoglobin oxygenation [in Russian; English abstract]
Chuvilin A N, Serebrennikova G A & Evstigneeva R P (1990) Bioorg. Khim. 16, 1157

Secondary ^18O isotope effects as a tool for studying reactions of phosphate mono-, di-, and triesters
Cleland W W (1990) FASEB J. 4, 2889

Chloride binding proteins: Mechanistic implications for the oxygen-evolving complex of Photosystem II [Minireview]
Colclough W J (1990) Photosynthesis Res. 23, 1

Defining hypoxia: a systems view of VO2, glycolysis, energetics, and intracellular pO2 [Brief review]
Connett R J, Honig C R, Gayeski T E J & Brooks G A (1990) J. Appl Physiol. 68, 833

A new cellular function for peroxisomes related to oxygen free radicals
Delrio L A, Sandalio L M & Palma J M (1990) Biochim. Biophys. Acta 1014, 46, 989

Biochemical events associated with rapid cellular damage during the oxygen–paradoxes and calcium–paradoxes of the mammalian heart [Minireview]
Duncan C J (1990) Experientia, 46, 41

Role of oxygen free radicals in carcinogenesis and brain ischemia
Floyd R A (1990) FASEB J. 4, 2587

Photosystem II and the oxygen–evolving complex
Ghanotakis D F & Youcam C F (1990) Annu. Rev Plant Physiol. Plant Mol. Biol. 41, 255-276

Cortical endoplasmic reticulum in plants
Hepler P K, Palevitz B A, Lancelle S A, McCauley M M & Lichtscheidl I (1990) J. Cell Sci. 90, 355

The molecular basis of brain injury and brain edema: the role of oxygen free radicals
Ikeda Y & Long D M (1990) Neurosurgery, 27, 1

Reactive oxygen and glomerular dysfunction
Iwasaki K (1990) Xenobiotica, 20, 909

Transcriptional regulatory cascade of nitrogen-fixation genes in anoxygenic photosynthetic bacteria — oxygen-responsive and nitrogen-responsive factors [Minireview]
Kranz R G & Fosterhartnett D (1990) Mol. Microbiol. 4, 1793

Nerve blood flow and oxygen delivery in normal, diabetic, and ischemic neuropathy
Low P A, Lagerlund T D & Meimanis P G (1989) Int. Rev. Neurobiol. 31, 355

The lymphocyte-B — a newly recognized source of reactive oxygen species with immunoregulatory potential
Maly F E (1990) Free Radical Res. Commun. 8, 143

Biochemical basis of ozone toxicity
Mustafa M G (1990) Free Radical Biol. Med. 9, 245

The mammalian reo mirror and ozone availability [Minireview]
O'Dea J D (1990) Comp. Biochem. Physiol. Pt A, 95, 23

Studies on the activation of molecular oxygen and biological defence mechanism against active oxygen species [in Japanese; English abstract]
Ozawa T (1990) Yakugaku Zasshi, 110, 617

Abnormal oxygen-dependent processes in burn disease — present status and possible mechanism [in Russian; English abstract]
Raybourn V E & Lifshits R I (1990) Top. Clin. Med. Khim. 36, 7

Oxygen toxicity in the neonatal period
Saugstad O D (1990) Acta Paediatr. Scand. 79, 881

Oxygen radicals in intestinal ischemia and reperfusion
Schoenberg M H & Beger H G (1990) Chem-Biol. Inter. 76, 141

Autoxidation of oxymyoglobin — a meeting point of the stabilization and the activation of molecular oxygen
Shikama K (1990) Biol. Rev. Cambridge Phil. Soc. 65, 517

Free radicals and anticancer drug resistance — oxygen free radicals in the mechanisms of drug cytotoxicity and resistance by certain tumors
Sinha B K & Mimnaugh E G (1990) Free Radical Biol. Med. 8, 567

FNR and its role in oxygen-regulated gene expression in Escherichia coli
Spiro S & Guest J R (1990) FEMS Microbiol. Rev. 75, 399

The measurement of oxygen-derived free radicals and related substances in medicine
Weber G F (1990) J. Clin Chem Clin. Biochem. 28, 509

Cellular, biochemical and functional effects of ozone: new research and perspectives on ozone health effects [Minireview]
Wright E S, Dziedzic D & Wheeler C S (1990) Toxicol. Lett. 51, 125

PANCREAS

Calcitonin gene-related peptide (CGRP) and amylin and the endocrine pancreas
Ahren B & Pettersson M (1990) Int. J. Pancretol. 6, 1

Review — Progastrin in pancreas and the Zollinger–Ellison syndrome
Bardram L (1990) Scand. J. Gastroenterol. 25, 1185

Experimental models of acute pancreatitis [Current research review]
Bilichik A J, Leach S D, Zucker K A & Moulin I M (1990) J. Surg Res. 48, 639

Adaptation of the exocrine pancreas to diet
Brannon P M (1990) Annu. Rev. Nutr. 10, 85

Pancreatic glucagon signals postprandial satiety
Geary N (1990) Neurosci. Biobehav. Rev. 14, 323

Consumption of methylxanthine-containing beverages and risk of pancreatic cancer
Gordis L (1990) Cancer Lett. 52, 1-12

Proinsulin trafficking and processing in the pancreatic B cell
Halban P A (1990) Trends Endocrinol. Metab. 1, 261
The generation of genetic diversity in malaria parasites
McConkey G A, Waters A P & McCutchan T F (1990) Annu. Rev. Microbiol. 44, 479

Genetic control of cell communication in C. elegans development
Maine E M & Kimble J (1990) BioEssays, 12, 261

Macrophage–parasite interactions in Leishmania infections
Mauel J (1990) J. Leukocytl Biol. 47, 187

Specificity of attachment of fungal parasites to their hosts
Mawoche M S & Chen Y (1990) Can. J. Microbiol. 36, 69–76

Parasites and allergy — evidence for a cause and effect relationship
— Review
Maquelin R & Pritchard D I (1990) Clin. Exp. Allergy. 20, 611

Serological diagnosis of trichinosis by enzyme linked immunosorbent assay (ELISA)
Nakai Y & Ogimoto K (1989) Jap. J. Med. Sci. Biol. 42, 149-161

Physiology of the interaction of angiosperm parasites and their higher plant hosts: Commissioned review
Press M C, Graves J D & Stewart G R (1990) Plant Cell Envir. 13, 91

Molecular biology of human lymphatic filariasis [Minireview]
Rajan T V (1990) Exp. Parasitol. 70, 306

Chitin metabolism: a target for drugs against parasites
Spindler K-D, Spindler-Barth M & Londershausen M (1990) Parasitol. Res 76, 283

The physiology and biochemistry of parasitic angiosperms
Stewart G R & Press M C (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 127–151

The role of the major histocompatibility complex in resistance to parasite infections
Wassom D L & Kelly E A B (1990) Curr. Rev. Immunol. 10, 31

Parasite antigenemia in lymphatic filariasis [Minireview]
Weil G J (1990) Exp. Parasitol. 71, 351

Parasitoids, polydnnaviruses and endosymbiosis
Whitfield J B (1990) Parasitol. Today. 6, 381

The cystic fibrosis defect approached from different angles — new perspectives on the gene, the chloride channel, diagnosis and therapy
Halley D J J & others (1990) Eur. J. Pediatr. 149, 670

Tubular lysosomes in exocrine acinar cells: a review
Oliver C (1990) Acta Histochem. Cytochem. 23, 31

Control of insulin secretion in pancreatic β-cells
Petersen O H (1990) News Physiol. Sci. 5, 254

Recent studies of fish pancreatic hormones — selected topics
Plisetskaya E M (1990) Zool. Sci 7, 335

Cystic fibrosis: a disease in electrolyte transport
Quinton P M (1990) FASEB J. 4, 2709

Stem cell potential of ductular and periductular cells in the adult rat pancreas
Rao M S, Yeldandi A V & Reddy J K (1990) Cell Differentiation Dev 29, 155

Intestinal and Pancreatic Adaptation: Adaptational Response and Repair Mechanisms in the Enteropancreatic System — Proceedings of the 4th International Conference held in Berlin, October 25–29, 1989
Riecken E O & others (1990) Digestion. 46, Suppl. 2, 1–472

From basic defect to symptoms in cystic fibrosis — Proceedings of a Symposium on the occasion of the 20th Anniversary of the Dutch Cystic Fibrosis Association, 21–22 April 1989
Van der Laag J & others (1989) Acta Paediat. Scund. Suppl. 365, 5

Abnormal regulation of ion channels in cystic fibrosis epithelia
Welsh M J (1990) FASEB J. 4, 2718

PARASITES

Symposium on Parasites: Molecular Biology, Drug and Vaccine Design, Keystone, CO, April 3–10, 1989
Agabian N & Cerami A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 180, 504 pp.

Sexual differentiation in malaria parasites
Alano P & Carter R (1990) Annu. Rev. Microbiol. 44, 429

DNA probe diagnosis of parasitic infections [Minireview]
Darker R H J (1990) Exp. Parasitol. 70, 494

RNA editing in trypanosomes — is there a message?
Bonne R (1990) Trends Genet 6, 177

New macrofilaricidal leads from plants?
Cronley J C W (1980) Trop. Med. Parasitol. 41, 1

Cellular and genetic aspects of antigenic variation in trypanosomes
Cross G A M (1990) Annu. Rev. Immunol 8, 83

Sensitivity of parasites to free radical damage by antiparasitic drugs
Docampo R (1990) Chem-Biol. Inrev. 73, 1

A comparison of trans-RNA splicing in trypanosomes and nematodes
Donelson J E & Zeng W (1990) Parasitol. Today, 6, 327

Biochemistry of microfilarial exsheathment [Minireview]
Fuhrman J A (1990) Exp. Parasitol. 70, 363

The hsp70 multigene family of C. elegans [Minireview]
Heschl M F P & Baillie D L (1990) Comp. Biochem. Physiol. Pt B, 99, 633

Heat-shock proteins: a missing link in the host–parasite relationship? [Minireview]
Kaufmann S H E (1990) Med. Microbiol. Immunol. 179, 61

Arachidonic acid metabolism in filarial parasites [Minireview]
Liu L X & Weller P F (1990) Exp. Parasitol. 71, 496

PEPTIDES AND POLYPEPTIDES

See also: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS
NEUROTRANSMITTERS AND RECEPTORS
PROTEINS

Peptide competition for antigen presentation
Adorini L & Nagy Z A (1990) Immunol. Today. 11, 21

Biochemistry of the erythrocyte K+ polypeptides — a review
Agre P, Smith B L & Hartlfschenk S (1990) Yale J. Biol. Med. 63, 461

Calcitonin gene-related peptide (CGRP) and amylin and the endocrine pancreas
Ahren B & Pettersson M (1990) Int. J. Pancreatol 6, 1

Biochemistry of multifunctional cytokines: IL 6 and related molecules (IL and TNF)
Akira S, Hirano T, Tartaglia M & Kashimoto T (1990) FASEB J. 4, 2860

Somatostatin gene expression
Andrissani O M & Dixon J E (1990) Annu. Rev. Physiol 52, 793

Stress–ethanol interaction — involvement of endogenous opioid mechanisms
Aragon C M G, Trudeau L E & Amit Z (1990) Neurosci. Biobehav Rev 14, 535
Protease-catalyzed syntheses of peptides in biphasic aqueous-organic systems
Kuhl P & Jakubke H-D (1990) Pharmacazie, 45, 393

Neuropeptide-mediated transmission of nociceptive information and its regulation — novel mechanisms of analgesics [In Japanese; English abstract]
Kuraishi Y (1990) Yakagakuzasashi, 110, 711

Peptide YY and neuropeptide Y in the gut — availability, biological actions, and receptors [Brief review]
Laburthe M (1990) Trends Endocrinol. Metab. 1, 168

Cytotoxic mechanism of tumor necrosis factor-alpha
Larrick J W & Wright S C (1990) FEBS J. 4, 3215

Endogenous opioid peptides and cardiac arrhythmias
Lee A Y S (1990) Int. J. Cardiol. 27, 145

Neuropeptide Y: an overview
Lehmann J (1990) Drug Dev. Res. 19, 329

Antimicrobial polypeptides of human neutrophils
Lehrer R I & Ganz T (1990) Blood, 76, 2169

Endothelin — a new cardiovascular regulatory peptide
Lerman A & others (1990) Mayo Clin. Proc. 65, 1441

Molecular characterization of opioid receptors
Loh H H & Smith A P (1990) Annu. Rev. Pharmacol. Toxicol. 30, 123-147

Homologies between the amino acid sequences of some vertebrate peptide hormones and peptides isolated from invertebrate sources [Minireview]
Loof A de & Schoofs L (1990) Comp. Biochem. Physiol. Pt B, 95, 459

Bombesin: potential integrative peptide for feeding and satiety
McCoy J G & Avery D D (1990) Peptides, 11, 595

VIP neurons in the cerebral cortex
MagniAretti P J (1990) Trends Pharmacol. Sci 11, 250

The tissue-specific processing of pro-ACTH/endorphin — recent advances and unsolved problems [Brief review]
Mains R E & Epper B A (1990) Trends Endocrinol. Metab. 1, 388

Calcium binding proteins. Elucidating the contributions to calcium affinity from an analysis of species variants and peptide fragments
Marsden B J, Shaw G S & Sykes B D (1990) Biochem. Cell Biol. 68, 587-601

International Conference on Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, Siena, Italy, October 22-25, 1989
Melli M & Parente L, eds (1990) Progr. Clin. Biol. Res. 349, 463 pp.

Alteration of intracellular traffic by monensin; mechanism specificity and relationship to toxicity
Molkenhauer H I, Moro E D J & Rowe L D (1990) Biochim. Biophys. Acta. 1031, 225

New perspectives on the structure and function of ubiquitin
Monia B P, Eckert D J & Crooke S T (1990) Bio/Technology, 8, 209

Appetite regulation by gut peptides
Morley J E (1990) Annu. Rev. Nutr. 10, 383

Glutathione S-transferases and drug resistance
Morrow C S & Cowan K H (1990) Cancer Cells, 2, 15

Islet amyloid polypeptide. A new β cell secretory product related to islet amyloid deposits [Minireview]
Nishi M, Sanke T, Bell G I & Steiner D F (1990) J. Biol. Chem. 265, 4173

Recent advances in capillary electrophoresis of proteins, peptides and amino acids
Novotny M V, Cobb K A & Liu J P (1990) Electrophoresis, 11, 735

The role of tumor necrosis factor-α in acquired immunodeficiency syndrome
Odeh M (1990) J. Intern. Med. 228, 549

Absorption of peptides and proteins from the respiratory tract and the potential for development of locally administered vaccine
Ohagan D T & Illum L (1990) Crit. Rev. Ther. Drug Carr. Syst. 7, 35

Endogenous opiates — 1989
Olson G A, Olson R D & Kastin A J (1990) Peptides, 11, 1277

The controlled parenteral delivery of polypeptides and proteins
Pitt C G (1990) Int. J. Pharmacuet. 59, 175

Recent advances in solid-phase peptide synthesis and preparation of antibodies to synthetic peptides
Plaufe S, Muller S, Bruand J P & Van Regenmortel M H V (1990) Biologicals, 18, 147

Cytokines and endothelial cell biology
Pober J S & Cotran R S (1990) Physiol. Rev. 70, 427

Glucose homostasis and endogenous opioid peptides [Therapeutic review]
Ramabadran K & Bansiath M (1990) Int. J. Clin. Pharmacol. Thera. Toxicol. 28, 89

Glutathione: toxicological implications
Reed D J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 603-631

Posttranslational attenuation of peptide gene expression
Rehfeld J F (1990) FEBS Lett. 268, 1

The patterns of neurotransmitter and neuropeptide co-occurrence among striatal projection neurons — conclusions based on recent findings
Reiner A & Anderson K D (1990) Brain Res. Rev. 15, 251

Is atrial natriuretic factor a physiological regulator of sodium excretion? — A review of the evidence
Richards A M (1990) J. Cardiov. Pharmacol. 16, Suppl. 7, 539

Synthetic peptide vaccines against pathogens and biological mediators
Rivcau G J & Audibert F M (1990) Trends Pharmacol. Sci. 11, 194

Regulation of brain atrial natriuretic peptide and angiotensin receptors — quantitative autoradiographic studies
Saavedra J M, Castren E, Gutkind J S & Nazarali A J (1989) Int. Rev. Neurobiol. 31, 257

Atrial natriuretic peptides
Sagel G A & Macgregor G A (1990) Q. J. Med. 77, 1001

The neuropeptide saga [Plenary lecture]
Scharrer B (1990) Am. Zool. 30, 887

Tumor necrosis factor. an update on basic research and clinical applications
Semenzato G (1990) Cancer Cells, 2, 15

Ischemic brain injury — a cytokine with multiple biological activities
Siegfried B, Frischknecht R H & Desouza R L N (1990) Neurosci. Biobehav. Rev. 14, 481

Hormonal control of neuropeptide gene expression in sexually dimorphic olfactory pathways
Simerly R B (1990) Trends Neurosci. 13, 104
Cellular signaling by peptides of the endothelin gene family
Simonson M S & Dunn M J (1990) FASEB J 4, 2989

Antigen recognition and peptide-mediated immunotherapy in autoimmune disease
Smilk D E, Lock C B & Medovitt H O (1990) Immunol Rev. 118, 37

The role of immuno-peptides in the regulation of anterior pituitary hormone release [Brief review]
Spangelo B L & Macleod R M (1990) Trends Endocrinol Metab. 1, 408

The heavy metal-binding peptides of plants
Steffens J C (1990) Annu Rev Plant Physiol. Plant Mol. Biol. 41, 553-575

Peptide mediators of hypercalcemia in malignancy
Strewler G J & Nisonoff A R (1990) Annu. Rev. Med. 41, 35

Pharmaceutical studies on drug dependence in rodents. Dependence on opioids and CNS depressants
Suzuki T (1990) Jap. J Pharmacol 52, 1

Physiological and pharmacological actions of a neuroactive dipeptide, kyotorphin, and its precursor, L-arginine, and clinical application [In Japanese; English abstract]
Takagi H (1990) Folia Pharmacol Jap 96, 85

Determining the functional conformations of biologically active peptides
Taylor J W & Osapay G (1990) Acc Chem Res. 23, 338

Ionc, neuronal and endocrine influences on the propionelactoncocin system of the hypothalamus [Minireview]
Tilgada E & Wilson J F (1990) Life Sci. 46, 81-90

Conformationally restricted peptides through short-range cyclization
Toniole C (1990) Int. J. Peptide Protein Res 35, 287

Brain-gut peptides, renal function and cell growth [Editorial review]
Unwin R J, Ganz M D & Sterzel R B (1990) Kidney Int. 37, 1031

The effects of interleukin-1 on articular cartilage destruction as observed in arthritic diseases, and its therapeutic control
Verschure P J & Vannoorden C J F (1990) Clin. Exp. Rheumatol. 8, 303

Atrial natriuretic peptide in peripheral organs other than the heart
Vollmar A M (1990) Klin. Wocheenschre. 68, 699

Glutathione S transferases in relation to their role in the biotransformation of xenobiotics
Vos R M E & Bladeren P J van (1990) Chem.-Biol. Int. 75, 241

Recent developments in the research of opioid receptor subtype molecular characterization [Short review]
Wollemann M (1990) J Neurochem 34, 1095

Regulation of rat inhibin synthesis in the rat ovary
Woodruff T K & Mayo K E (1990) Amnu Rev. Physiol. 52, 807

Renal action of atrial natriuretic peptide: regulation of collecting duct sodium and water transport
Zeidel M L (1990) Amnu Rev Physiol. 52, 747

44 K Cels: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]
Zeytin F N (1989) Trends Endocrinol. Metab. 1, 107

Mast cell degranulating peptide: a multi-functional neurotoxin
Ziai M R, Russek S, Wang H-C, Beer B & Blume A J (1990) J Pharm Pharmacol. 42, 457

PEPTIDOGLYCANS
See: POLYSACCHARIDES

PERMEABILITY
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PEROSISOMES
A new cellular function for peroxisomes related to oxygen free radicals
Delrio L A, Sandalio L M & Palma J M (1990) Experience. 46, 989

Topogenesis of peroxisomal proteins
Osumi T & Fujiki Y (1990) BioEssays, 12, 217

The inborn errors of peroxisomal beta-oxidation — a review
Wanders R J A & others (1990) J. Inher. Metab. Dis. 13, 4

PECTICIDES
An assessment of the toxicological properties of pyrethroids and their neurotoxicity
Aldridge W N (1990) Crit. Rev. Toxicol. 21, 89

Association between soft tissue sarcomas, malignant lymphomas, and phenox herbicides/chlorophenols: evidence from occupational cohort studies
Johnson L S (1990) Fund Appil. Toxicol. 14, 219

Neurotoxicological effects and the mode of action of pyrethroid insecticides
Vijverberg H P M & Vandenberken J (1990) Crit. Rev. Toxicol. 21, 105

Neurobehavioral effects of toxicity due to metals, solvents and insecticides
White R F, Feldman R G & Travers P H (1990) Clin. Neuropharmacol. 13, 392

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See: HYDROGEN, HYDROGEN EXCHANGE AND HYDROGEN IONS

PHEROMONES
See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

PHOSPHATES
Regulation of carbohydrate metabolism by glucose 1,6-bisphosphate in extrahepatic tissues; comparison with fructose 2,6-bisphosphate
[Minireview]
Beiter R (1990) Int. J. Biochem. 22, 553

Secondary O isotope effects as a tool for studying reactions of phosphate mono-, di-, and triesters
Cleland W W (1990) FASEB J. 4, 2889

Polyammonium macrocycles as catalysts for phosphoryl transfer - the evolution of an enzyme mimic
Mertes M P & Mertes K B (1990) J Am. Chem Soc. 112, 239 pp.

Molecular aspects of phosphate transport in Escherichia coli
[MicroReview]
Rao N N & Torriani A (1990) Mol Microbiol 4, 1083
Inhibition of ribulose 1,5-bisphosphate carboxylase/oxygenase by 2-carboxyarabinitol-1-phosphate
Servaites J C (1990) Plant Physiol. 92, 867

Fructose-2,6-bisphosphate as a regulatory molecule in plants
Stitt M (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 153–185

From cell membrane to nucleotides: the phosphate regulon in Escherichia coli
Torriani A (1990) BioEssays, 12, 371

Induction of a phosphomannosyl binding lectin activity in Giardia
Ward H D, Keusch G T & Pereira M E (1990) BioEssays, 12, 211

PHOSPHOGLYCERIDES
See: LIPIDS

PHOSPHORUS COMPOUNDS
See also: PHOSPHATES

Mechanism of organophosphor ester-induced delayed neurotoxicity
Abou-Donia M & Lapadula D M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 405–440

Amplification of butyrylcholinesterase and acetylcholinesterase genes in normal and tumor tissues: putative relationship to organophosphorus poisoning
Soreq H & Zakut H (1990) Pharmaceut. Res. 7, 1

PHOTOSYNTHESIS

Nature of the primary photochemical events in rhodopsin and bacteriorhodopsin
Birge R R (1990) Biochim. Biophys. Acta, 1016, 293

Mechanisms of long-distance electron transfer in proteins — lessons from photosynthetic reaction centers
Boxer S G (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 267

The structure and function of CPa-1 and CPa-2 in photosystem II [Minireview]
Bricker T M (1990) Photosynthesis Res. 24, 1

A reverse Krebs cycle in photosynthesis: consensus at last [Minireview]
Buchanan B B & Arnon D I (1990) Photosynthesis Res. 24, 47

Chloride binding proteins: Mechanistic implications for the oxygen-evolving complex of Photosystem II [Minireview]
Coleman W J (1990) Photosynthesis Res. 23, 1

Spectroscopic analysis of genetically modified photosynthetic reaction centers
Coleman W J & Youvan D C (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 333

Stable carbon isotope fractionation by marine phytoplankton during photosynthesis: commissioned review
Descolas-Gros C & Fontugne M (1990) Plant Cell Environ. 23, 207

The mechanisms contributing to photosynthetic control of electron transport by carbon assimilation in leaves [Minireview]
Foyer C, Darwin B, Harbinson J & Herton P (1990) Photosynthesis Res. 25, 83

Photosystem II and the oxygen-evolving complex
Ghanotakis D F & Yocum C F (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 25–276

Photosystem II heterogeneity: the acceptor side [Minireview]
Govindjee (1990) Photosynthesis Res. 25, 151

Limitations of the primary events of CO2 fixation in photosynthetic organisms: the structure and mechanism of rubisco
Gutteridge S (1990) Biochim. Biophys. Acta, 1015, 1

Current perceptions of Photosystem II [Minireview]
Hansson O & Wydrzynski T (1990) Photosynthesis Res. 23, 131

A structural basis of light energy and electron transfer in biology [Lecture]
Huber R (1990) Eur J Biochem. 187, 283–305

Transcriptional regulatory cascade of nitrogen-fixation genes in anoxygenic photosynthetic bacteria — oxygen-responsive and nitrogen-responsive factors [Micoreview]
Kranz R G & Fosterhartnett D (1990) Mol. Microbiol. 4, 1793

Sequential transduction of light into redox and acid-base energy in photosynthesis
Losada M, Guercero M G, Rosa M A de Ia, Seriando A, Ilevis & Ortega J M (1990) Bioelectrochem. Bioenerget. 23, 105

Special issue: Sixth European Bioenergetics Conference (EBEC). The photosynthetic reaction centre from the purple bacterium Rhodopseudomonas viridis — an overview and recent advances
Michel H, Sinning I, Koepke J, Ewald G & Fritzsch G (1990) Biochim. Biophys. Acta, 1018, 115

Sunbeams and photosynthesis in plant canopies
Peachy R W (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 421–453

Resonance Raman studies of bacterial reaction centers [Review]
Robert B (1990) Biochim. Biophys. Acta, 1017, 99

Metabolism of 2-carboxyarabinitol-1-phosphate and regulation of ribulose-1,5-bisphosphate carboxylase activity [Minireview]
Semann J R, Kobza J & Moore B D (1990) Photosynthesis Res. 23, 119

PIGMENTS

Biosynthesis of the tetrapyrrole pigment precursor, delta-aminolevulinic acid, from glutamate
Beale S I (1990) Plant Physiol. 93, 1273

Biosynthesis of phycobilins. Formation of the chromophore of phytochrome, phycoerythrin and phycoerythrin
Brown S B, Houghton J D & Vernon D I (1990) J. Photochem. Pho.tobiol. B: Biol. 3, 3

Metabolism of carotenoid pigments in birds
Brush A H (1990) PASEB J. 4, 2969

Carotenoids and photoprotection in plants — a role for the xanthophyll zeaxanthin
Demmigadams B (1990) Biochim. Biophys. Acta, 1020, 1

New light on visual pigment genes [Minireview]
Jay B (1990) Br J. Ophthalmol. 74, 238

Carotenoids: recent progress, problems and prospects
Karnaoukov V N (1990) Comp. Biochem. Physiol. Pt B, 95, 1

Melanin as a virulence factor in pathogenic fungi
Polak A (1990) Mycoses, 33, 215

Ultra-fast laser spectroscopy of visual pigments
Shichida Y (1990) Photochem. Photobiol. 52, 1179

Hypocrellins and their use in photosensitization
Zhenjun D & Lown J W (1990) Photochem. Photobiol. 52, 609–616
PLANTS AND PLANT PRODUCTS

Renal failure caused by chemicals, foods, plants, animal venoms, and misuse of drugs — an overview
Abuelo J G (1990) Arch. Intern. Med. 150, 505

The structure and function of the mitotic spindle in flowering plants
Baskin T I & Cande W Z (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 277–315

Quantitative variations of nuclear DNA during plant development: a critical analysis
Bassi P (1990) Biol. Rev. 65, 185

Chlorophyll binding proteins with antenna function in higher plants and green algae
Bassi R, Rigoni F & Giacometti G M (1990) Photochem. Photobiol. 52, 1187

Genetics and molecular biology of alternative nitrogen fixation systems
Bishop P E & Joerger R D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 109–125

Genetic engineering of plants for insect resistance
Boulter D, Gatehouse J A, Gatehouse A M R & Hilder V A (1990) Endavour, 14, 185

The plasma membrane H+–ATPase of higher plant cells: biochemistry and transport function
Briskin D P (1990) Biochim. Biophys. Acta, 1019, 95

Ca2+-translocating ATPase of the plant plasma membrane
Briskin D P (1990) Plant Physiol. 94, 397

Biosynthesis of phycobilins. Formation of the chromophore of phycocyanin and phycoerythrin
Brown S B, Houghton J D & Vernon D I (1990) J. Photochem. Photobiol. B-Biol. 5, 3

Light as a signal influencing the phosphorylation status of plant proteins
Budden J A & Randall D D (1990) Plant Physiol. 94, 1501

Measuring intracellular Ca2+ levels in plant cells using the fluorescent probes, indo-1 and fura-2 — progress and prospects
Bush D S & Jones R L (1990) Plant Physiol. 93, 841

Nitrate reductase — a target for molecular and cellular studies in higher plants
Chadwick D J & Marsh J, eds (1990) Plant Physiol. 93, 841

Codon usage in higher plants, green algae, and cyanobacteria
Campbell W H & Gowri G (1990) Plant Physiol. 92, 1

Embryogenic cell lines in plant tissue cultures: occurrence and behavior
Carman J G (1990) In Vitro, 26, 746

Symposium on Bioactive Compounds from Plants. Bangkok, Thailand, February 20–22, 1990
Chadwick D J & Marsh J, eds (1990) CIBA Fdn Symp. 154, 242 pp.

Acetylenes and related compounds in Cynareae
Christensen L P & Lam J (1990) Phytochemistry. 29, 2753

New macrofilaricidal leads from plants?
Comley J C W (1990) Trop. Med. Parasitol. 41, 1

Medicinal plant biotechnology
Constabel F (1990) Planta Med. 56 421

The nucleolus of plant and animal cells: a comparison
Deltour R & Motte P (1990) Biol. Cell. 68, 5

Carotenoids and photoprotection in plants — a role for the xanthophyll zeaxanthin
Demmig-Adams B (1990) Biochim. Biophys. Acta, 1020, 1

Role of mineral ions in the control of plant morphogenesis: example of the inhibition of the growth of Bidens pilosa L [In French. English abstract]
Desbiez M O, Frachisse J M & Thellier M (1989) C. R. Soc. Biol. 183, 493

Molecular communication in interactions between plants and microbial pathogens
Dixon R A & Lamb C J (1990) Annu. Rev. Plant Physiol. Plant Mol Mol Biol. 41, 339–367

Cell-specific gene expression in plants
Edwards J W & Coruzzi G M (1990) Annu. Rev. Genet. 24, 275

Transmembrane signaling via phosphatidylinositol 4,5-bisphosphate hydrolysis in plants
Edspsahr K J & Thompson G A (1990) Plant Physiol. 93, 361

Gametocidal chromosomes and their induction of chromosome mutations in wheat
Endo T R (1990) Jap. J. Genet. 65, 135

The mechanisms contributing to photosynthetic control of electron transport by carbon assimilation in leaves [Mini-review]
Foyer C, Furbank R, Harbinson J & Horton P (1990) Photosynthesis Res. 25, 83

Genetic engineering of plants for virus resistance [Brief review]
Gadani F, Mansky I. M, Mefcici R, Miller W A & Hill J H (1990) Arch. Viral 115, 1

3-Isoprenylcoumarins
Galán R H, Massanat G M, Luis F R & Salvá J (1990) Phytochemistry, 29, 2053

Polyamines in plant physiology
Galston A W & Sawhney R K (1990) Plant Physiol. 94, 406

Organo-specific and inducible expression of potato genes [Brief review]
Gartel A L, Mansky L M, Medici R, Miller W A & Hill J H (1990) Trends Genet. 6, 155

Molecular light switches for plant genes
Gilmartin P M, Sarokin L, Memelink J & Chua N-H (1990) Plant Cell, 2, 369–378

Evolution of the P450-gene superfamily — animal–plant warfare, molecular drive and human genetic differences in drug oxidation
Gonzalez F J & Nebert D W (1990) Trends Genet. 6, 182

Phytochemicals: differentiation and function
Gottlieb O R (1990) Phytochemistry, 29, 1715

Plant growth and development in molecular perspective
Hathaway D E (1990) Biol. Rev. Cambridge Phil Soc. 65, 473

Nitrogen fixation genes involved in the Daidyliscadium japonicum–soybean symbiosis [Mini-review]
Hennecke H (1990) FEBS Lett. 268, 422–426

Cortical endoplasmic reticulum in plants
Hepler P K, Palevitz B A, Lancelle S A, McCauley M M & Lichtscheidl I (1990) J Cell Sci. 96, 355

Nuclear architecture in plants
Hesiophotarrison J S & Bennett M D (1990) Trends Genet. 6, 401

Electrotransfection of plant protoplasts with viral nucleic acids
Hibi I (1989) Advan. Virus Res. 37, 329

Plant protoplast fusion by electromanipulation
Hibi T (1989) Advan. Cell Culture, 7, 147
Recent developments in the isolation and structure elucidation of naturally occurring iridoid compounds
Junior P (1990) Planta Med. 56, 1

Spirosolane-containing solanum species and induction of congenital craniofacial malformations — review article
Keeler R F, Baker D C & Gaffield W (1990) Toxicon, 28, 873

Gene-for-gene complementarity in plant-pathogen interactions
Keen N T (1990) Annu. Rev. Genet. 24, 447

Novel occurrence of uncommon polyamines in higher plants
Kuehn G D, Rodriguezgrayar B, Bagga S & Phillips G C (1990) Plant Physiol. 94, 855

Symposium on Plant Gene Transfer, Park City, UT, April 1–7, 1989
Lamb C J & Beachy R N, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 129, 345 pp.

Allium sativum (garlic) and cancer prevention
Lau B H S, Tadi P P & Tsoi J M (1990) Nutr. Res. 10, 937

Lignin: occurrence, biogenesis, and degradation
Lewis N G & Yamamoto E (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 455-496

Maize R gene family: tissue-specific helix–loop–helix proteins
Ludwig S R & Wesser S R (1990) Cell, 62, 849-851

Molecular approaches to improving the nutritional and functional properties of plant seeds as food sources: developments and comments
Lumen B O de (1990) J. Agric. Food Chem. 38, 1779

Phenic signals in cohabitation: implications for plant development
Lynn D G & Chang M (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 497-526

Gene activity during pollen development
Mascarenhas J P (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 317-338

Diversity of plant actins
Morton J F (1990) J. Ethnopharmacol. 29, 245

Role of the cell wall hydrolytic polysaccharides in the physicochemical behaviour of the flax fibres — application to an enzymatic retting — review [In French; English abstract]
Mol J N M & others (1990) FEBS Left. 268, 427-430

Metabolism, enzymology and possible roles of 4-aminoxybutyrate in higher plants
Narayan V S & Nair P M (1990) Phytochemistry, 29, 367

Calcium ion and turgor regulation in plant cells [Topical review]
Okazaki Y & Tazawa M (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 553-575

What is phloem unloading?
Oparka K J (1990) Plant Physiol. 94, 393

Transfer of phytotormone genes to induce morphogenesis in plants
Owens L D & Smigocki A C (1989) Advan. Cell Culture, 7, 183

Contrasting modes and tempos of genome evolution in land plant organelles
Palmer J D (1990) Trends Genet. 6, 115

SunFlakes and photosynthesis in plant canopies
Pearcy R W (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 421-453

Gene transfer to cereals — an assessment
Potrykus I (1990) BioTechnology, 8, 535

Cyanogenesis in plants
Poulton J E (1990) Plant Physiol. 94, 401

Gene expression during tuber development in potato plants
Prat S & others (1990) FEBS Lett. 268, 334-338

Physiology of the interaction of angiosperm parasites and their higher plant hosts: Commissioned review
Press M C, Graves J D & Stewart G R (1990) Plant Cell Envirom. 13, 91

Positional cues and differential gene expression in somatic embryos of higher plants
Racusen R H & Schiavone F M (1990) Cell Differentiation Dev. 30, 159

Anticancer and antiviral activities in Indian medicinal plants: a review
Rastogi R P & Dixsan B N (1990) Drug Dev. Res., 19, 1

Transport of toxic metals in plants — a review of recent experiments with P 31 NMR spectroscopy
Ratkovic S (1990) Stud. Biophys. 138, 175

Plasmodesmata
Robards A W & Lucas W J (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 369-419

Metabolism of L-canavanine and L-canalin in leguminous plants
Rosenthal G A (1990) Plant Physiol. 94, 1

Annonaceous acetogenins — a review
Rupprecht J K, Hui Y H & McLauglin J L (1990) J. Nat. Prod. 53, 237

Kinetic modeling of plant and fungal membrane transport systems
Sanders D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 77-107

Chemically induced aneuploidy in higher plants
Sharma C B S R (1990) Mutagenesis, 5, 105

The prolamin storage proteins of cereal seeds: structure and evolution
Shewry P R & Tatham A S (1990) Biochem. J. 267, 1–12

The biosynthetic potential of plant roots
Signs M W & Flores H E (1990) BioEssays, 12, 7

Gene expression in response to abscisic acid and osmotic stress
Skriver K & Mundy J (1990) Plant Cell, 2, 503–512

Novel regulation of vegetative storage protein genes
Staswick P E (1990) Plant Cell, 2, 1–6

The heavy metal-binding peptides of plants
Steffens J C (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 553–575

The physiology and biochemistry of parasitic angiosperms
Stewart G R & Press M C (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 127–151

Fructose-2,6-bisphosphate as a regulatory molecule in plants
Stitt M (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 153–185

Biotransformation of exogenous substrates by plant cell cultures
Suja F & Hirata T (1990) Phytochemistry, 29, 2393

Resiniferatoxin and its analogs provide novel insights into the pharmacology of the vanilloid (capsaicin) receptor [Minireview]
Szallas A & Blumberg P M (1990) Luef Sci. 47, 1399

Effects of metal ions on enzyme activity in plants: commissioned review
Van Assche F & Clijsters H (1990) Plant Cell Envirom. 13, 195

Xylem phloem exchange via the rays — the undervalued role of transport
Vanbel A J E (1990) J. Exp. Bot. 41, 631
Techniques in plant molecular biology — progress and problems
Walden R & Schell J (1990) Eur. J. Biochem. 192, 563

The effects of plant transposable element insertion on transcription initiation and RNA processing
Weil C F & Wessler S R (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 527–552

The formation of phenolic compounds in plant cell and tissue cultures and the possibility of its regulation
Zaprometov M N (1989) Advan. Cell Culture, 7, 201

PLASMIDS

Partition-mediated incompatibility of bacterial plasmids
Austin S & Nordström K (1990) Cell, 60, 351–354

Plasmid-mediated 4-quinolone resistance: a real or apparent absence? [Minireview]
Courvalin P (1990) Antimicrob. Agents Chemother. 34, 681–684

Biochemistry and function of the plasmid envelope
Douce R & Joyard J (1990) Annu. Rev. Cell Biol. 6, 173

Genetic functions and cell–cell interactions in the phomomone-inducible plasmid transfer system of Enterococcus faecalis [Microreview]
Dunny G M (1990) Mol. Microbial. 4, 689

The Tn21 subgroup of bacterial transposable elements
Gristled J, Delacrut F & Schmitt R (1990) Plasmid, 24, 163

Virulence plasmids of Salmonella typhimurium and other Salmonellae [Minireview]
Gutg P A (1990) Microb. Pathogen. 4, 3

Linear plasmids among eukaryotes: fundamentals and applications [Minireview]
Meinhart F, Kempen F, Kämper J & Esser K (1990) Curr. Genet. 17, 89–95

Control of plasmid replication — how do DNA termini set the replication frequency
Nordström K (1990) Cell, 63, 1121–1124

Inverters, a class of structurally and functionally related genetic elements that includes linear DNA plasmids, transposable elements, and genomes of adeno-type viruses
Sakaguchi K (1990) Microbial. Rev. 54, 66–74

TraT lipoprotein, a plasmid-specified mediator of interactions between gram-negative bacteria and their environment
Bertocchi C, Navarini L, Cesaro A & Anastasio M (1990) Carbohydrate Polymers, 12, 127

Polysaccharide research in Trondheim
Christensen B E, Indergaard M & Smidsrod O (1990) Carbohydr. Polym. 13, 239

Glycoconjugate expression during embryogenesis and its biological significance
Fenderson B A, Eddy E M & Hakomori S (1990) BioEssays, 12, 173–179

Antibodies to lipopolysaccharides — some diagnostic and protective aspects
Fomsgaard A (1990) APMIS, 98, Suppl. 1, 5–38

Exopolysaccharide production in Rhizobium and its role in invasion [Microreview]
Gray J X & Rolfe B G (1990) Mol. Microbial. 4, 1425

Human lymphocyte-B and lymphocyte-T responses to vaccination with pneumococcal polysaccharides
Heilmann C (1990) APMIS, 98, Suppl. 1, 4–23

Glycogen phosphorylase. The structural basis of the allosteric response and comparison with other allosteric proteins [Minireview]
Johnson L N & Barford D (1990) J. Biol. Chem. 265, 2409

Polysaccharide antigens of Pseudomonas aeruginosa
Knirel Y A (1990) Crit. Rev. Microbiol. 17, 273

Application of anhydrous hydrogen fluoride for the structural analysis of polysaccharides
Knirel Y A, Vinogradov E V & Mort A J (1989) Advan. Carbohydr. Chem. Biochem. 47, 167

Conformational analysis of carbohydrate chains of glycoconjugates [In Russian, English abstract]
Lipkind G M (1990) Bioorg. Khim. 16, 5
Porphyrians
See: Haem, Haem Proteins and Porphyrians

Potassium

Properties and functions of ATP-sensitive K-channels [Minireview]
Ashcroft S J H & Ashcroft F M (1990) Cell. Signal. 2, 197

Potassium channels and airway function - new therapeutic prospects
Black J L & Barnes P J (1990) Thorax, 45, 213

G proteins and potassium currents in neurons
Brown D A (1990) Annu. Rev. Physiol. 52, 215

Significance of Na⁺-K⁺ pump regulation in skeletal muscle
Clausen T (1990) News Physiol. Sci. 5, 148

29th Annual A.N. Richards Symposium on Potassium Channels: Basic Function and Therapeutic Aspects, Valley Forge, PA, May 16-17, 1988

Colatsky T J, ed (1990) Progr. Clin. Biol. Res. 334, 348 pp.

Basolateral K⁺ conductance: role in regulation of NaCl absorption and secretion
Dawson D C & Richards N W (1990) Am. J. Physiol. 259, No 2, Pt 1, C181

Structure activity relationships of K⁺ channel openers
Edwards G & Westen A H (1990) Trends Pharmacol. Sci. 11, 417

How might the diversity of potassium channels be generated?
Jan L Y & Jan Y N (1990) Trends Neurosci. 13, 415

Ionic regulatory mechanisms in crustacean gill epithelia
Lucoc C (1990) Comp. Biochem. Physiol. Pt A, 97, 297

Regulation of Cl⁻ and K⁺ channels in airway epithelium
McCann J D & Welsh M J (1990) Annu. Rev. Physiol. 52, 115

Calcium channels, potassium channels, and voltage dependence of arterial smooth muscle tone [Brief review]
Nelson M T, Patlak J B, Worley J F & Standen N B (1990) Am. J. Physiol. 259, No 1, Pt 1, C3

Cardiovascular and biological effects of K⁺ channel openers, a class of drugs with vasoradilatant and cardioprotective properties [Minireview]
Richer C & others (1990) Life Sci. 47, 1693

ATP-Regulated K⁺ channels and diabetes-mellitus
Rorsman P, Berggren P O, Bokvist K & Efendic S (1990) News Physiol. Sci. 5, 143

Decreased activity of the platelet Na⁺,K⁺-adenosine triphosphatase enzyme in allergic subjects
Skoner D P, Gentile D & Evans R (1990) J. Lab. Clin. Med. 115, 535

Fourth Datta Lecture: The energy coupled exchange of Na⁺ for K⁺ across the cell membrane — the Na⁺,K⁺-pump
Skou J C (1990) FEBS Lett. 268, 314-324

Energetics and the design principles of the Na⁺/K⁺-ATPase
Stein W D (1990) J. Theoret. Biol. 147, 145

G protein-mediated regulation of K⁺ channels in heart
Szabo G & Otero A S (1990) Annu. Rev. Physiol. 52, 293

PRIONS
See: PROTEINS

PROSTACYCLINS
See: PROSTAGLANDINS

PROSTAGLANDINS

Thromboxane A₂: its generation and role in platelet activation
Arita H, Nakano T & Hansoaki K (1989) Prog. Lipid Res. 28, 273

The eicosanoids — a historical overview
Baker R R (1990) Clin. Biochem. 23, 455

The interaction of prostaglandin-E₁ with serum lipoproteins — possible role in cholesterol homeostasis
Bergelson L D (1990) Lipids, 25, 767

The effects of plasma lipoproteins on platelet responsiveness and on platelet and vascular prostanoid synthesis
Bruckdorfer K R (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 247

Leukotriene-B₄ hydroxylase characterization — comparison between hepatic cytochrome P 450 and polymorphonuclear leukocytes metabolisms in various species — original scientific paper
Delafarge M, Boucher J L & Leclaire J (1990) Acta Pharmaceut. Jugoslav. 40, 461

Overview of eicosanoid metabolism and relationship to platelet-activating factor
Dusting G J & Stewart A G (1990) Reprod. Fertil. Dev. 2, 417

Prostaglandin H synthase and xenobiotic oxidation
Elzing T E, Thompson D C, Foureman G L, Curtis J F & Hughes M F (1990) Annu. Rev. Pharmacol. Toxicol. 30, 1-45

Analysis of eicosanoid formation in humans by mass spectrometry
Fischer S (1989) Advan. Lipid Res. 23, 199

Dietary polyunsaturated fatty acids and eicosanoid formation in humans
Fischer S (1989) Advan. Lipid Res. 23, 169

157
Leukotriene B4 in inflammation
Ford-Hutchinson A W (1990) Crit. Rev. Immunol. 10, 1

12(R)- and 12(S)-hydroxyeicosatetraenoic acids: chemistry, biology, and pharmacology
Fretland D J & Djuric S W (1989) Prostagland Leuk. Essent. Fatty Acids, 38, 215

Vitamin E and platelet eicosanoids in diabetes mellitus
Giugliano G, Watanabe J & Colwell J A (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 169

Progesterone receptor antagonists and prostaglandins in human fertility regulation — a clinical review
Healy D L J (1990) Reprod. Fertil. Dev. 2, 477

Prostaglandins and malignant neoplasms (a review) [In Russian]
Ignatovich L G & Freimanis Y F (1990) Khim. Farm. Zh. SSSR, 24, No 16, 4

Dietary unsaturated fatty acids — interactions and possible needs in relation to eicosanoid synthesis
Kinsella I E, Broughton K S & Whelan J W (1990) J. Nutr. Biochem. 1, 123

The neutrophil and leukotrienes — role in health and disease
König W & others (1990) Eicosanoids, 3, 1

Mechanisms of disease: leukotrienes and other products of the 5-lipoxygenase pathway — biochemistry and relation to pathology in human diseases
Lewis R A, Austen K F & Soberman R J (1990) New Engl. J. Med. 325, 645

Eicosanoid biosynthesis and role in renal immune injury
Lianos E A (1990) Prostagland. Leuk. Essent. Fatty Acids, 41, 1

The role of prostaglandins in human parturition
Lundin-Schiller S & Mitchell M D (1990) Prostagland. Leuk. Essent. Fatty Acids, 39, 1

Interferons, interleukins, virus-host interaction — relation to leukotrienes and other lipoxygenase derivatives of the arachidonic acid
Mayer M (1990) Acta Virol. 34, 99

The effect of ethanol on platelet function and vascular prostanooids
Mikhalidis D P, Barradas M A & Jeremy J Y (1990) Alcohol, 7, 171

Eicosanoids, impotence and pharmacologically induced erection
Mikhalidis D P, Jeremy J Y, Shoukry K & Virag R (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 239

Arachidonate-related Lipid Mediators
Murphy R C & Fitzpatrick F A, eds (1990) Methods Enzymol. 187, 683 pp.

Transdermal absorption and skin metabolism of viprostat, a synthetic prostaglandin E2 analogue
Nicola G & Yacobi A (1990) Drug Metab. Rev. 21, 401

The role of prostaglandins in bone in vivo
Norrobin R W, Lee W S S & High W B (1990) Prostagland. Leuk. Essent. Fatty Acids, 41, 139

Control of prostaglandin production in human amnion
Olson D M, Zakar T, Potesio F A & Snieja Z (1990) News Physiol. Sci. 5, 259

Adrenergic prostaglandin interactions in the respiratory system
Omini C, Daffonechio L, Abbracchio M P, Hernandez A & Cattabeni F (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 85

Relationship between the prostaglandin cascade and virus infection
Ongradi J & Telekes A (1990) Acta Virol. 34, 380

Prostaglandins and the control of muscle protein synthesis and degradation
Palmer R M (1990) Prostagland. Leuk. Essent. Fatty Acids, 39, 95

Platelet-activating factor (PAF) and its relation to prostaglandins, leukotrienes and other aspects of arachidonate metabolism
Peplow P V & Mikhalidis D P (1990) Prostagland. Leuk. Essent. Fatty Acids, 41, 71

Eicosanoids, epithelium and airway reactivity [Minireview]
Raeburn D (1990) Gen. Pharmacol. 21, 11

Symposium on Trends in Eicosanoid Biology, Interlaken, Switzerland, September 1989
Samuelsson B, Dahlen S E, Fritsch J & Hedqvist P eds (1990) Advan. Prostaglandin, Thromboxane, Leukotriene Res. 20, 264 pp.

Eicosanoids in myocardial ischemia [Minireview]
Schror K & Thieme H C (1989) Biomed. Biochem. Acta, 48, 729

Eicosanoids and peripheral neurotransmission
Senio R & Daniel E E (1989) Prostagland. Leuk. Essent. Fatty Acids, 39, 237

Spices: antiplatelet activity and prostanooid metabolism
Srivastava K C & Mustafa T (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 255

Prostaglandins and extracorporeal circulation
Starling M B & Neutze J M (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 1

PROTEIN KINASE

Sec.: PROTEIN PHOSPHORYLATION, PROTEIN KINASE AND PROTEIN PHOSPHATASE

PROTEIN PHOSPHATASE

Sec.: PROTEIN PHOSPHORYLATION, PROTEIN KINASE AND PROTEIN PHOSPHATASE

PROTEIN PHOSPHORYLATION, PROTEIN KINASE AND PROTEIN PHOSPHATASE

Protein kinase C and T cell activation
Burry N & Nishizuka Y (1990) Eur J Biochem. 189, 205-214

Transcription factor phosphorylation — a link between signal transduction and the regulation of gene expression
Bohmann D (1990) Cancer Cells, 2, 337

Calcium-activated, phospholipid-dependent protein kinase (protein kinase C) — general aspects and experimental considerations
Bumpus A & Tenenhouse H S (1990) Israel J Med. Sci 26, 293

Light as a signal influencing the phosphorylation status of plant proteins
Budde R J A & Randall D D (1990) Plant Physiol. 94, 1501

G2 to M transition substrates of the M-phase specific kinase p34cdc2 [In French; English abstract]
Cavadora J C, Lebouffant F & Labbe J C (1990) Mol. Cell. Biol. 10, 895

Lipid activators of protein kinase C [Minireview]
Chauhan V P S, Chauhan A, Deshmukh D S & Brockerhoff H (1990) Life Sci. 47, 981

Okadaic acid: a new probe for the study of cellular regulation
Cohen P, Holmes C F B & Tsukitani Y (1990) Trends Biochem. Sci. 15, 98-102

Protein serine/threonine phosphatases; an expanding family
[Minireview]
Cohen P T W, Brews N D, Hughes V & Mann D J (1990) FEBS Lett. 268, 355-359
The phosphoinositide/protein kinase C system as a potential target for neurotoxicity
Costa L G (1990) Pharmacol. Res. 22, 393

Cell cycle control in eukaryotes: molecular mechanisms of cdc2 activation
Draetta G (1990) Trends Biochem. Sci. 15, 378

src-related tyrosine protein kinases as signaling components in hematopoietic cells
Eisenman E & Bolten J B (1990) Cancer Cells, 2, 303

Protein kinase C in transmembrane signalling [Minireview]
Farago A & Nishizuka Y (1990) FEBS Lett. 268, 350–354

Calmodulin-dependent protein kinase II
Fujisawa H (1990) BioEssays, 12, 27

Protein phosphorylation associated with the stimulation of neutrophils. Modulation of superoxide production by protein kinase C and calcium [Minireview]
Heyworth P G & Badway J A (1990) J. Bioenerget. Biomembr. 22, 1

Involvement of an initiation factor and protein phosphorylation in translational control of GCN4 mRNA
Hinnebusch A G (1990) Trends Biochem. Sci. 15, 148

Protein phosphorylation and inositol phosphohpid metabolism in transduction [In Japanese; English abstract]
Huganir R L & Greengard P (1990) Neuron, 5, 555

Glycogen phosphorylase. The structural basis of the allosteric response and comparison with other allosteric proteins [Minireview]
Johnson L N & Barford D (1990) J. Biol. Chem. 265, 2409

Protein kinase recognition sequence motifs
Kemp B E & Pearson R B (1990) Trends Biochem. Sci. 15, 342

Second messengers and protein phosphorylation in cellular signal transduction [In Japanese; English abstract]
Kuno T (1990) Folia Pharmacol. Jap. 96, 41

Protein phosphorylation and inositol phospholipid metabolism in activated mast cells
Kurosawa M (1990) Clin. Exp. Allergy, 20, 7

Insulin receptor tyrosine kinase and glucose transport
Lane M D & others (1990) Diabetes Care, 13, 565

Role of phosphorylation in desensitization of the β-adrenoceptor
Lefkowitz R J, Hausdorff W P & Caron M G (1990) Trends Pharmacol. Sci. 11, 190

Substrates for p34cdc2: in vivo veritas?
Moreno S & Nurse P (1990) Cell, 61, 549–551

Universal control mechanism regulating onset of M-phase
Nurse P (1990) Nature, 344, 503–508

Intrinsic kinase activity of the insulin receptor [Minireview]
O’Hare T & Pilch P F (1990) Int. J. Biochem. 22, 315

Receptor tyrosine kinases — genetic evidence for their role in Drosophila and mouse development
Pawson T & Bernstein A (1990) Trends Genet. 6, 350

Casein kinase 2: an ‘eminence grise’ in cellular regulation?
Pinna L A (1990) Biochim. Biophys. Acta, 1054, 267

Growth-related protein kinases
Ralph R K, Darkin-Rattray S & Schofield P (1990) BioEssays, 12, 121

Control of glycogen synthase by hierarchal protein phosphorylation
Rose P J (1990) FASEB J. 4, 2961

Signal transduction by the bacterial phosphotransferase system.
Draetta G & others (1990) Trends Biochem. Sci. 15, 391

Decoupling of oxidative phosphorylation and photophosphorylation
Rottenberg H (1990) Biochim. Biophys. Acta, 1018, 1

CD4, CD8 and the TCR-CD3 complex — a novel class of protein–tyrosine kinase receptor
Rudd C E (1990) Immunol. Today, 11, 400

The hormone-induced regulation of contact-dependent cell–cell communication by phosphorylation
Stagg R B & Fletcher W H (1990) Endocr. Rev. 11, 302

Potent and specific inhibitors of protein kinase C of microbial origin
Tamaoki T & Nakano H (1990) Bio/Technology, 5, 732

Regulation of cardiac L-type calcium current by phosphorylation and G proteins
Trautwein W & Hescheler J (1990) Annu Rev. Physiol. 52, 257

Phosphorylase B kinase deficiency in man — a review
Vandenberg I E T & Berger R (1990) J. Inher. Metab. Dis. 13, 442

Protein kinase C in insulin releasing cells: Putative role in stimulus secretion coupling [Minireview]
Wollheim C B & Regazzi R (1990) FEBS Lett. 268, 376–380
PROTEINS

See also: ANTIBODIES
ANTIGENS AND ANTIGEN RECEPTORS
BACTERIOPHAGES
BLOOD AND BLOOD PROTEINS
COLLAGEN
CYTOCHROMES
ENZYMES AND ENZYME REGULATION
GLYCOPROTEINS
HAEM, HAEM PROTEINS AND PORPHYRINS
HAEMOGLOBIN
HISTONES
HORMONES, MEDIATORS, REGULARATORY
SUBSTANCES AND RECEPTORS
IMMUNOGLOBULINS AND IMMUNOGLOBULIN
RECEPTORS
INSULIN
ISOENZYMES
LIPOPROTEINS
MUSCLE AND MUSCLE PROTEINS
PEPTIDES AND POLYPEPTIDES
TOXINS AND TOXIC SUBSTANCES
TRANSPORT
VIRUSES

DNA methylation. The effect of minor bases on DNA–protein interactions
Adams R L P (1990) Biochim. J. 265, 309–320

Specific interactions of proteins with functional lipid monolayers —
ways of stimulating biomembrane processes
Ahlers M, Muller W, Reichert A, Ringsdorf H & Venzmer J (1990)
Angew. Chem. 79, 1269

Modification of low molecular weight GTP-binding proteins and of actin by clostridial toxins [Mini-review]
Aktories K (1990) Med. Microbiol. Immunol. 179, 123

A general strategy for the de novo design of proteins — template
assembled synthetic proteins [Mini-review]
Altmann K-H & Mutter M (1990) Int. J. Biochem 22, 947

Bacterial periplasmic permeases belong to a family of transport proteins operating from Escherichia coli to human: traffic ATPases
Ams E F-L, Minnara C S & Shyamala V (1990) FEMS Microbiol
Rev. 75, 429

Current views on chloroplast protein import and hypotheses on the
origin of the transport mechanism [Mini-review]
Archer E K & Keegstra K (1990) J. Bioenerget. Biomembr 22, 789

Biological antifreezes and the mechanism of their activity
Avanov A Y (1990) Mol. Biol. Engl. Tr 24, 473

Small GTP-binding proteins in vesicular transport
Balch W E (1990) Trends Biochem Sci. 15, 473

The non-NMDA receptors — types, protein structure and molecular biology
Barnard E A & Henley J M (1990) Trends Pharmacol. Sci 11, 500

Recent achievements in studies on thyroid hormone-binding proteins
Battalena L (1990) Endocr. Rev. 11, 47

Chlorophyll binding proteins with antenna function in higher plants and green algae
Bassi R, Rigoni F & Giaconnetti G M (1990) Photochem. Photoblot
52, 1187

Growth hormone-binding proteins [Brief review]
Baumann G (1990) Trends Endocrinol Metab. 1, 342

Talin: role at sites of cell–substratum adhesion
Beckerle M C & Yeh R K (1990) Cell Motil Cytoskel. 16, 7–13

Recent developments in the field of iron–sulfur proteins
Beinert H (1990) FASEB J. 4, 2483

Spectrin-based membrane skeleton — a multipotential adaptor
between plasma membrane and cytoplasm
Bennett V (1990) Physiol. Rev. 70, 1029

Zinc finger domains — hypotheses and current knowledge
Berg J M (1990) Annu. Rev Biophys. Biophys. Chem. 19, 405

Zinc fingers and other metal-binding domains. Elements for
interactions between macromolecules [Mini-review]
Berg J M (1990) J. Biol. Chem. 265, 6513

Connexin family of gap junction proteins [Topical review]
Beyer E C, Paul D L & Goodenough D A (1990) J. Membr Biol.
116, 187

G proteins in signal transduction
Birnbaumer L (1990) Annu. Rev Pharmacol Toxicol 30, 675–706

Roles of G proteins in coupling of receptors to ionic channels and other effector systems
Birnbaumer L & others (1990) Curr. Rev. Biochem. Mol. Biol. 25, 725

Receptor-effector coupling by G proteins
Birnbaumer L, Abramowitz J & Brown A M (1990) Biochim
Biophys Acta, 1031, 163

Protenase inhibition, immunoglobulin-binding proteins and a novel antimicrobial principle [Microreview]
Björk L (1990) Mol. Microbiol. 4, 1439

Mechanisms of long-distance electron transfer in proteins — lessons from photosynthetic reaction centers
Boxer S G (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 267

The role of charged amino acids in the localization of secreted and
membrane proteins [Mini-review]
Boyd D & Beckwith J (1990) Cell, 62, 1031–1033

Metallothionein and the trace minerals
Bremer I & Beattie J H (1990) Annu. Rev Nutr 10, 63

β-Lactamase as a probe of membrane protein assembly and protein
export [Microreview]
Broome-Smith J K, Tadayyon M & Zhang Y (1990) Mol. Microbiol
4, 1637

Ionic channels and their regulation by protein subunits
Brown A M & Birnbaumer L (1990) Annu. Rev Physiol 52, 197

G proteins and potassium currents in neurons
Brown D A (1990) Annu. Rev Physiol 52, 215

Signal transducing GTP-binding proteins in olfaction [Mini-review]
Bruch R C (1990) Comp. Biochem. Physiol. Pt A, 95, 27

Imaging of protein molecules towards atomic resolution
Bullough P A (1990) Electron Microsc. Rev. 3, 249

Understanding structural relationships in proteins of unsolved three-
dimensional structure
Burbaam J J, Starzyk R & Schimmel P (1990) Proteins, 7, 99

Secretory vesicle-associated proteins and their role in exocytosis
Burgoyne R D (1990) Annu. Rev Physiol 52, 647

Structural features of the HMG chromosomal proteins and their genes
Burstein M, Lehni D A & Landsman D (1990) Biochem. Biophys. Acta,
1049, 231

Genes of Acanthamoeba DNA, RNA and protein sequences (a review)
Byers T J, Hugo E R & Stewart V J (1990) J Protozool. 37, Suppl,
S17

Hemolysins — pore-forming proteins in invertebrates
Camcatti C (1990) Experientia, 49, 239
Membrane proteins involved in phagocyte adherence to endothelium
Carlos T M & Harlan J M (1990) *Immunol. Rev. 114*, 5

Novel affinity-based processes for protein purification
Chen J P (1990) *J. Ferment. Bioeng. 70*, 199

Applications of graph theory to enzyme kinetics and protein folding kinetics. Steady and non-steady-state systems
Chou K-C (1990) *Biophys. Chem. 35*, 1

Insulin-like growth factor binding proteins [Brief review]
Clemmons D R (1990) *Trends Endocrinol. Metab. 1*, 412

Alpha-helical coiled coils and bundles — how to design an alpha-helical protein
Cohen C & Parry D A D (1990) *Proteins, 7*, 1

The mechaehemistry of kinesin: a review
Cohn S A (1990) *Mol. Chem. Neuropath. 12*, 83

Chloride binding proteins: Mechanistic implications for the oxygen-evolving complex of Photosystem II [Minireview]
Coleman W J (1990) *Photosynthesis Res. 25*, 1

Symposium on Protein and Pharmaceutical Engineering, Park City, U T, 1, 11–22 January, 1989
Craik C S, Fletterick R, Matthews C R & Wells J, eds. (1990) UCLA *Smpy. Mol. Cell. Biol. NS. 110*, 184 pp.

Structure and dynamics of the colicin E1 channel [Microreview] Cramer W A, Cohen F S, Merrill A R & Song H Y (1990) *Mol. Microbiol. 4*, 519

Protein folding
Creighton T E (1990) *Biochem. J. 270*, 1–16

Glycolipid anchoring of plasma membrane proteins
Cross G A M (1990) *Annu. Rev. Cell Biol. 6*, 1

The HIV-1 TAT protein — an RNA sequence-specific processivity factor [Minireview] Cullen B R (1990) *Cell, 63*, 655–657

Functions of the auxiliary gene products of the human immunodeficiency virus type 1 [Minireview]
Cullen B R & Greene W C (1990) *Cell Culture, 7*, 125

Biochemistry of fish antifreeze proteins
Davies P L & Hew C L (1990) *FASEB J. 4*, 2460

Calcium and calmodulin regulation of prolactin gene expression [Brief review] Davis J R E (1990) *Trends Endocrinol. Metab. 1*, 319

The synapins
Dewampli R, Benfenati F, Valtorta F & Greengard P (1990) *Annu. Rev Cell Biol. 6*, 433

The p53 protein — from molecular biology to clinical investigations
Defromentel C C, Soussi T & May P (1990) *M/S Méd. Sci. 6*, 352

Guide to protein purification
Deutscher M P, ed. (1990) *Methods Enzymol. 182*, 894 pp.

Multi-author review: Pore-forming proteins of biological membranes
Dihanich M & others (1990) *Experientia, 46*, 131

G protein modulation of calcium currents in neurons
Dolphin A C (1990) *Annu. Rev Physiol. 52*, 243

Molecular evolution: computer analysis of protein and nucleic acid sequences
Doolittle R F, ed. (1990) *Methods Enzymol. 183*, 736 pp.

The ras superfamily of small GTP-binding proteins
Downward J (1990) *Trends Biochem. Sci. 15*, 469

NACM, a cytopathogenic protein from Naegleria gruberi, EGs — purification, production of monoclonal antibody, and the immunoidentification of a product that develops in NACM-treated vertebrate cell cultures
Dunnebacke T H & Dixon J S (1990) *J. Protozool. 37*, Suppl, S11

Digestion and absorption of dietary protein
Erickson R H & Kim Y S (1990) *Annu. Rev. Med. 41*, 133

Cis-elements and DNA-binding proteins involved in transcription regulation [In French; English abstract]
Etienne J, Brault D & Firmin S (1990) *Annu. Biol. Clin. Paris, 48*, 681

Neisseria meningitidis outer membrane proteins — prospects of their use in the development of preparations for immunoprophylaxis [In Russian, English abstract]
Filatova T N (1990) *Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No. 2*, 86

How an insect sickness turns out to be useful in protein engineering
Filhol O, Cocol C & Chambaz E M (1990) *M/S Méd. Sci. 6*, 297

RNA and protein metabolism in the aging brain
Finch C E & Morgan D G (1990) *Annu. Rev. Neurosci. 13*, 75

Three-dimensional modelling of G-protein-linked receptors
Findlay J & Eliopoulos E (1990) *Trends Pharmacol. Sci. 11*, 492

On the translocation of proteins across the chloroplast envelope [Minireview]
Figuero A I (1990) *J. Bioenerg. Biomembr. 22*, 769

A review of studies leading towards a three-dimensional understanding of the annexin family of proteins
Freemont P S (1990) *Biochem. Soc. Trans. 18*, 1098

From the structure to the function of villin, an actin-binding protein of the brush border
Frederich E, Pringault E, Arpin M & Louvard D (1990) *BioEssays, 12*, 403

Calorimetrically determined dynamics of complex unfolding transitions in proteins
Freire E, Vainsod W W, Mayorga O L & Sanchezruiz J M (1990) *Annu. Rev Biophys. Biophys. Chem. 19*, 159

Prion liposomes
Gabizon R & Prusiner S B (1990) *Biochem. J. 266*, 1–14

Defensins
Ganz T, Selsted W E & Lehrer R I (1990) *Eur. J. Haematol. 44*, 1–8

Mitochondrial protein import [Minireview]
Geli V & Glick B (1990) *J. Bioenerg. Biomembr. 22*, 725

Platelet immunoglobulin-G — its significance for the evaluation of thrombocytopenia and for understanding the origin of alpha-granule proteins
George J N (1990) *Blood, 76*, 859

Membrane topology, structure, and functions of the penicilin-interactive proteins
Ghuysen J M (1990) *Biotechnol. Appl. Biochem. 12*, 468

NF-xB, KBF1, dorsal, and related matters [Minireview]
Gilmore T D (1990) *Cell, 62*, 841–843

Prenyl proteins in eukaryotic cells: a new type of membrane anchor
Glomset J A, Gelb M H & Farnsworth C C (1990) *Trends Biochem. Sci. 15*, 139

GE: a GTP-binding protein mediating exocytosis
Gomperts D D (1990) *Annu. Rev. Physiol. 52*, 391
Disintegrins — a family of integrin inhibitory proteins from viper venoms [Minireview]

Gould R J & others (1990) Proc. Soc. Exp. Biol. Med. 195, 168

Physiology and biochemistry of vitamin D-dependent calcium binding proteins [Editorial review]

Gross M & Kumar R (1990) Am. J. Physiol. 259, No 2, Pt 2, F195

Cold acclimation and freezing stress tolerance: role of protein metabolism

Guy C L (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 187–223

Cyclic AMP response element binding proteins: a cornucopia of transcription factors [Minireview]

Habener J F (1990) Mol. Endocrinol. 4, 1087

Molecular properties of corticosteroid binding globulin and the sex-steroid binding proteins

Hammond G L (1990) Endoecr. Rev. 11, 65

Oute membrane proteins of Pseudomonas [Micoreview]

Hancock R E W, Siehnel R & Martin N (1990) Mol. Microbiol. 4, 1069

Mechanisms of membrane protein turnover

Hare J F (1990) Biochim. Biophys. Acta, 1031, 71

Symposium on Protein and Peptide Neurotoxins — Twenty-First Annual Meeting of the American Society for Neurochemistry

Harris J & others (1990) J. Toxocol. Toxin Rev. 9, 175–285

Symposium on Dynamic Interactions of Myelin Proteins. Chicago, IL, April 3–10, 1989

Hashim G A & Moscarello M eds (1990) Progr Clin. Biol Res. 336, 196 pp.

What determines the specificity of action of Drosophila homedomain proteins?

Hayashi S & Scott M P (1990) Cell, 63, 883

9th International Symposium on HPLC of Proteins, Peptides and Polynucleotides, Philadelphia, PA, November 6–8, 1989

Hearn M T W & others (1990) J. Chromatogr. 512, 1–433

Interleukin-6 and the acute phase response

Heinrich P C, Castell J V & Andus T (1990) Biochem. J. 265, 621–636

VLA proteins in the integrin family: structures, functions, and their role on leukocytes

Hemler M E (1990) Annu. Rev. Immunol. 8, 365

Folate-binding proteins

Henderson G B (1990) Annu. Rev. Nutr. 10, 319

Regulation of bacterial gene expression by metal-protein complexes [Minireview]

Hennecke H (1990) Mol. Microbiol. 4, 1621

Molecular machinery required for protein transport from the endoplasmic reticulum to the Golgi complex

Hicke L & Schekman R (1990) BioEssays, 12, 253

Binding protein-dependent transport systems [Minireview]

Higgins C F & others (1990) J. Bioenerget. Biomembr. 22, 571

The LDL receptor locus in familial hypercholesterolemia — mutational analysis of a membrane protein

Hobbs H H, Russell D W, Brown M S & Goldstein J L (1990) Annu. Rev. Genet. 24, 133

Membrane fusion of enveloped viruses: especially a matter of proteins [Minireview]

Hooekstra D (1990) J. Bioenerget. Biomembr. 22, 121

Ethanol and guanine nucleotide binding proteins: a selective interaction

Hoffman P L & Tabakoff B (1990) FASEB J. 4, 2612

Three-dimensional structures of proteins determined by two-dimensional NMR and distance geometry calculations

Inagaki F (1990) Cell Struct. Funct. 15, 237

Proteins under extreme physical conditions [Minireview]

Jaenicke R & Zavodszyky P (1990) FEBS Lett. 268, 344–349

Errors in three dimensions

Janin J (1990) Biochimie, 72, 705–709

The structure of protein–protein recognition sites [Minireview]

Janin J & Chottha C (1990) J. Biol. Chem. 265, 16027

Biophysics and function of porins

Jap B K & Walian P J (1990) Q Rev Biophys. 23, 367

Carbohydrates and carbohydrate-binding proteins in the nervous system

Jessell T M, Hynes M A & Dodd J (1990) Annu. Rev. Neurosci. 13, 227

Protein secondary structure and circular dichroism — a practical guide

Johnson W C (1990) Proteins, Struct. Funct. Genet. 7, 205

Diversity among tubulin subunits: toward what functional end?

Joshi H C & Cleveland D W (1990) Cell Motil. Cytoskel. 16, 159

Conformational changes involved in the activation of ras p21: implications for related proteins [Minireview]

Jumna F, Heffron S & Bergmann E (1990) Cell, 60, 525–528

Molecular dynamics simulations in biology

Karplus M & Petsko G A (1990) Nature, 347, 631

Effects of snake venom proteins in blood platelets

Kim R M & Evans H J (1990) Toxicon, 28, 1387

Proteins in whey — chemical, physical and functional properties

Kinsella J E & Whitehead D M (1990) Advan Food Nutr Res. 33, 343

Autoimmunity to collagen-II and myelin basic protein — comparative studies in humans and rodents

Klareskog L & Olsson T (1990) Immunol. Rev. 118, 285

Mechanism and evolution of the uncoupling protein of brown adipose tissue

Klangenberg M (1990) Trends Biochem Sci. 15, 108

The role of viral and cellular nuclear proteins in herpes simplex virus replication

Knipe D M (1989) Advan. Virus Res. 37, 85

Cell growth and abrupt doubling of membrane proteins in Escherichia coli during the division cycle

Kubitscheck H E (1990) J. Gen Microbial. 136, 599

The role of protein growth factors in the regulation of bone growth

[In German]

Kukoschke K G & Mayer H (1990) Dtsch. Med. Wochenschr. 115, 1921

Involvement of aminoaacyl-transfer RNA synthetases and other proteins in group-I and group-II intron splicing

Lambowitz A M & Perlman P S (1990) Trends Biochem. Sci. 15, 440

Structure and function of t-3-protein coupled receptors

Lameh J & others (1990) Pharmaceut. Res. 7, 1213

Alzheimer’s disease — proteins, genes and early diagnosis [In French, English abstract]

Laplancher J L, Chatelein J, Launay J M & Dreux C (1990) Ann. Biol. Clin. Paris, 48, 281
Tau protein: an update on structure and function
Lee G (1990) Cell Motil. Cytoskel. 15, 199

Uniform and selective deuteration in 2-dimensional NMR of proteins
Lemaster D M (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 243

Deuterium labelling in NMR structural analysis of larger proteins
Lemaster D M (1990) Q. Rev. Biophys. 23, 133

Human monocye chemoattractant protein-1 (MCP-1)
Leonard J J & Yoshimura T (1990) ImmunoL. Today, 11, 97

The p53 protein and its interactions with the oncogene products of the small DNA tumor viruses [Minireview]
Levine A J (1990) Virology, 177, 419

Commitment and activation at Pol II promoters: a tail of protein-protein interactions
Lewin B (1990) Cell, 61, 1161-1164

Emerging functional roles for the glycosyl-phosphatidylinositol membrane protein anchor [Topical review]
Lisanti M P, Rodriguez-Boulan E & Saltiel A R (1990) J. Membr. Biol. 117, 1

Molecular biology of IgE-binding protein, IgE-binding factors, and IgE receptors
Liu F-T (1990) Crit. Rev. Immunol. 10, 289

Regulation of free calmodulin levels by neuromodulin — neuron growth and regeneration
Liu Y C & Storm D R (1990) Trends Pharmacol. Sci. 11, 107

Maize R gene family: tissue–specific helix-loophelix proteins
Ludwig S R & Wesser S R (1990) Cell, 62, 849-851

Structure of spliceosomal snRNPs and their role in pre-messenger RNA splicing
Lührmann R, Kastner B & Bach M (1990) Biochim. Biophys Acta, 1087, 265

Electrophoretic separation of protein fractions from polyacrylamide gel [In Russian; English abstract]
Lutsyk M D, Oleshko P S & Vovkanych A S (1990) Ukr. Biohim. Zk. SSSR, 62, 112

Protein Langmuir-Blodgett films [In Russian; English abstract]
Lvov Y M, Erokhin V V & Zaitsev S Y (1990) Biol. Membr., 7, 917

Regulation of Cl- and K+ channels in airway epithelium
McCaan J D & Welsh M J (1980) Annu. Rev. Physiol. 52, 115

Chloroplast ribosomal proteins and their genes
MacR (1990) Plant Sci. 72, 1

The fats of life: the importance and function of protein acylation
McIlhinney R A J (1990) Trends Biochem. Sci. 15, 387

Biosynthetic incorporation of 15N and 14C for assignment and interpretation of nuclear magnetic resonance spectra of proteins
McIntosh L P & Dahlquist F W (1990) Q. Rev. Biophys. 23, 1

Role of immunity to mycobacterial stress proteins in rheumatoid arthritis [Current status review]
McLean L, Winrow V & Blake D (1990) J. Exp. Path. 71, 295

S100 protein and Down syndrome
Marks A & Alloire R (1990) BioEssays, 12, 381

Calcium binding proteins. Elucidating the contributions to calcium affinity from an analysis of species variants and peptide fragments
Marksen B J, Shaw G S & Sykes B D (1990) Biochem. Cell Biol. 68, 587-601

Lipid–protein interactions in membranes [Minireview]
Marsh D (1990) FEBS Lett. 268, 371-375

Properties of parathyroid hormone-related protein and its role in malignant hypercalcaemia
Martin T J (1990) J. Med. 76, 771

Intracellular fatty acid trafficking and the role of cytosolic lipid binding proteins
Mattarrese S, Stone R L, Waghoner D W & Bernlohr D A (1989) Progr. Lipid Res. 28, 245

A selective review of RNA–protein interactions in eukaryotes
Mattaj I W (1990) Mol. Biol. Rep. 14, 151

The single-stranded DNA-binding protein of Escherichia coli
Meyer R R & Laine P S (1990) Microbiol. Rev. 54, 342

Casein — a milk protein with diverse biologic consequences [Minireview]
Miller M J S, Witherly S A & Clark D A (1990) Proc. Soc. Exp. Biol. Med 195, 143

Tubulin flux in the mitotic spindle: where does it come from, where is it going?
Mitchison T J & Savin K E (1990) Cell Motil. Cytoskel. 16, 93

The parvalbumin-containing nonpyramidal neurons in the rat hippocampus
Nitsch R, Soriano E & Frotscher M (1990) Anat. Embryol. 181, 413-425

Molecular anatomy and molecular design of channel proteins
Montal M (1990) FASEB J. 4, 2623

Dietary fatty acids and membrane protein function
Murphy M G (1990) J. Nutr. Biochem. 1, 68

Theoretical studies of protein conformation by means of energy computations
Nemethy G & Scheraga H A (1990) FASEB J. 4, 3189

The parvalbumin-containing nonpyramidal neurons in the rat hippocampus
Nitsch R, Soriano E & Frotscher M (1990) Anat. Embryol. 181, 413-425

Recent advances in capillary electrophoresis of proteins, peptides and amino acids
Novotny M V, Cobb K A & Liu J P (1990) Electrophoresis, 11, 735

Historic overview of studies on fatty acid-binding proteins
Ockner R K (1990) Mol. Cell. Biochem. 98, 3

Absorption of peptides and proteins from the respiratory tract and the potential for development of locally administered vaccines
Ohagan D T & Illum L (1990) Crit. Rev. Ther. Drug Carr Syst. 7, 35

Potential clinical applications of C-reactive protein
Okamura J M, Miyagi J M, Terada K & Hokama Y (1990) J. Clin. Lab Anal. 4, 231

Protein toxins with intracellular targets [Mini-review]
Olsnes S & others (1990) Microb. Pathogen. 8, 163

How calmodulin binds its targets — sequence independent recognition of amphiphilic alpha–helices
Oscilk T & Deglado W G (1990) Trends Biochem. Sci. 15, 59

Topogenesis of peroxisomal proteins
Osumi T & Fujiki Y (1990) J. Cell Biol. 195, 143

Potential clinical applications of C-reactive protein
Osumi T & Fujiki Y (1990) J. Cell Biol. 195, 143

Vinculin
Otto T J (1990) Cell Motil. Cytoskel. 16, 1-6

Conformational stability of globular proteins
Pace C N (1990) Trends Biochem. Sci. 15, 14

Dicarboxylic acid anhydrides as dissociating agents of protein-containing structures
Palacan E, Gonzalez P J, Piñero M & Hernández F (1990) Mol. Cell. Biochem. 97, 101

Drug–protein conjugation and its immunological consequences
Park B K & Kitteringham N R (1990) Drug Metab. Rev. 22, 87
Mechanism of action of statins — an overview of receptor function and studies of the molecular characterization and purification of statin receptor proteins

Patei Y C & others (1990) Metabolism, 39, No. 9, Suppl. 2, 63

Genetic analysis of clathrin function in yeast [Topical review]

Payne G S (1990) J. Membr. Biol. 116, 93

Clathrin, adaptors, and sorting

Peer B M F & Robinson M S (1990) Annu. Rev. Cell Biol. 6, 151

Controlling the nuclear translocation of proteins — an additional level to the regulation of gene expression [In French; English abstract] [Minireview]

Pieczaeky M & Roux P (1990) M/5 Med. Sci. 6, 803

Functional diversity of dyneins

Piperno G (1990) Cell Motil. Cytoskel. 17, 147

The controlled parenteral delivery of polypeptides and proteins

Pitt C G (1990) Int. J. Pharmaceut. 59, 173

Synexin (Annexin VII): a cytosolic calcium-binding protein which promotes membrane fusion and forms calcium channels in artificial bilayers and natural membranes [Topical review]

Pollard H B, Burns A L & Rojas E (1990) J. Membr Biol. 117, 101

On the microassembly of integral membrane proteins

Popot J L & Devitry C (1990) Annu Rev Biophys. Biophys Chem 19, 369

Allelic variations of human TCR V-gene products

Posnett D N (1990) Immunol. Today, 11, 368

Biological relevance of the protein C system and laboratory diagnosis of protein C and protein S deficiencies [Editorial review]

Prusiner S K (1990) Clin. Sci. 78, 321–364

Cold denaturation of proteins

Privatov P L (1990) Crit. Rev. Biochem. Mol. Biol. 25, 281

Novel structure and genetics of prions causing neurodegeneration in humans and animals

Prusiner S B (1990) Biologicals, 18, 247

Activators and targets

Ptashne M & Gann A F (1990) Nature, 346, 329–331

Genetics of extracellular protein secretion by Gram-negative bacteria

Pugsley A P, Denfert C, Reyss I & Kornacker M G (1990) Mol. Microbiol. 4, 1

The pS2 gene, mRNA, and protein: a potential marker for human breast cancer

Rabinov I (1990) Electrophoresis, 11, 785

Protein transport across the ER membrane

Rapaport T A (1990) Trends Biochem. Sci. 15, 355

The pS2 gene, mRNA, and protein: a potential marker for human breast cancer

Rao M-C & Chambo P (1990) Cancer Cells, 2, 269

Inosine monophosphate dehydrogenase inhibitors — probes for investigations of the functions of guanine nucleotide binding proteins in intact cells [Minireview]

Rizzon M T & others (1990) Cell. Signal. 2, 509

The RecA protein — structure and function

Rose A I & Cox M M (1990) Crit. Rev. Biochem. Mol. Biol. 25, 415

The mechanisms of protein silver staining in polyacrylamide gels — a ten-year synthesis

Rosebrough T (1990) Electrophoresis, 11, 785

Protein transfer proteins

Rueckert D G & Schmidt K (1990) Chem. Phys. Lipids, 56, 1

Insulin-like growth factors and their binding proteins [Minireview]

Rutanen E M & Pekonen F (1990) Acta Endocrinol. 123, 7

From comparisons of protein sequences and structures to protein modelling and design

Rutten J P, Johnson M S & Blundell T L (1990) Trends Biochem. Sci. 15, 235

Insulin-like growth factor receptors and their binding proteins

Sara V R & Hall K (1990) Physiol. Rev 70, 591

The P-loop — a common motif in ATP-binding and GTP-binding proteins

Saraete M, Sibbald P R & Wittinghofer A (1990) Trends Biochem. Sci. 15, 430

Genetic analysis of protein export in Escherichia coli

Schatz G, Rosenthal W, Hescheler J & Trautwein W (1990) Annu. Rev. Physiol. 52, 275

Solubility as a function of protein structure and solvent components

Schein C H (1990) Biotechnol. 8, 308

Proosomes, subcomplexes of untranslated mRNAs [Minireview]

Scherrer K (1990) Mol. Biol. Rep. 14, 1

Heat shock proteins [Minireview]

Schlesinger M J (1990) J. Biol. Chem 265, 12111

More than just histone-like proteins [Minireview]

Schmid M B (1990) Cell, 63, 451

Role of G proteins in calcium channel modulation

Schutz G, Rosenthal W, Hescheler J & Trautwein W (1990) Annu. Rev. Physiol. 52, 275

Amphipathic helix motif — classes and properties

Segrest J P, Deloof H, Dohlman J G, Brouillet C G & Anantharamaiah G M (1990) Proteins, Struct Funct Genet 8, 103

Sex hormone binding globulins — origin, function and clinical significance

Selby C (1990) Ann. Clin. Biochem. 27, 532

The prolamin storage proteins of cereal seeds: structure and evolution

Shewry P R & Tatham A S (1990) Biochem J 267, 312

Structural studies of protein–nucleic acid interaction: the sources of sequence-specific binding

Steitz T A (1990) Q Rev. Biophys. 23, 205

The 11 protein — channel connection

Strom TM & Van Hoek D (1990) Trends Neurosci. 13, 122

Parathyroid hormone-related proteins — coming of age in the 1990s — clinical review

Stewart A F & Broadus A E (1990) J. Clin. Endocrinol. Metab 71, 1410
Cascades of sigma-factors revisited [Microreview]
Stragier P & Losick R (1990) Mol. Microbiol. 4, 1801

Mechanisms of immune injury in rheumatoid arthritis — evidence for the involvement of T-cells and heat-shock protein
Strober S & Holoshitz J (1990) ImmunoL Rev. 118, 233

The search for the elusive adrenal steroidogenic “regulatory” protein [Brief review]
Strout C A (1990) Trends Endocrinol. Metab. 1, 117

An element of symmetry in yeast TATA-box binding protein transcription factor-IIId — consequence of an ancestral duplication?
Stucka R & Feldmann H (1990) FEBS Lett. 261, 223

Molecular biology of selenoproteins
Sunde R A (1990) Annu. Rev. Nut. 10, 451

The dynamics of glycan–protein interactions in immunoglobulins.
Results of spin label studies
Sykulev Y K Nezlin R S (1990) Glycoconjugate J 7, 163

G protein-mediated regulation of K+ channels in heart
Szabo G & Otero A S (1990) Annu. Rev. Physiol. 52, 293

The role of G-proteins in transmembrane signalling
Taylor C W (1990) Biochem. J. 272, 1

A membrane anti-oncoprotein implied in colorectal cancer [Minireview]
Thomas G (1990) M/S Méd. Sci. 6, 292

Eukaryotic DNA replication — enzymes and proteins acting at the fork
Thommes P & Hubscher U (1990) Eur J Biochem. 194, 699

Laboratory investigation of cerebrospinal fluid proteins
Thompson E J & Keir G (1990) Ann. Clin. Biochem. 27, 425

The role of transferrin in the mechanism of cellular iron uptake
Thorsensen K & Romso I (1990) Biochem. J. 271, 1

Regulation of cardiac L-type calcium current by phosphorylation and G proteins
Trautwein W & Hescheler J (1990) Annu. Rev. Physiol. 52, 257

Electrical modulation of membrane proteins — enforced conformational oscillations and biological energy and signal transductions
Tsong T Y (1990) Annu. Rev. Biophys. Biophys Chem. 19, 83

The roles of microtubule-associated proteins in brain morphogenesis — a review
Tucker R P (1990) Brain Res. Rev. 15, 101

Specific nuclear DNA-binding proteins [In Russian; English abstract]
Turpaev K T & Vassnetsky Y S (1990) Genetika, 26, 804

Transcription activation and deactivation in rod systems of different structural integrity Attempts at a focussed view through scattered light [Minireview]
Uhl R & Ryba N J P (1990) Biochim Biophys Acta, 1054, 56

Watching G proteins at work
Uhl R, Wagner K & Ryba N (1990) Trends Neurosci 13, 64

Structural diversity and dynamics of microtubules and polymorphic tubulin assemblies
Unger E, Bohm K J & Vater W (1990) Electron Microsc. Rev. 3, 355

Molecular characterization of high molecular weight microtubule-associated proteins: some answers, many questions
Vallee R B (1990) Cell Motil. Cytoskel. 15, 204

γ-Carboxyglutamate-containing proteins and the vitamin K-dependent carboxylase
Vermeer C. (1990) Biochem. J 266, 625-636

Membrane proteins — from sequence to structure
Vonheijne G & Manoli C (1990) Protein Eng, 4, 109

Drosophila src family proteins [Minireview]
Wadsworth S C (1990) Comp. Biochem. Physiol. Pt B. 97, 403

Active transport of proteins into the nucleus [Review letter]
Wagner P, Kunz J, Koller A & Hall M N (1990) FEBS Lett. 275, 1–5

Protein engineering and the study of structure–function relationships in receptors
Ward W H I, Timms D & Forsht A R (1990) Trends Pharmacol. Sci. 11, 280

GTP Binding proteins and signal transmission in the human neutrophil [Minireview]
Weingarten R & Bokoch G M (1990) ImmunoL Lett 26, 1

Viral and cellular membrane fusion proteins
White J M (1990) Annu. Rev. Physiol. 52, 675

Molecular evolution and genetic engineering of protein domains involving aspartate transcarbamoylase
Wild J R & Wale R M E (1990) Annu. Rev. Microbiol 44, 193

Properties and possible function of phosphatidylinositol-transfer proteins
Wirtz K W A, Snook G T, Gadella T W J, Vanparidon P A & Somerharju P J (1990) Biotechnol. Appl. Biochem. 12, 485

Ferritin
Worwood M (1990) Blood Rev. 4, 259

International Symposium on Structure and Function of Nucleic Acids and Proteins, Acad Sinica, Inst Biomed Sci, Taipei, May 11–13, 1989
Wu G Y Y & Wu C W, eds (1990) Int. Symp. Struct. Funct. Nucleic Acids Proteins, 336 pp.

Protein structure determination in solution by NMR spectroscopy [Minireview]
Wuthrich K (1990) J. Biol. Chem. 265, 22059

Stress proteins and immunology
Young R A (1990) Annu. Rev Immunol. 8, 401

The architecture of invertebrate carotenoproteins
Zagalsky P F, Eliopoulos E E & Findlay J B C (1990) Comp. Biochem. Physiol. Pt B. 97, 1

Cell biology of the snRNP particles
Zieve G W & Sauterer R A (1990) Crit. Rev. Biochem. Mol. Biol. 25, 1

Ribonucleoparticle-independent transport of proteins into mammalian microsomes [Minireview]
Zimmermann R & others (1990) J. Bioenerget. Biomembr 22, 711

Mini-review series: Protein Transport in Membranes of Eukaryotes
Zimmermann R & others (1990) J. Bioenerget. Biomembr 22, 711–789

Immunochemical approaches to the study of histone H1 and high mobility group chromatin proteins
Zlatanova J S (1990) Mol. Cell. Biochem. 92, 1

PROTEINS, DEGRADATION

The structure and function of the aspartic proteinases
Davies D R (1990) Annu Rev Biochem. Biophys. Chem. 19, 189

Peptide sequences that target cytosolic proteins for lysosomal proteolysis
Davies D R (1990) Trends Biochem. Sci. 15, 305

Targeting of cytosolic proteins to lysosomes for degradation
Davies D R & Terlecky S R (1990) Crit. Rev. Ther. Drug Carrier Syst. 7, 211
Protein degradation in the endoplasmic reticulum [Minireview]
Klausner R D & Sitia R (1990) Cell, 62, 611–614

Regulation of protein degradation in the liver [Minireview]
Mortimore G E & Khurana K K (1990) Int. J. Biochem, 22, 1075

Gut microflora and tissue protein turnover in vivo in animals [Minireview]
Muramatsu T (1990) Int. J. Biochem 22, 793

Proteolytic processing of picornaviral polyprotein
Palmenberg A C (1990) Annu. Rev. Microbiol. 44, 603

Prostaglandins and the control of muscle protein synthesis and degradation
Palmer R M (1990) Prostagland. Leuk. Essent. Fatty Acids. 39, 95

Cathpsin-D in breast cancer — from molecular and cellular biology to clinical applications
Rochefort H, Capony F & Garcia M (1990) Cancer Cell Mon Rev. 2, 383

Inter-alpha-trypsin inhibitor — emergence of a family within the Kunitz-type protease inhibitor superfamily
Salier J P (1990) Trends Biochem Sci 15, 435

Evaluation of protein digestibility-corrected amino acid score method for assessing protein quality of foods
Sarwar G & McDonough F E (1990) J. Assoc. Offic. Anal. Chem. 73, 347

**PROTEINS, MODIFICATION**
See: PROTEINS, SYNTHESIS

**PROTEINS, PROCESSING**
See: PROTEINS, SYNTHESIS

**PROTEINS, SORTING**
See: PROTEINS, SYNTHESIS

**PROTEINS, SYNTHESIS**
See also: RNA, MESSENGER RNA, SYNTHESIS

Home production in animal tissues: the regulation of biogenesis of δ-aminolevulinate synthase [Minireview]
Aedes I Z (1990) Int. J. Biochem. 22, 565

Induced differentiation of K562 leukemia cells: a model for studies of gene expression in early megakaryoblasts
Altalal R (1990) Leukemia Res. 14, 501

Regulation of cell cycle-dependent gene expression in yeast [Minireview]
Andrews B J & Herskowitz I (1990) J. Biol. Chem. 265, 14057

Somatoestatin gene expression
Andriani O M & Dixon J E (1990) Annu. Rev. Physiol. 52, 793

Collagen gene expression and tooth development: An overview
Andujar M B & Magloire H (1990) J. Biol. Bucc. 18, 117

From protein synthesis to antibody formation and cellular immunity: a personal view
Askonas B A (1990) Annu. Rev. Immunol. 8, 1

Minireview: The function of protein carboxymethyltransferase in eukaryotic cells
Barten D M & O’Dea R F (1990) Life Sci. 47, 181

Triple post-transcriptional control [Microreview]
Bechhofer D H (1990) Mol Microbiol. 4, 1419

In situ hybridization: application to the study of gene expression during experimental hepatocarcinogenesis and human hepatocellular carcinoma
Bernau D & Feldmann G (1990) Tumor Biol. 11, 173

The genetics of protein secretion of E. coli
Bicker K L & Silhavy T J (1990) Trends Genet. 6, 329

Genetic regulation of Salmonella virulence [In Russian; English abstract]
Boichenko M N & Vorobyev A A (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No 2, 68

Control of protein formation in chloroplasts
Boschetti A, Breidenbach E & Blattler R (1990) Plant Sci. 68, 131

170 GP expression and resistance to chemotherapy in human cancers [In French; English abstract]
Bourhis J, Riou G & Benard J (1990) Bull. Cancer, 77, 957

Expression of human plasma protein genes in ageing transgenic mice
Bowman D H, Yang F & Adrian G S (1990) BioEssays. 12, 317

Calcium-dependent regulation of protein synthesis in intact mammalian cells
Brostrom C O & Brostrom M A (1990) Annu. Rev. Physiol. 52, 577

Induction of heat shock (stress) genes in the mammalian brain by hyperthermia and other traumatic events—a current perspective [Minireview]
Brown I R (1990) J. Neurosci Res 27, 247

Brittle bones — fragile molecules: disorders of collagen gene structure and expression
Byers P H (1990) Trends Genet. 6, 293

Codon usage in higher plants, green algae, and cyanobacteria
Campbell W H & Gowri G (1990) Plant Physiol. 92, 1

Flavivirus genome organization, expression, and replication
Chambers T J, Hahn C S, Galler R & Rice C M (1990) Annu. Rev Microbiol. 44, 649

Antibiotics inhibiting protein synthesis
Cocto C & Dagiambattista M (1990) M/S Med. Sci. 6, 46

Control of mitochondrial gene expression in Saccharomyces cerevisiae
Costanato M C & Fox T D (1990) Annu. Rev. Genet. 24, 91

Special issue: 22nd Lunteren Lectures on Molecular Genetics: The Stress Response in Microorganisms. A review of the role of 70kDa heat shock proteins in protein translocation across membranes
Craig E, Kang P J & Boorstein W (1990) Anton. Leeuwenhoek Int. J. Gen. Mol. Microbiol. 38, 137

Recent advances in peptide chain termination [Microreview]
Cragen W J, Lee C C & Caskey C T (1990) Mol Microbiol. 4, 861

The regulation and expression of MHC class-1 genes
Davidwatine B, Israel A & Kourilsky P (1990) Immunol. Today. 11, 280

Calcium and calmodulin regulation of prolactin gene expression [Brief review]
Davis J R E (1990) Trends Endocrinol Metab. 1, 319

Biosynthesis of glycosyl phosphatidylinositol membrane anchors [Minireview]
Doering T L, Masterson W J, Hart G W & England P T (1990) J. Biol. Chem. 265, 611

Regulation of hemopoietic by bone marrow stromal cells and their products
Dorschkind K (1990) Annu. Rev Immunol. 8, 111

Regulatory elements of the pro-opiomelanocortin gene: pituitary specificity and glucocorticoid repression [Brief review]
Drouin J, Sun Y L & Nemer M (1990) Trends Endocrinol Metab. 1, 219
Coronavirus. organization, replication and expression of genome
Lai M M C (1990) Annu. Rev Microbiol. 44, 303

Biosynthesis of collagen crosslinks [Minireview]
Last J A, Armstrong L G & Reiser K M (1990) Int. J. Biochem. 22, 559

Insertion and translocation of proteins into and through membranes
[Lazdunski C J & Benedetti H (1990) FEBS Lett. 268, 408-414

Regulation of the immunoglobulin gene transcription
McCarthy J E G & Guerlain M (1990) Biochemie. 72, 7

Mapping of viral epitopes with prokaryotic expression products [Brief review]
Lenstra J A, Kusters J G & Van der Zeijst B A M (1990) Arch. Virol. 110, 1

Baker's yeast, the new work horse in protein synthesis studies —
analyzing eukaryotic translation initiation
Linder P & Prat A (1990) BioEssays, 12, 519

Glycophospholipid membrane anchoring provides clues to the
mechanism of protein sorting in polarized epithelial cells
Lisanti M P & Rodriguez-Boulan E (1990) Trends Biochem. Sci. 15, 113

Translational attenuation as the regulator of inducible $cat$ genes
[Minireview]
Lovett P S (1990) J. Bact. 172, 1-6

Post-transcriptional control in the polycistronic operon environment:
studies of the $a_{ug}$ operon of Escherichia coli [MicroReview]
McCarthy J E G (1990) Mol. Microbiol. 4, 1233

Translational control of prokaryotic gene expression
McCarthy J E G & Guerlain M (1990) Trends Genet. 6, 78

Regulation of gene expression by intracellular hormone receptors
Maggi A (1990) Pharmacol. Res. 22, 409

Thyroid-stimulating hormone — biosynthesis, cell biology, and
bioactivity
Mangner J A (1990) Endocr. Rev. 11, 354

Posttranslational modification of proteins by isoprenoids in
mammalian cells
Majlessi W A (1990) FASEB J 4, 3319

Regulation of pulmonary surfactant protein synthesis in fetal lung. a
major role of glucocorticoids and cyclic AMP [Brief review]
Mendelson C R & Boggaram V (1990) Trends Endocrinol. Metab 1, 20

Variation and control of protein expression in Neisseria
Meyer T F, Gibbs C P & Haas R (1990) Annu Rev Microbiol 44, 45

Guanine nucleotide binding proteins in neuroblastoma $\alpha$ glioma
hybrid, NG108-13, cells. Regulation of expression and function
[Minireview]
Mulligan G, McKenzie F R, McClue S J, Mitchell F M & Mullaney T (1990) Int. J. Biochem. 22, 701

Regulation of plant gene expression by antisense RNA [Minireview]
Mol J N M & others (1990) FEBS Lett. 268, 427-430

Regulation of cAMP-inducible genes by CREB
Montminy M R, Gonzalez G A & Yamamoto K K (1990) Trends Neurosci. 13, 184

What is the clock? Translational regulation of circadian
bioluminescence
Morse D S, Fritz L & Hastings J W (1990) Trends Biochem. Sci. 15, 262

Translation and regulation of translation in the yeast Saccharomyces
cerevisiae
Muller P P & Trachsel H (1990) Eur. J. Biochem. 191, 257-261

Gut microflora and tissue protein turnover in vivo in animals
[Minireview]
Muramatsu T (1990) Int. J. Biochem. 22, 793

How do polypeptides cross the mitochondrial membranes
[Minireview]
Neupert W, Hartl F U, Craig E A & Pfanner N (1990) Cell, 63, 447

Defining components required for transport from the ER to the Golgi
complex in yeast
Newman A P & Ferronovsk S (1990) BioEssays, 12, 485

Targeting of proteins into the eukaryotic secretory pathway — signal
peptide structure function relationships
Nolliwelu S F & Goudj J I (1990) BioEssays, 12, 479

Sequence signals in eukaryotic upstream regions
Nussinov R (1990) Crit. Rev. Biochem. Mol. Biol. 25, 185

Translational dynamics — Interactions between the translational
factors, rRNA and ribosomes during eukaryotic protein synthesis
Nygard O & Nilsson L (1990) Eur. J. Biochem. 191, 1-17

Globin gene regulation and switching — circa 1990 [Meeting review]
Orkin S H (1990) Cell, 63, 665

Expression and biosynthesis of ABH-related carbohydrate antigens in
normal and pathologic human urothelium
Orntoft T F (1990) APMIS, 98, Suppl. 17, 5-34

Prostaglandins and the control of muscle protein synthesis and
degradation
Palmer R M (1990) Prostagland. Leuk. Essent. Fatty Acids. 39, 95

Molecular mechanisms of liver-specific albumin and $\alpha$-fetoprotein
gene regulation. A review
Papaconstantinou J, Rabek J P & Zhang D-er (1990) Dev Growth Differenrtion. 32, 205

Modification of Class-I major histocompatibility complex expression
and tumor progression [In French, English abstract]
Paul P (1990) M/S Med. Sci, 6, 449

Clathrin, adaptors, and sorting
Pearce B M F & Robinson M S (1990) Annu. Rev Cell Biol 6, 151

The retention signal for soluble proteins of the endoplasmic reticulum
Polham H R B (1990) Trends Biochem Sci 15, 483

Controlling the nuclear translocation of proteins — an additional level
to the regulation of gene expression [In French: English abstract]
[Minireview]
Piecuchczyk M & Roux P (1990) M/S Med. Sci. 6, 803

Eukaryotic transcription factors
Polyansovsky O I & Stephenkho A G (1990) BioEssays, 12, 205

On the microassembly of integral membrane proteins
Popot J L & Devity C (1990) Annu. Rev. Biophys. Biophys Chem 19, 369

Positional cues and differential gene expression in somatic embryos
of higher plants
Racusen R H & Schiavone F M (1990) Cell Differentiation Dev 30, 159

Complex and diversified regulatory programs control the expression
of vertebrate collagen genes
Ramirez F & Listero M D (1990) FASEB J 4, 1616

The concept of limiting genetic factors of expression, organization and
evolution [In Russian, English abstract]
Ratner V A (1990) Genetika, 26, 789
Posttranslational attenuation of peptide gene expression
Rehfeld J F (1990) FEBS Lett. 268, 1

Eukaryotic protein elongation factors
Riis B, Rattan S I S, Clark B F C & Merrick W C (1990) Trends Biochem. Sci 15, 420

Regulation and deregulation of human IgE synthesis
Romagnani S (1990) Immunol. Today. 11, 316

Tat and rev — positive regulators of HIV gene expression [Editorial review]
Rosen C A & Pavlakis G N (1990) AIDS, 4, 499

Movement of proteins through the Golgi stack: a molecular dissection of vesicular transport
Rothman J E & Orci L (1990) FASEB J. 4, 1460

The involvement of calcium in transport of secretory proteins from the endoplasmic reticulum
Sambrook J F (1990) Cell, 61, 197–199

Expression of animal and human retroviral gene products in Escherichia coli with the ApI promoter pJL6 vector system
Samuel K P & others (1990) Genet. Anal. 7, 178

Regulation of the genes for heme pathway enzymes in erythroid and non-erythroid cells [Concise review]
Sassa S (1990) Int. J. Cell Cloning, 8, 10

Differential gene expression in human cancer cells resistant to cisplatin [Basic science review]
Scanlon K J, Kashani-Sabet M & Miyachi H (1989) Cancer Invest. 7, 581

Heat shock proteins [Mini-review]
Schlesinger M J (1990) J. Biol. Chem. 265, 12111

Cell biology of intracellular protein trafficking
Schwartz A L (1990) Annu. Rev Immunol. 8, 195

Myosin, from the gene to the circulating forms [Plenary lecture]
Schwartz K (1990) J. Membr. Biol 117, 201

Hormonal control of neuroepitope gene expression in sexually dimorphic olfactory pathways
Simerly R B (1990) Trends Neurosci 13, 104

Polarized sorting in epithelia [Mini-review]
Simons K & Wandinger-Ness A (1990) Cell, 62, 207–210

Regulation of the expressions of class I MHC genes
Singer D S & Magure J E (1990) Crit. Rev. Immunol. 10, 235

Mitochondrial import: properties of precursor proteins
Skjerjanc I (1990) Biochem. Cell Biol 68, 9–16

Gene expression in response to aldosterone and mineralocorticoids
Skriver K & Mundy J (1990) Plant Cell, 2, 503–512

Protein transport into and within chloroplasts
Smoleczsk S, Weisbeek P & Robinson C (1990) Trends Biochem. Sci. 15, 73

Control of papillomavirus gene expression
Sousa R, Dostatni N & Yaniv M (1990) Biochim. Biophys. Acta, 1032, 19

FNR and its role in oxygen-regulated gene expression in Escherichia coli
Spiro S & Guest J R (1990) FEMS Microbiol. Rev. 75, 399

Novel regulation of vegetative storage protein genes
Staswick P E (1990) Plant Cell, 2, 1–6

Relationship of cell growth to the regulation of tissue-specific gene expression during osteoblast differentiation
Stein G S, Lian J B & Owen T A (1990) FASEB J. 4, 3111

Meeting on Regulation of Gene Expression in the Nervous System, Catania, Italy, July 8–11, 1989
Stripp B R, Whitsett J A & Lattier D L (1990) Am. J. Physiol. 259, No 4, Pt I, L185

Mechanisms of immune injury in rheumatoid arthritis — evidence for the involvement of T-cells and heat-shock protein
Strober S & Holoshitz J (1990) Immunol. Rev. 118, 233

A role for DNA methylation in vertebrate gene expression? [Mini-review]
Strobl I S (1990) Mol Endocrinol. 4, 181

Expression and functions of P glycoprotein (mdr1) gene product in normal and malignant tissues
Sugawara I (1990) Acta Path. Jap. 40, 545

Mini-review series: Protein export in bacteria; structure, function, and molecular genetics
Tai P C, ed. (1990) J. Bioenerget. Biomembr. 22, 209

Regulation of ferritin and transferrin receptor mRNAs
Theil E C (1990) J. Biol. Chem. 265, 4771

How cells maintain stability
Todorov I N (1990) Sci. Am. 263, No 6, 32–39

Lipid involvement in protein translocation in Escherichia coli [Microreview]
Vrije G J de, Batenburg A M, Killian J A & Kruijff B de (1990) Mol. Microbiol. 4, 143

Salvage receptors: two of a kind? [Mini-review]
Warren G (1990) Cell, 62, 1–2

Complexity of steroid hydroxylase gene expression in the adrenal cortex: a microcosm of regulated transcription [Brief review]
Waterman M R, Lund J & Simpson E R (1989) Trends Endocrinol. Metab. 1, 99

Gene regulation by receptors binding lipid-soluble substances
Weinberger C & Bradley D J (1990) Annu. Rev Physiol. 52, 823

Eukaryotic DNA methylation and gene expression
Wesselschuch A, Ward C & Bolden A (1989) Curr. Top. Cell Regul. 30, 1

Glucose regulation of insulin gene expression
Welsh M (1989) Diabetes Metab. 15, 367

Regulation of rat inhibin synthesis in the rat ovary
Woodruff T K & Mayo K E (1990) Annu. Rev. Physiol. 52, 807

RNA metabolism: strategies for regulation in the heat shock response
Yost H J, Petersen R B & Lindquist S (1990) Trends Genet. 6, 223

44-2C Cells: a neuroendocrine model to study neuropeptide oncogene, and growth factor gene regulation [Brief review]
Zezin F N (1989) Trends Endocrinol. Metab. 1, 107

Histone H1 and the regulation of transcription of eukaryotic genes
Zlatanov A (1990) Trends Biochem. Sci. 15, 273

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See GLYCOPROTEINS

PROTOZOA

The acid-active hemolysin of Trypanosoma cruzi [Minireview]
Andrews N W (1990) Exp. Parasitol. 71, 241

The pellicle and the membrane of the flagellum, flagellar adhesion zone, and flagellar pocket: functionally discrete surface domains of the bloodstream form of African trypanosomes
Balber A E (1990) Crit. Rev. Immunol. 10, 177

The ultrastructure of red cell invasion in malaria infections - a review
Bannister L H & Dluzewski A R (1990) Blood Cells, 16, 257

Plasmodium and the infected erythrocyte: sequestration in Plasmodium falciparum malaria: sticky cells and sticky problems
Berendt A R, Ferguson D J P & Newbold C I (1990) Parasitol. Today, 6, 247

Intestinal protozoa and epithelial cell kinetics, structure and function
Burst A, Gall D G, Nation P N & Olson M E (1990) Parasitol. Today, 6, 375

Genes of Acanthamoeba DNA, RNA and protein sequences (a review)
Byers T J, Hugo E R & Stewart V J (1990) J. Protozool. 37, Suppl. S17

Genome structure and evolution of Naegleria and its relatives
Clark C G (1990) J. Protozool. 37, Suppl. S2

New trends in photobiology. Photomotile responses in ciliated protozoa
Colombetti G (1990) J. Photochem. Photobiol. B-Biol. 4, 243

NACM, a cytopathogenic protein from Naegleria gruberi, EGs — purification, production of monoclonal antibody, and the immunodentification of a product that develops in NACM-treated vertebrate cell cultures
Dunnebacke T H & Dixon J S (1990) J. Protozool. 37, Suppl. S11

Alterations caused by the intraerythrocytic malaria parasite in the permeability of its host cell membrane [Minireview]
Ginsberg H (1990) Comp. Biochem. Physiol. Pt. A, 95, 31

Thymidylate synthase-dihydrofolate reductase in protozoa [Minireview]
Ivanetich K M & Santi D V (1990) Exp. Parasitol. 70, 367

Bifunctional thymidylate synthase-dihydrofolate reductase in protozoa
Ivanetich K M & Santi D V (1990) FASEB J. 4, 1591

Prevention of malaria
Keystone J S (1990) Drugs, 39, 337-354

Macrophage-parasite interactions in Leishmania infections
Mauel J (1990) J. Leukocyte Biol. 47, 187

Laboratory models for research in vivo and in vitro on malaria parasites of mammals: current status
Mons B & Sinden R E (1990) Parasitol. Today, 6, 3

Viruses of protozoan parasites [Minireview]
Patterson J L (1990) Exp. Parasitol. 70, 111

Expression of variable antigen genes in African trypanosomes [In French; English abstract]
Pays E (1990) M/S Med. Sci. 6, 510

Genetic dissection of Ca2+-dependent ion channel function in Paramecium
Preston R R (1990) BioEssays, 12, 269

Amoeboid locomotion of Naegleria gruberi. The effect of cytochalasin-B on cell-substratum interactions and motile behaviour
Preston T M, Cooper L G & King C A (1990) J. Protozool. 37, Suppl. S6

Genetic exchange in African trypanosomes
Stenfors J & Tait A (1990) Trends Genet. 6, 317

Plasmodium and the infected erythrocyte: glucose transport in malaria infected erythrocytes
Tanabe K (1990) Parasitol. Today, 6, 225

The leishmanial lipophosphoglycan: a multifunctional molecule [Minireview]
Turco S J (1990) Exp. Parasitol. 70, 241

Artemisia annua L — a source of novel antimalarial drugs
Weedonbag H J, Lutz C B & Pras N (1990) Pharmaceut. Weekbl. Sci. Ed. 12, 169

Natural products and the development of selective antiprotozoal drugs
Wright C W & Phillipson J D (1990) Phytother. Res. 4, 127

How does the end begin? Formation and maintenance of telomeres in ciliates and yeast
Zakian V A, Runge K & Wang S S (1990) Trends Genet. 6, 12

PTERIDINES

Production of pteridines during hematopoiesis and T-lymphocyte proliferation: potential participation in the control of cytokine signal transmission
Ziegler I (1990) Med Res. Rev. 10, 95

PURINES

P2 purinoceptors on vascular endothelial cells: physiological significance and transduction mechanisms
Boeynaems J-M & Pearson J D (1990) Trends Pharmacol. Sci. 11, 34

Potent inhibitors of de novo pyrimidine and purine biosynthesis as chemotherapeutic agents
Christopherson R I & Lyons S D (1990) Med. Res. Rev. 10, 505

Consumption of methyImxanthine-containing beverages and the risk of pancreatic cancer
Gordis L (1990) Cancer Lett. 52, 1-12

Consumption of methyImxanthine-containing beverages and the risk of breast cancer [Review Letter]
Lubin F & Ron E (1990) Cancer Lett. 53, 81-90

Adenosine deaminase and purinergic neuroregulation
Nagy J I, Geiger J D & Staines W A (1990) Neurochem. Int. 16, 211

PYRIMIDINES

Potent inhibitors of de novo pyrimidine and purine biosynthesis as chemotherapeutic agents
Christopherson R I & Lyons S D (1990) Med. Res. Rev. 10, 505

Pyrimidine derivatives — psychotropic properties and molecular mechanisms of central action [In Russian; English abstract]
Karlyshevskii N N, Makhaykov Y S & Stradomsky D V (1990) Farmakol. Toksikol. 53, 67
Fluorine-19 nuclear magnetic resonance spectroscopy — a privileged tool for metabolism and pharmacokinetic studies of fluoropyrimidines
[In French; English abstract]
Makita T, Inui M, Matsumoto N, Hattori N, Kato K, Chiba H, Nomoto H, Kajihara M, Kanno M, Nakano M, Yamaoka Y, Nakazato N, Nonaka T, Nishida N, Matsumura S, Kajihara M, Yamada M, Maeda S, Kato H, Inohara K, Kato Y, and Horiuchi T (1990) *J. Biol. Chem.*, 7, 1223

Molecular mechanism of N4-aminocytidine mutagenesis [In Japanese; English abstract]
Negishi K (1990) *Yakugaku Zasshi*, 110, 293

**PYROPHOSPHATES**
*See: PHOSPHATES*

**RADIATION**

Molecular analysis of the REV2 gene of *Saccharomyces cerevisiae* — a review. Paper presented at a meeting on DNA Repair Network — Molecular Radiation Biology, München-Neueherberg, March 21-23, 1990
Ahne F, Wendel S & Eckardt-Schunn F (1990) *Radiat. Environ. Biophys.*, 29, 293

Molecular mechanisms of ultraviolet radiation carcinogenesis
Ananthaswamy H N & Piercell W E (1990) *Photochem. Photobiol.*, 52, 1119

The development of new radiopharmaceuticals
Britton K E (1990) *Eur. J. Nucl. Med.*, 16, 373

Experimental studies of radiation carcinogenesis in the skin: a review
Coggle J E & Williams J P (1990) *Int. J. Radiat. Biol.*, 57, 797

1989 Douglas Lea Memorial Lecture. The cell dose concept: potential application in radiation protection
Feinendgen L E (1990) *Phys. Med. Biol.*, 35, 597

Fleischner Lecture. Radioclonides and the lung — past, present, and future
Hughes J M B (1990) *Am. J. Roentgenol.*, 155, 455

Effects of visible radiation on cultured cells
Karu T I (1990) *Photochem. Photobiol.*, 52, 1089

Effects of UV radiation on tumor immunity
Kripke M L (1990) *J. Nat Cancer Inst.*, 82, 1392

The comparative radiation genetics of humans and mice
Neel J V & Lewis S E (1990) *Annu. Rev. Genet.*, 24, 327

Two-quantum UV photochemistry of nucleic acids: Comparison with conventional low-intensity UV photochemistry and radiation chemistry
Nikogosyan D N (1990) *Int. J. Radiat. Biol.*, 57, 233

A review: The potential for food irradiation
Patterson M F (1990) *Lett. Appl. Microbiol.*, 11, 55

The ESTRO Regaud Lecture: Inherent radiosensitivity of tumor and normal tissue cells as a predictor of human tumor response
Petters L J (1990) *Radiother. Oncol.*, 17, 177

DNA damage and repair following treatment with ionizing radiation — review
Powell S & McMillan T J (1990) *Radiother. Oncol.*, 19, 95

Past and revised risk estimates for cancer induced by irradiation and their influence on dose limits
Richardson R B (1990) *Br. J. Radiol.*, 63, 235

Radical reactions in vivo — an overview. Paper presented at a meeting on DNA Repair Network — Molecular Radiation Biology, München-Neueherberg, March 21-23, 1990
Saran M & Bors W (1990) *Radiat. Environ. Biophys.*, 29, 249

Laser-induced strand break formation in DNA and polynucleotides
Schultefrohlinde D, Simic M G & Gorner H (1990) *Photochem. Photobiol.*, 52, 1137

Biphasic mortality response of chipmunks in the wild to single doses of ionizing radiation: toxicity and longevity hormesis
Thompson G A, Smithers J & Buxenbaum H (1990) *Drug Metab. Rev.*, 22, 269

Failia Memorial Lecture. Time, cells, and X-rays. Temporal aspects of some responses of cultured cells to X irradiation
Tolmach L J (1990) *Radiat. Res.*, 123, 119

The interaction of UVA radiation with cultured cells
Tyrrell R M & Keyse S M (1990) *J. Photochem. Photobiol. B: Biol.*, 4, 349

Colloquium on Ionizing Radiation Damage to DNA: Molecular Aspects, Lake Tahoe, CA, January 16-21, 1990
Wallace S S & Painter R B, eds (1990) *UCLA Symp. Mol. Cell. Biol.*, NS. 136, 331 pp.

The radiobiology of targeted radiotherapy
Wheldon T E & O'Donoghue J A (1990) *Int. J. Radiat. Biol.*, 58, 1

Towards perfection in radionuclide imaging
Williams E D (1990) *Phys. Med. Biol.*, 35, 1447

Activation of human immunodeficiency virus by ultraviolet radiation
Zmudzka B Z & Beer J Z (1990) *Photochem. Photobiol.*, 52, 1153

**RECEPTORS**
*See: ANTIGENS AND ANTIGEN RECEPTORS, CATECHOLAMINES AND RECEPTORS, HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS, NEUROTRANSMITTERS AND RECEPTORS, STEROIDS, STEROID HORMONES AND RECEPTORS*

**REDUCTION**
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**REGULATORY SUBSTANCES**
*See: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS*

**REPRODUCTION**

The potential relevance of cytokines to ovarian physiology — the emerging role of resident ovarian cells of the white blood cell series
Adashi E Y (1990) *Endocr. Rev.*, 11, 454

Placental steroid hormone biosynthesis in primate pregnancy
Albrecht E D & Pepe G J (1990) *Endocr. Rev.*, 11, 124

The laboratory technical evaluation of sperm fertilizing capacity [In French; English abstract]
Alnot M O (1990) *Ann. Biol. Clin. Paris.*, 48, 617

Functional significance of white blood cells in the male and female reproductive tract [Minireview]
Barratt C L R, Bolton A E & Cooke I D (1990) *Hum. Reprod.*, 5, 639

The nature and function of polypeptide growth factor receptors in the human placenta
Blay J & Hollenberg M D (1990) *J. Dev. Physiol.*, 12, 237–248
Interactions between somatic cells and germ cells throughout mammalian oogenesis [Minireview]

Buccione R, Schroeder A C & Eppig J J (1990) *Biol Reprod* 43, 543

Biochemical consequences of phosphorylcholines low pK with special relevance to human semen: passive pH regulation [Minireview]

Burtt C T & Chen B (1990) *Int J Biochem.* 22, 115

Gametocidal chromosomes and their induction of chromosome mutations in wheat

Endo T R (1990) *Jap. J Genet.* 65, 135

The initiation of development at fertilization

Epel D (1990) *Cell Differentiation Dev.* 29, 1

Clinical biochemistry of preeclampsia and related liver diseases of pregnancy — a review

Freund G & Arvan D A (1990) *Clin. Chim. Acta.* 191, 123

The mast cell system in reproductive toxicology

Itonov I D (1990) *Reprod Toxicol.* 4, 251

The evolution of heteromorphic sex chromosomes

Jablonska E & Lamb M J (1990) *Biol. Rev.* 65, 249

The endogenous regulation of mosquito reproductive behavior

Klowden M J (1990) *Expierientia.* 46, 660

Signal transduction processes leading to axonal exosynthesis in mammalian spermatocytes [Brief review]

Kopf G S & Wilde M W (1990) *Trends Endocrinol Metab.* 1, 362

Placental-like alkaline phosphatase in semen

Ringler G E & Strauss J F (1990) *Endocr Rev.* 11, 532

Hormonal regulation of cytochrome P450 enzymes, cholesterol side-chain cleavage and 17α-hydroxylase/C17-20 lyase in Leydig cells

Payne A (1990) *Biol. Reprod.* 42, 399

Cytogenesis of human oocyte [In French; English abstract]

Pelletier F (1990) *M/S Méd. Sci.* 6, 966

Effects of gossypol on the motility of mammalian sperm

Porat O l & Koshida K (1989) *Mol Reprod Dev.* 25, 400

Development and regulation of growth and differentiated function in human and subhuman primate fetal gonads

Rabinovici J & Jaffe R B (1990) *Endocr Rev.* 11, 105

In vitro systems for the study of human placental endocrine function

Ringler G E & Strauss J F (1990) *Endocr Rev.* 11, 105

Oral contraceptives and breast cancer — review and meta-analysis

Romieu I, Berlin J A & Colditz G (1990) *Cancer.* 66, 2253

Parental imprinting of genes

Sapienza C (1990) *Sci. Am.* 263, No 4, 52

Towards a New Standard in Oral Contraception — XIII World Congress on Fertility and Sterility: Symposium Proceedings, Marrakesh, 3 October 1989

Schleselmann J J & others (1990) *Am J Obstet Gynecol.* 163, No 4, Pt 2, Suppl., 1379-1414

Sex hormone binding globulin — origin, function and clinical significance

Selby C (1990) *Ann. Clin. Biochem.* 27, 532

Cellular and molecular biology of capacitation and acrosome reaction in mammalian spermatozoa

Siddhu K S & Guraya S S (1989) *Int. Rev. Cytol.* 118, 231

Structure and function of sea urchin egg jelly molecules

Suzuki N (1990) *Zool Sci.* 7, 355

Reproduction; editorial overview

Talwar G P (1990) *Curr. Opin Immunol.* 2, 723

RU 486

Ulmann A, Teutsch G & Philibert D (1990) *Sci. Am.* 262, No 6, 42 48

Distribution and function of organized concentrations of actin filaments in mammalian spermatogenic cells and Sertoli cells

Vogel A W (1989) *Int. Rev. Cytol.* 119, 1

Regulation of rat inhibin synthesis in the rat ovary

Woodruff T K & Mayo K E (1990) *Annu Rev. Physiol.* 52, 807

RIBOSOMES

Ribosome gymnastics — degree of difficulty 9.5, style 10.0

Atkins J F, Weiss R B & Gesteland R F (1990) *Cell.* 62, 413-423

The where, what and how of ribosomal frameshifting in retroviral protein synthesis

Hatfield D & Oroszlan S (1990) *Trends Biochem. Sci.* 15, 186

Chloroplast ribosomal proteins and their genes

Mache R (1990) *Plant Sci.* 72, 1

Translational dynamics — Interactions between the translational factors, tRNA and ribosomes during eukaryotic protein synthesis

Nygård O & Nilsson L (1990) *Eur J. Biochem.* 191, 1-17
**RICKETTSIAE**

Interaction of rickettsiae with eukaryotic cells [In Russian; English abstract]
Balaeva N M (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No 2, 80

**RNA**

RNA editing in trypanosomes — is there a message?
Bonne R (1990) Trends Genet. 6, 177

Genes of Acanthamoeba — DNA, RNA and protein sequences (a review)
Byers T J, Hugo E R & Stewart V J (1990) J. Protozool 37, Suppl, S17

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Angew. Chem. 29, 759

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Bioessays 10, 239

Antisense strategies in cell and developmental biology
Colman A (1990) J. Cell Sci. 97, 399

RNA processing, Pt A. General methods
Dahlgberg J E & Abelson J N, eds (1989) Cold Spring Harb. Symp. Quant. Biol. 54, 1

RNA and protein metabolism in the aging brain
Finch C E & Morgan D G (1990) Annu. Rev. Neurosci 13, 75

Structure of spliceosomal snRNPs and their role in pre-messenger RNA splicing
Luhrmann R, Kastner B & Bach M (1990) Biochim. Biophys. Acta, 1087, 265

A selective review of RNA-protein interactions in eukaryotes
Mattaj I W (1990) Mol. Biol. Rep. 14, 151

Pseudoknots: a new motif in the RNA game
Pleij C W A & Oroszlan S (1990) Trends Biochem. Sci. 15, 143

Sequences supplement — RNA, cloned human DNA and E. coli sequences, codon usage and restriction enzyme recognition sequences
Specht T & others (1990) Nucleic Acids Res 18, Suppl. 2215

Antisense RNA
Takayama K M & Inouye M (1990) Crit. Rev. Biochem. Mol. Biol. 25, 155

Antisense RNA and DNA
Weintraub H M (1990) Sci. Am. 262, No 1, 40

RNA metabolism: strategies for regulation in the heat shock response
Yost H J, Pentzer R B & Lindquist S (1990) Trends Genet. 6, 223

Ribozyme design [Brief review]
Zhnedarova S M (1990) Mol. Biol. Engl. Tr 24, No 1, Pt 1, 1

Cell biology of the snRNP particles
Zieve G W & Sauterer R A (1990) Crit. Rev. Biochem. Mol. Biol. 25, 1

**RNA, MESSENGER**

Trans splicing of nuclear pre-mRNAs [Minireview]
Agabian N (1990) Cell, 61, 1157-1160

Codon preferences in free-living microorganisms
Andersson S G E & Kurland C G (1990) Microbiol. Rev 54, 198-210

Regulated messenger RNA stability
Atwater J A, Wisdom R & Verma I M (1990) Annu. Rev Genet. 24, 519

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Angew. Chem. 29, 759

Self-splicing and enzymatic activity of an intervening sequence RNA from Tetrahymena
Cech T R (1990) Bioessays 10, 239

Functions of maternal mRNA in early development
Dworkin M B & Dworkin-Rastl E (1990) Mol. Reprod. Dev. 26, 261

Different specificities of ribonuclease-II and polynucleotide phosphorylase in 3'messenger RNA decay — a review
Guarnieri G & Portier C (1990) Biochim. Biophys. Acta, 72, 771

Involvement of an initiation factor and protein phosphorylation in translational control of GCN4 mRNA
Hinnebusch A G (1990) Trends Biochem. Sci 15, 148

Do the poly(A) tail and 3' untranslated region control mRNA translation?
Jackson R J & Standart N (1990) Cell, 62, 15-24

Self-splicing group II and nuclear pre-mRNA introns: how similar are they?
Jacquier A (1990) Trends Biochem. Sci 15, 351

Localized messenger RNA and the egg cytoskeleton
LeCefler W R (1989) Int. Rev. Cytol. 119. 151

Localization in situ of specific messenger RNA using thymine thymine dimerized DNA probes — sensitive and reliable non-radioactive in situ hybridization
Kojo, T & Nakane P K (1990) Acta Path. Jap 40, 793

Structure of spliceosomal snRNPs and their role in pre-messenger RNA splicing
Luhrmann R, Kastner B & Bach M (1990) Biochim. Biophys. Acta, 1087, 265

Regulation of plant gene expression by antisense RNA [Minireview]
Mol J N M & others (1990) FEBS Lett. 268, 427-430

Transcriptional enhancers can act in trans
Muller H-P & Schnafler W (1990) Trends Genet. 6, 300

Insights into hormonal control of messenger RNA stability [Minireview]
Nielsen D A & Shapiro D J (1990) Mol. Endocrinol. 4, 953

Eukaryotic transcription factors
Polyanovsky O I & Stepchenko A G (1990) BioEssays. II. 205

Transcription repression in eukaryotes
Renkawitz R (1990) Trends Genet. 6, 192

The pS2 gene, mRNA, and protein: a potential marker for human breast cancer
Rio M-C & Chambon P (1990) Crit. Rev. Biochem. Mol. Biol. 15, 143

Eukaryotic transcription factors
Polyanovsky O I & Stepehenko A G (1990) BioEssays 12, 205

Transcription repression in eukaryotes
Renkawitz R (1990) Trends Genet. 6, 192

The pS2 gene, mRNA, and protein: a potential marker for human breast cancer
Rio M C & Chambon P (1990) Cancer Cells, 2, 269

Prosomes, subcomplexes of untranslated mRNP [Minireview]
Scherrer K (1990) Mol. Biol. Rep. 14, 1

Review — Transcription elongation and eukaryotic gene regulation
Spencer C A & Groudine M (1990) Annu. Rev. Genet. 24, 519

Regulation of ferritin and transferrin receptor mRNAs
Theil E C (1990) J. Biol. Chem. 265, 4771

RNA editing: guided but not templated? [Minireview]
Weiner A M & Maizels N (1990) Cell, 61, 917-920
How the messenger got its tail: addition of poly(A) in the nucleus
Wickens M (1990) Trends Biochem. Sci. 15, 277
Structure and expression of osteonectin mRNA in human tissue
Young M F & others (1990) Connective Tissue Res. 24, 17

RNA, RIBOSOMAL
Mechanism and regulation of bacterial ribosomal RNA processing
Srivastava A K & Schlessinger D (1990) Annu. Rev. Microbiol. 44, 105

RNA, SYNTHESIS
Transcriptional regulation of the
A comparison of truns-RNA splicing in trypanosomes and nematodes
Post-meiotic gene expression
and site-specific recombination [Minireview]
Nucleoprotein structures initiating DNA replication, transcription,
RNA editing in kmetoplastid mitochondria [Minireview]
Anti sense strategies in cell and developmental biology
The HIV-l TAT protein ~ an RNA sequence-specific processivity factor [Minireview]
Tails of RNA polymerase II
Are mec proteins transcription factors?
Antisense strategies in cell and developmental biology
Tails of RNA polymerase II
The HIV-1 TAT protein — an RNA sequence-specific processivity factor [Minireview]
Transcriptional regulation of the
Transcription factor phosphorylation — a link between signal
Transcriptional regulatory cascade of nitrogen-fixation genes in
Mechanism and regulation of bacterial ribosomal RNA processing
Cis-elements and DNA-binding proteins involved in transcription
Control of globin gene transcription
NF-kB, KBFl,
Transcriptional regulation of the
Transcriptional enhancers can act
Regulation of the immunoglobulin gene transcription
Eukaryotic transcription factors
Post-meiotic gene transcription
Positive regulators, VirG, PhoB, and OmpR
transduction and the regulation of gene expression
How the messenger got its tail: addition of poly(A) in the nucleus
Wickens M (1990) Trends Biochem. Sci. 15, 277
Structure and expression of osteonectin mRNA in human tissue
Young M F & others (1990) Connective Tissue Res. 24, 17
Activators and targets

Plushine M & Gann A F (1990) Nature, 346, 329-331

RNA synthesis in the nucleolus

Reeder R H (1990) Trends Genet. 6, 390

Transcription repression in eukaryotes

Renkawitz R (1990) Trends Genet. 6, 192

Rho-dependent transcription termination

Richardson J P (1990) Biochim. Biophys. Acta, 1048, 127

Environmental stimuli and transcriptional activity generate transient changes in DNA torsional tension

Saavedra R A (1990) BioEssays, 12, 125

Regulation of cell-type specific transcription and differentiation of the pituitary

Sharp Z D & Cao Z (1990) BioEssays, 12, 80

Review — Transcription elongation and eukaryotic gene regulation

Spencer C A & Groudine M (1990) Annu. Rev. Microbiol. 44, 105

Cascades of sigma-factors revisited [Microreview]

Stragier P & Losick R (1990) Mol. Microbiol. 4, 1801

An element of symmetry in yeast TATA-box binding protein transcription factor-IIId — consequence of an ancestral duplication?

Stucka R & Feldmann H (1990) FEBS Lett. 261, 223

The effects of plant transposable element insertion on transcription initiation and RNA processing

Weil C F & & Wessler S R (1990) Mol. Microbial. 4, 171

RNA editing: guided but not templated? [Mini review]

Weiner A M & Maizels N (1990) Cell, 61, 917-920

Position effects on eukaryotic gene expression

Wilson C, Bellen H J & Gehring W J (1990) Annu. Rev Cell Biol. 6, 679

Histone H1 and the regulation of transcription of eukaryotic genes

Zlatanova J (1990) Trends Biochem. Sci. 15, 273

RNA, TRANSFER

Uncharged transfer RNA, protein synthesis, and the bacterial stringent response [Microreview]

Goldman E & Jakubowski H (1990) Mol. Microbiol. 4, 2035

Structure and function of suppressor tRNAes in higher eukaryotes

Hatfield D L, Smith D W E. Lee B J, Worland P J & Orozlan S (1990) Crit. Rev. Biochem. Mol. Biol. 25, 71

Methionyl-transfer RNA synthetase from E. coli — a review

Meinnel T & others (1990) Biochimie, 72, 625

Translational dynamics — Interactions between the translational factors, tRNA and ribosomes during eukaryotic protein synthesis

Nygaard Ö & Nilsson L (1990) Eur. J. Biochem. 191, 1-17

NMR analyses of structures and functions of modified nucleosides in transfer ribonucleic acids [Plenary lecture]

Yokoyama S, Muramatsu T, Kawai G & Miyazawa T (1990) Nucleosides Nucleotides, 9, 303

SCHIZOPHRENIA

Interactions between glutamatergic and monoaminergic systems within the basal ganglia — implications for schizophrenia and Parkinson’s disease

Carlsson M & Carlsson A (1990) Trends Neurosci. 13, 272

Genetic mapping of common diseases: the challenges of manic-depressive illness and schizophrenia

Gershon E S, Martinez M, Goldin L R & Gejman P V (1990) Trends Genet. 6, 282

Molecular genetic studies of manic-depression and schizophrenia

Owen M J & Mullan M J (1990) Trends Neurosci. 13, 29

Pineal melatonin in schizophrenia — a review and hypothesis

Sandyk R & Kay S R (1990) Schizophrenia Bull. 16, 653

Dopamine receptors and transporters in Parkinson’s disease and schizophrenia

Seeman P & Niznik H B (1990) FASEB J. 4, 2737

Schizophrenia, affective psychoses, and other disorders treated with neuroleptic drugs — the enigma of tardive dyskinesia, its neurobiological determinants, and the conflict of paradigms

Waddington J L (1989) Int. Rev. Neurobiol. 31, 297

SECRETION

See: TRANSPORT

SENSORY SYSTEMS

The role of cell–cell interaction in the development of the Drosophila visual system

Bauerje U & Zivyusky S L (1990) Neuron, 4, 177-187

Sensory neuron–specific actions of capsaicin: mechanisms and applications

Bevan S & Szolcsányi J (1990) Trends Pharmacol. Sci. 11, 330

Dynamic microvillar cytoskeletons in arthropod and squid photoreceptors

Blest A D & Stowe S (1990) Cell Motil. Cytoskel. 17, 1

Visual deficits related to dopamine deficiency in experimental animals and Parkinson’s disease patients

Bodis-Wollner I (1990) Trends Neurosci. 13, 296

Development of visual sensitivity to light and color vision in human infants, a critical review [Mini review]

Brown A M (1990) Vision Res. 30, 1159

Signal transducing GTP-binding proteins in olfaction [Mini review]

Bruch R C (1990) Comp. Biochem Physiol. Pt A, 95, 27

Nutritional factors in cataract

Bunce G E, Kinoshita J & Horwitz J (1990) Annu. Rev. Nutr 10, 233

The role of perireceptor events in chemosensory processes

Carr W E S, Gleeson R A & Trapido-Rosenthal H G (1990) Trends Neurosci. 13, 212

Patterned activity, synaptic convergence, and the NMDA receptor in developing visual pathways

Constantine-Paton M, Cline H T & Debski E (1990) Annu. Rev. Neurosci. 13, 129

Face agnosia and the neural substrates of memory

Damasio A R, Tranel D & Damasio H (1990) Annu. Rev. Neurosci. 13, 89

Ontogeny of the somatosensory system: origins and early development of primary sensory neurons

Davies A M & Lumsden A (1990) Annu. Rev. Neurosci. 13, 61
Senescence in the Skin — an International Symposium organized by the Institute of Dermatology, London, 7–8 April 1989
Leyden J J & others (1990) Br. J. Dermatol. 122, Suppl. 35, 1

Epidermal cell kinetics of the pig: a review
Morris G M & Hopewell J W (1990) Cell Tissue Kinet. 23, 271

Transdermal absorption and skin maintenance of viprostat, a synthetic prostaglandin E2 analogue
Nicolau G & Vaeboe A (1990) Drug Metab. Rev. 21, 401

Drug metabolism by leukocytes and its role in drug-induced lupus and other idiosyncratic drug reactions
Uctrech J (1990) Crit. Rev. Toxicol. 20, 213

Structure, function and transforming potential of the epidermal growth factor receptor
Velu T J (1990) Mol. Cell. Endocrinol. 70, 205

Supplement on the Psoriasis Workshop: Molecular, Immunologic and Pharmacologic Aspects of Psoriasis — Deer Valley, Utah, 14–17 September 1989
Weinstein G D & others (1990) J. Invest. Dermatol. 95, S1–S62

Essential fatty acids and the skin
Wright S (1989) Prostagland. Leuk. Essent. Fatty Acids, 38, 229

Biologically active analogues of the extracellular matrix — artificial skin and nerves
Yannas I V (1990) Angew. Chem. Int. Ed. 29, 20

Essential fatty acids and polynsaturated fatty acids: significance in cutaneous biology
Ziboli V A & Miller C C (1990) Annu. Rev. Nutr. 10, 433

SLEEP

Sleep, brain activity and cognition
Dujardin K, Guerrien A & Lecomte P (1990) Physiol. Behav. 47, 1271

Somnogenic activity of immune response modifiers
Krueger J M (1990) Trends Pharmacol. Sci. 11, 122

The biological basis of an antidepressant response to sleep deprivation and relapse — review and hypothesis
Wu J C & Bunney W E (1990) Am. J. Psychiatry. 147, 14

SMELL

See: SENSORY SYSTEMS

SMOKING

See: DRUGS AND DRUG METABOLISM

SODIUM

Structure activity in the atrial natriuretic peptide (ANP) family
Bovyl P R (1990) Med. Res. Rev. 10, 115

Diverse biological actions of atrial natriuretic peptide
Brenner B M, Ballermann B J, Gunning M E & Zeidel M L (1990) Physiol. Rev. 70, 665

Significance of Na+-K+ pump regulation in skeletal muscle
Clausen T (1990) News Physiol. Sci. 5, 148

Atrial natriuretic factor in edematous disorders
Cody R J (1990) Annu. Rev. Med. 41, 377

Renal effects of atrial natriuretic factor
Cogan M G (1990) Annu. Rev. Physiol. 52, 699

Angiotensin II: a powerful controller of sodium transport in the early proximal tubule [Brief review]
Cogan M G (1990) Hypertension, 15, 451

Basolateral K conductance: role in regulation of NaCl absorption and secretion
Dawson D C & Richards N W (1990) Am. J. Physiol. 259, No 2, Pt 1, C181

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part I [Editorial review]
De Wardener H E (1990) Clin. Sci. 79, 193–200

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part II [Editorial review]
De Wardener H E (1990) Clin. Sci. 79, 289–291

Wellcome Prize Lecture: Intracellular sodium in cardiac muscle: effects on contractility
Eisner D A (1990) Exp. Physiol. 75, 437

The mechanism of pressure natriuresis [Editorial review]
Firth J D, Raine A E G & Ledingham J G G (1990) J. Hypertension, 8, 97

Degradation and clearance of atrial natriuretic factors (ANF) [Minireview]
Gerbes A L & Vollmar A M (1990) Life Sci. 47, 1173

Membrane potentials and the mechanism of intestinal Na+-dependent sugar transport
Kimich G A (1990) J. Membr. Biol. 114, 1

Salinity tolerance of eukaryotic marine algae
Kirst G O (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 21–53

Electrogenic properties of the Na-Ca exchange
Lagnado L & McNaughton P A (1990) J. Membr. Biol. 113, 177

Regulation of the abundance of sodium pumps in isolated animal cells [Minireview]
Lamb J F (1990) Int. J. Biochem. 22, 1365

Cardiovascular dopamine receptors: role of renal dopamine and dopamine receptors in sodium excretion [Minireview]
Lokhandwala M F & Hegde S S (1990) Pharmacol. Toxicol. 66, 237

Ionic regulatory mechanisms in crustacean gill epithelia
Luci C (1990) Comp. Biochem. Physiol. Pt A, 97, 297

The sodium pump needs its β subunit
McDonough A A, Geering K & Farley R A (1990) FASEB J. 4, 1598

Chemical modification as an approach to elucidation of sodium pump structure–function relations
Pedomonte C H & Kaplan J H (1988) Am. J. Physiol. 258, No 1, Pt I, C1

Mechanisms of sodium homeostasis: sodium and water excretion in mammals — haemodynamic, endocrine, and neural mechanisms
Renhardt H W & others (1990) Acta Physiol. Scand. 139, Suppl. 591, 3–107

Is atrial natriuretic factor a physiological regulator of sodium excretion? — A review of the evidence
Richards A M (1990) J. Cardiovasc. Pharmacol. 16, Suppl. 7, S39

Regulation of brain atrial natriuretic peptide and angiotensin receptors — quantitative autoradiographic studies
Sawosrab J M, Castren E, Gutkind J S & Nazarali A J (1989) Int. Rev. Neurobiol. 31, 257

Atrial natriuretic peptides
Sagnella G A & Macgregor G A (1990) Q. J. Med. 77, 1001
Enkephalinase (EC 3.4.24.11) inhibitors: protection of endogenous ANF against inactivation and potential therapeutic applications [Minireview]
Schwarz J-C, Gros C, Lecomte J-M & Bialet J (1990) Life Sci. 47, 1279

Increased vascular wall sodium in hypertension: where is it, how does it get there and what does it do there? [Editorial review]
Simon G (1990) Clin. Sci. 78, 533-540

Decreased activity of the platelet Na⁺,K⁺-adenosine triphosphatase enzyme in allergic subjects
Skoner DJ P, Gentile D & Evans R (1990) J. Lab. Clin. Med. 115, 535

Fourth Datta Lecture: The energy coupled exchange of Na⁺ for K⁺ across the cell membrane — the Na⁺,K⁺-pump
Skou J C (1990) FEBS Lett. 268, 314-324

Energetics and the design principles of the NA/K-ATPase [Minireview]
Stein W D (1990) J. Theoret. Biol. 147, 145

Atrial natriuretic peptide in peripheral organs other than the heart
Vollmar A M (1990) Klin. Wochenschr. 68, 699

Renal action of atrial natriuretic peptide: regulation of collecting duct sodium and water transport
Zeidel M L (1990) Annu. Rev. Physiol. 52, 747

SPECTROSCOPY

Nuclear magnetic resonance in clinical pharmacology and measurement of therapeutic response
Aellig W H (1990) Br. J. Clin. Pharmacol 29, 157

Time-resolved luminescence spectroscopy of photosensitizers of biomedical interest
Andreoni A (1990) Photochem. Photobiol 52, 423

Use of deuterium labelling in NMR studies of antibody combining site structure
Anglister J (1990) Q. Rev. Biophys. 23, 175

Water transport through membranes — a review of NMR studies of model and biological systems
Babic G, Srejic R & Ratkovic S (1990) Stud. Biophys. 138, 95

NMR studies of metabolism
Cerdan S & Seelig J (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 43

Spectroscopic analysis of genetically modified photosynthetic reaction centers
Coleman W J & Youvan D C (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 333

Static secondary ion mass spectrometry of polymeric biomaterials
Davie M C & Lynn R A P (1990) Crit. Rev. Biocompatibility. 5, 297

C-13-nuclear magnetic resonance — spectral studies of the interactions of metal ions with carbohydrates — use of relaxation probes
Dill K & Carter R D (1989) Advan. Carbohydr Chem. Biochem. 47, 125

Heteronuclear three-dimensional NMR spectroscopy of isotopically labelled biological macromolecules
Fesik S W & Zuidweg E R P (1990) Q. Rev. Biophys. 23, 97

Analysis of eicosanoid formation in humans by mass spectrometry
Fischer S (1989) Advan. Lipid Res. 23, 199

Interpretation of DNA vibrational spectra by normal coordinate analysis [Minireview]
Ghomi M, Letellier R, Liquier J & Taillandier E (1990) Int. J. Biochem. 22, 691

Cellular energy metabolism — recent advances in the study of the diaphragm with magnetic resonance spectroscopy
Gutiérrez G, Palizas F & Mariné C E (1990) Chest. 97, 975

Indirect spectrophotometric detection in reversed phase HPLC applications in drug analysis [In French; English abstract]
Herne P (1990) J Pharm. Belg. 45, 151

Ultraviolet and light absorption spectrometry
Howell J A & Hargis L G (1990) Anal. Chem. 62, R155

Three-dimensional structures of proteins determined by two-dimensional NMR and distance geometry calculations
Inagaki F (1990) Cell Struct. Func. 15, 237

Errors in three dimensions
Janin J (1990) Biochimie, 72, 705-709

Nuclear magnetic resonance spectroscopy
Jelinski L W (1990) Anal. Chem. 62, R212

Protein secondary structure and circular dichroism — a practical guide
Johnson W C (1990) Proteins, Struct. Func. Genet. 7, 205

Nuclear magnetic resonance relaxation methodology: application to enzyme systems [Minireview]
Kasturi S R, Jaron G K, Iyer S B & Kenkare U W (1990) Indian J Biochem. Biophys. 27, 187

NMR microscopy — fundamentals, limits and possible applications
Kuhn W (1990) Angew. Chem. Int. Ed. 29, 1

Uniform and selective deuteration in two-dimensional NMR of proteins
Lemaster D M (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 243

Deuterium labelling in NMR structural analysis of larger proteins
Lemaster D M (1990) Q. Rev. Biophys. 23, 133

Colloquium on Frontiers of NMR in Molecular Biology, Park City, UT, January 12-19, 1989
Live D, Armitage I M & Patel D, eds (1990) UCLA Symp. Mol. Cell. Biol. NS. 109, 283 pp.

Nuclear magnetic resonance studies of cellular metabolism
Lundberg P, Harmsen E, Ho C & Vogel H J (1990) Anal. Biochem 191, 193

Molecular fluorescence, phosphorescence, and chemiluminescence spectrometry
Mcgown L B & Warner I M (1990) Anal. Chem. 62, R255

Biosynthetic incorporation of ¹³N and ¹³C for assignment and interpretation of nuclear magnetic resonance spectra of proteins
McNish L P & Dahlquist F W (1990) Q. Rev. Biophys. 23, 1

Fluorine-19 nuclear magnetic resonance spectroscopy — a privileged tool for metabolism and pharmacokinetic studies of fluoropyrimidines [In French; English abstract]
Maletmartmo M C, Martin0 R & Armand J P (1990) Int. J. Biochem. 23, 175

Electron spin resonance
Narayana M (1990) Anal. Chem. 62, R150

Infrared spectrometry
Nyquist R A & others (1990) Anal. Chem. 62, R223

Nuclear magnetic resonance, Pt B, Structure and mechanism
Oppenheimer N J & James T L (1989) Methods Enzymol. 177, 507 pp.
Heteronuclear filters in two-dimensional ['H,'H]-NMR spectroscopy: combined use with isotope labelling for studies of macromolecular conformation and intermolecular interactions
Oetig G & Wüthrich K (1990) Q. Rev. Biophys. 23, 39

Transport of toxic metals in plants — a review of recent experiments with P.31 NMR spectroscopy
Ratkovic S (1990) Stud. Biophys. 138, 175

Resonance Raman studies of bacterial reaction centers [Review]
Robert B (1990) Biochim. Biophys. Acta. 1017, 99

Carbon-13 NMR spectroscopy of pyrrolizidine alkaloids
Roeder E (1990) Phytochemistry, 29, 11

Chromatography and mass spectrometry — an overview
Schmid E R (1990) Chromatographia, 30, 573

Mass spectrometry: applications in the analysis of nucleosides, nucleotides and oligonucleotides [Plenary lecture]
Schrum K H (1990) Nucleosides Nucleotides, 9, 311

AllostERIC linkage-induced distortions of the prosthetic group in haem proteins as derived by the theoretical interpretation of the depolarization ratio in resonance Raman scattering
Schweitzerstenner R (1989) Q. Rev. Biophys. 22, 381-479

Ultra-fast laser spectroscopy of visual pigments
Shichida Y (1990) Photochem. Photobiol. 52, 1179

Mossbauer spectroscopy
Stevens J G, Bowen L H & Whatley K M (1990) Anal. Chem. 62, R125

The dynamics of glycan–protein interactions in immunoglobulins. Results of spin label studies
Sykulev V K, Nezlin R S (1990) Glycoconjugate J. 7, 163

Mutational spectroscopy in animal toxicity testing
Thilly W G (1990) Annu Rev Pharmacol Toxicol 30, 369-385

NMR spectroscopy: its basis, biological application and use in studies of insect metabolism [Mini-review]
Thompson S N (1990) Insect Biochem. 20, 223

Waugh Conference on High Resolution NMR in Solids, MIT, Cambridge, MA, January 19-21, 1989
Warren W S, ed. (1989) Advan. Magnet. Resonance, 13, 277 pp.

Protein structure determination in solution by NMR spectroscopy [Mini-review]
Worthich K (1990) J. Biol. Chem. 265, 22059

NMR analyses of structures and functions of modified nucleosides in transfer ribonucleic acids [Plenary lecture]
Yokoyama S, Muramatsu T, Kawai G & Miyazawa T (1990) Nucleotides Nucleotides, 9, 303

SPERMIDINE
See: AMINES

SPHINGOLIPIDS
See: LIPIDS

STEROIDS, STEROID HORMONES AND RECEPTORS
See also: HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

Placental steroid hormone biosynthesis in primate pregnancy
Albrecht E D & Pepe G J (1990) Endocr. Rev. 11, 124

IXth Ecdysone Workshop, Paris, September 11-14, 1989, — a collection of review articles
Barker G C & others (1990) Invertebr. Reprod. Dev. 18, 1—91

Steroidal control of behavioural, neuroendocrine and brain sexual differentiation: studies in a carnivore, the ferret
Baum M J, Carroll R S, Cherry J A & Tobet S A (1990) J. Neuroendocrinol. 2, 401

Anticonvulsant steroids and the GABA/benzodiazepine receptor–chlordiazepoxide complex
Belletti D, Lan N C & Gee K W (1990) Neurosci. Biobehav. Rev. 14, 315

Agonist-stimulated turnover of the phosphoinositides and the regulation of adrenocortical steroidogenesis
Bird I M, Walker S W & Williams B C (1990) J. Mol. Endocrinol. 5, 191

Steroid receptor family — structure and functions
Carsonjurica M A, Schrader W T & Omalley B W (1990) Endocr. Rev. 11, 201

Progestin regulation of cellular proliferation
Clarke C L & Sutherland R L (1990) Endocr. Rev. 11, 266

Effect of dehydroepiandrosterone treatment on liver metabolism in rats [Mini-review]
Cleary M P (1990) Int. J. Biochem. 22, 205

Congenital adrenal hyperplasia due to 21-hydroxylase deficiency
Cutler G B, Rosen H, Blanksegal M, Majzoub J & Laue L (1990) New Engl. J. Med. 323, 1806

Regulation of proliferation, invasion and growth factor synthesis in breast cancer by steroids [Plenary lecture]
Dickson R B, Thompson F W & Lippman M E (1990) J. Steroid Biochem. Mol. Biol. 37, 305

Regulatory elements of the pro-opiomelanocortin gene: pituitary specificity and glucocorticoid repression [Brief review]
Drouin J, Sun Y L & Nemer M (1990) Trends Endocrinol. Metab. 1, 219

Thyroid and steroid hormone regulation of protooncogene expression [Brief review]
Franklyn J A & Sheppard M C (1989) Trends Endocrinol. Metab. 1, 35

Target tissue specificity of mineralocorticoids [Brief review]
Funder J W (1990) Trends Endocrinol. Metab. 1, 145

Metabolism of 17-alpha-ethynylestradiol in humans [Mini review]
Guengerich F P (1990) Life Sci. 47, 1981

Molecular properties of corticosteroid binding globulin and the sex-steroid binding proteins
Hammond G L (1990) Endocr. Rev 11, 65

Progesterone receptor antagonists and prostaglandins in human fertility regulation — a clinical review
Healy D L (1990) Reprod. Fertil. Dev. 2, 477

Measurement of steroid-hormone receptors in carcinomas of the breast tissue [In German: English abstract]
Holtkamp W (1990) Dtsch. Med. Wochenschr. 115, 1442

Endocrine pharmacology of antiestrogens as antitumor agents
Jordan V C & Murphy C S (1990) Endocr. Rev 11, 578

179
Glucocorticoid antiproliferative and anti-inflammatory effects by Jun–Fos complex inhibition [Minireview] [In French; English abstract]

Kalnin A (1990) M/S Méd. Sci. 6, 1003

Sex hormones and coronary disease — a review of the clinical studies
Kalin M T & Zumoff B (1990) Steroids, 55, 330

Salivary cortisol in psychobiological research — an overview
Kirschbaum C & Hellhammer D H (1990) Neuropsychobiology, 22, 150

Ecdysteroids
Koolman J (1990) Zool. Sci. 7, 563

Estrogen carcinogenesis in hamster tissues — a critical review
Li J J & Li S A (1990) Endocr. Rev. 11, 524

Heterodox notions on pathways of steroidogenesis
Lieberman S & Prasad V K (1990) Endocr. Rev. 11, 469

Free radical generation by redox cycling of estrogens
Liehr J G & Roy D (1990) Free Radical Biol. Med. 8, 415

Glucocorticoid-induced osteoporosis — pathogenesis and management
Lukert B P & Raisz L G (1990) Ann. Int. Med. 112, 352

Effect of cis-platinum on heme, drug, and steroid metabolism pathways: possible involvement in nephrotoxicity and infertility
Maines M S (1990) Crit. Rev. Toxicol. 21, 1

Regulation of pulmonary surfactant protein synthesis in fetal lung: a major role of glucocorticoids and cyclic AMP [Brief review]
Mandelson C R & Boggaram V (1990) Trends Endocrinol. Metab 1, 20

The significance of steroid metabolism in human cancer [Plenary lecture]
Miller W R & O'Neill J S (1990) J. Steroid Biochem. Mol. Biol. 37, 317

Phosphorylation of steroid hormone receptors [Minireview]
Moudgil V K (1990) Biochim. Biophys. Acta, 1055, 243

Uterine insulin-like growth factor-I — regulation of expression and its role in estrogen-induced uterine proliferation
Murphy L J & Ghahtary A (1990) Endocr. Rev. 11, 443

Anabolic steroids — a review of the clinical toxicology and diagnostic screening
Narducci W A, Wagner J C, Hendrickson T P & Jeffrey T P (1990) J. Toxicol. Clin. Toxicol. 28, 287

The steroid receptor superfamily: more excitement predicted for the future [Minireview]
O'Malley B (1990) Mol. Endocrinol. 4, 363

Adrenergic–prostaglandin interactions in the respiratory system
Omini C, Daffonchio L, Abbraccio M P, Hernandez A & Cattabeni F (1990) Prostagland. Leuk. Essent. Fatty Acids, 40, 83

Human placental xenobiotic and steroid biotransformations catalyzed by cytochrome P450, epoxide hydrolase, and glutathione S-transferase activities and their relationships to maternal cigarette smoking
Pasano M & Pelkonen O (1990) Drug Metab. Rev. 21, 427

Progestosterone as a bone-trophic hormone
Prior J C (1990) Endocr. Rev. 11, 386

Oral contraceptives and breast cancer — review and meta-analysis
Romieu I, Berlin J A & Colditz G (1990) Cancer, 66, 2253

The functions of corticosteroid-binding globulin and sex hormone-binding globulin — recent advances
Rougeot W (1990) Endocr. Rev. 11, 80

4th International Symposium on Cellular Endocrinology. Molecular Endocrinology and Steroid Hormone Action, W. Alton Jones Cell Ctr, Lake Placid, NY, August 24–27, 1988
Sato O H & Stevens J L, eds (1990) Progr. Clin. Biol. Res. 322, 320 pp.

Molecular action of progestosterone [Minireview]
Savouret J F, Misrahi M & Milgrom E (1990) Int. J. Biochem. 22, 579

Aggressive behavior in birds — an experimental model for studies of brain–steroid interactions [Minireview]
Sclinger B A & Callard G V (1990) Comp. Biochem. Physiol. Pt A, 97, 307

Sex steroids and osteoporosis — effects of deficiencies and substitutive treatments
Schot L P C & Schuurs A H W M (1990) J. Steroid Biochem. Mol. Biol 37, 167

Effects of gender and sex steroids on the immune response
Schuurs A H W M & Verheul H A M (1990) J. Steroid Biochem. 35, 157

Steroid/thyroid receptor-like proteins with oncogenic potential — a review
Sluyser M (1990) Cancer Res. 50, 451

Specificity of the mineralocorticoid receptor: crucial role of 11β-hydroxyesteroid dehydrogenase [Brief review]
Stewart P M & Edwards C R W (1990) Trends Endocrinol. Metab 1, 225

Specific steroid-binding glycoproteins of human blood plasma: novel data on their structure and function
Stuckl'yanov O A & Avvakumov G V (1990) J. Steroid Biochem. 35, 519

The search for the elusive adrenal steroidogenic “regulatory” protein [Brief review]
Strott C A (1990) Trends Endocrinol. Metab 1, 312

Steroid hormones and the cardiovascular system — direct actions of estradiol, progesterone, testosterone, glucocorticoids and mineralocorticoids, and soltrio (vitamin D) on central nervous regulatory and peripheral tissues
Stumpf W E (1990) Experientia, 46, 113

First European Conference on Sex Steroids and Metabolism, Oral Contraceptives in the Nineties. Metabolic Aspects — Facts and Fiction, Esbjerg, Denmark, May 18–20, 1989
Thorogood M & others (1990) Am. J. Obstet Gynecol 163, No 1, Pt 2, Suppl. 274–443

RU 486
Ulmann A, Touttech G & Phibibert D (1990) Sci. Am. 262, No 6, 42–48

Glucocorticoid hormone receptor under physiological and extreme conditions [In Russian; English abstract]
Vorobyov D V & Larina I M (1990) Kasmich. Biol. Aviakosmich Med. SSSR, 24, 4

Complexity of steroid hydroxylase gene expression in the adrenal cortex, a mechanism of regulated transcription [Brief review]
Waterman M R, Lund J & Simpson E R (1989) Trends Endocrinol. Metab. 1, 99

Structure and function of sterols in fungi
Weeke J D (1989) Advan. Lipid Res. 23, 115

Extrarenal receptor-effector-mechanisms for aldosterone — the sequence of effects on the cellular electrolyte transport in human lymphocytes and their implications for disorders of the water and electrolyte balances [Minireview]
Wehling M & Theisen K (1990) Acta Endocrinol. 123, 385
STEROLS
See: STEROIDS, STEROID HORMONES AND RECEPTORS

SUBCELLULAR STRUCTURES
See: ORGANELLES AND SUBCELLULAR STRUCTURES

SULPHUR COMPOUNDS
Recent developments in the field of iron-sulfur proteins
Beinert H (1990) *FASEB J.* 4, 2483

Methionine metabolism in mammals
Finkelstein J D (1990) *J. Nutr. Biochem.* 1, 228

Thiosulfate, polythionates and elemental sulfur assimilation and reduction in the bacterial world
Le Faou A, Rajagopal B S, Daniels L & Fauque G (1990) *FEMS Microbiol. Rev.* 72, 351

Metabolism of thioamide antithyroid drugs
Sitari D S (1990) *Drug Metab. Rev.* 22, 477

The role of sulfation in thyroid hormone metabolism [Brief review]
Vieier J T, Huuren C J C van, Rutgers M, Roorda S J E & Harder W W de (1990) *Trends Endocrinol. Metab.* 1, 211

SURGERY
Intestinal glutamine metabolism during critical illness: a surgical perspective
Herskowitz K & Southa W W (1990) *Nutrition,* 6, 199

From Prout to the proton pump — a history of the science of gastric acid secretion and the surgery of peptic ulcer
Modlin I M (1990) *Surg. Gynecol. Obstet.* 170, 81

TASTE
See: SENSORY SYSTEMS

TECHNIQUES
See also: CHROMATOGRAPHY
SPECTROSCOPY
TISSUE CULTURE

The use of microbial and enzymatic function in organic synthesis
total synthesis of the aglycone of venturicidin-A and venturicidin-B
[In Japanese; English abstract]
Akita H (1990) *Yakugaku Zasshi,* 110, 789

Reportor genes: application to the study of mammalian gene transcription
Alam J & Cook J L (1990) *Anal. Biochem.* 188, 245

The unique lipoprotein(a) — properties and immunochemical measurement
Albers J J, Marcovina S M & Lodge M S (1990) *Clin. Chem.* 36, 2019

The laboratory technical evaluation of sperm fertilizing capacity [In French; English abstract]
Alnot M O (1990) *Ann. Biol. Clin. Paris,* 48, 617

A general strategy for the *de novo* design of proteins — template assembled synthetic proteins [Minireview]
Altmann K H & Mutter M (1990) *Int. J. Biochem.* 22, 947

PCR analysis of DNA sequences in single cells — single sperm gene mapping and genetic disease diagnosis — review
Arnheim N, Li H H & Cui X F (1990) *Genomics,* 8, 415

A critical review of trend-detection methodologies for biomedical monitoring systems
Avent R K & Charlton J D (1990) *Crit. Rev. Biomed. Eng.* 17, 621

Biotinylated oligonucleotides as molecular hybridization probes [Brief review]
Badashkeeva A G & Zarytova V F (1989) *Biol. Bull. Engl. Tr.* 25, No 5, Pt 1, 963

New trends in the design of luminescent metal complexes
Balzani V & Gallardini R (1990) *Photochem. Photobiol.* 52, 409

In vivo assays used to measure the activity of topoisomerase [Minireview]
Barrett J F, Sutcliffe J A & Gootz T D (1990) *Antimicrob. Agents Chemother.* 34, 1–7

Current status of *Azaspirillum* inoculation technology: *Azaspirillum* as a challenge for agriculture
Bashan Y & Levannon Y (1990) *Can. J. Microbiol.* 36, 591–608

Transplacental amino acid transfer and its study using positron emission tomography — a short review based on a doctoral thesis
Berglund L (1990) *Upsala J. Med. Sci.* 65, 95

In situ hybridization: application to the study of gene expression during experimental hepatocarcinogenesis and human hepatocellular carcinoma
Bernau D & Feldmann G (1990) *Tumor Biol.* 11, 173

Experimental models of acute pancreatitis [Current research review]
Billich A J, Leach S D, Zucker K A & Modlin I M (1990) *J. Surg. Res.* 46, 639

Targeted gene modification for gene therapy of stem cells
Boggs S S (1990) *Int. J. Cell Cloning,* 8, 80

Experimental models in skin pharmacology
Bouhler M, Cavey D, Kail N & Hensby C (1990) *Pharmacol. Res.* 42, 127

Crystallographic consequences of molecular dissymmetry
Brittain H G (1990) *Pharmacol. Res.* 7, 683

Graphitized carbon black — a unique adsorbent for gas chromatography and related techniques
Bruner F, Crescentini G & Mangani F (1990) *Chromatographia,* 30, 565

Trends in the combination of high-performance liquid chromatography and electroanalytical methods
Buchberger W (1990) *Chromatographia,* 30, 577

An appraisal of bioassay methods for the detection of mycotoxins — a review
Buckle A E & Sanders M F (1990) *Lett. Appl Microbiol.* 10, 155

Imaging of protein molecules towards atomic resolution
Bullough P A (1990) *Electron Microsc.* Rev. 5, 249

Detection of peptide-MHC class-II complexes on the surface of intact cells
Busch R & Rothbard J B (1990) *J. Immunol. Methods,* 134, 1

Measuring intracellular Ca2+ levels in plant cells using the fluorescent probes, indo-1 and fura-2 — progress and prospects
Bush D S & Jones R L (1990) *Plant Physiol.* 93, 841

Nucleic acid sequence analysis software for microcomputers
Cannon G (1990) *Anal. Biochem.* 190, 147

Chemistry and biology of N-(7-nitrobenz-2-oxa-1,3-diazol-4-y1)- labeled lipids: fluorescent probes of biological and model membranes
Chattopadhyay A (1990) *Chem. Phys. Lipids,* 53, 1

Pulsed-field electrophoresis in the investigation of biological macromolecules
Chebotarev V Y & Rekesh A N (1989) *Biol. Engi. Tr.* 24, 488

181
Novel affinity-based processes for protein purification
Chen J P (1990) J. Ferment. Bioeng. 70, 199

The current state of oncogenes and cancer. Experimental approaches for analyzing oncogenetic events in human cancer
Chiao P J, Bischoff F Z, Strong L C & Taintsky M A (1990) Cancer Metast. Rev. 9, 63

Secondary 18O isotope effects as a tool for studying reactions of phosphate mono-, di-, and triesters
Cleland W W (1990) FASEB J 4, 2889

Okadaic acid: a new probe for the study of cellular regulation
Cohen P, Holmes C F B & Tsukitani Y (1990) Trends Biochem. Sc. 15, 98–102

Methods in Neurosciences. I. Gene probes
Conn P M, ed. (1989) Methods Neurosci. 1, 464 pp.

Demonstration techniques in cellular pathology: putting things into perspective
Cook II C (1990) Med. Lab. Sci. 47, 210

Nonequilibrium isotope exchange methods for investigating enzyme mechanisms
Cornish-Bowden A (1989) Curr. Top. Cell. Regul. 30, 143

Blood collection and samples preparation for free amino acids determinations [In French; English abstract]
Cynober L & Giboudeau J (1990) Ann. Biol. Clin. Paris. 48, 713

RNA processing, Pt A. General methods
Dahlberg J E & Abelson J N, eds (1990) Methods Enzymol. 182, 600 pp.

Cell cycle-related proteins and flow cytometry
Danova M, Riccardi A & Mazzini G (1990) Haematologica, 75, 252

The use of fluorescent probes in immunochemistry
Davidson R S & Hilchenbach M M (1990) Photochim. Photobiol. 52, 431

Local amplification of nucleic acids — a new method of analysis [Brief review]
Debabov V G (1990) Mol. Biol. Engl. Tr. 24, No 2, Pt 1, 239

Reviews of molecular biology of sexually transmitted diseases — molecular techniques in the diagnosis of human infectious diseases
Desselberger U & Collingham K (1990) Photochim. Photobiol. 52, 431

Guide to protein purification
Deutseher M P, ed. (1990) Methods Enzymol. 182, 894 pp.

Analytical methodologies for the quantitation of platinum anticancer drugs and related compounds in biological media
Dewail W A J, Maessen F J M J & Kraak J C (1990) J. Pharmacut Biomed. Anal. 8, 1

A review on biomedical image processing and future trends
Dhawan A P (1990) Computer Methods Programs Biomed 31, 141

Mutational analysis of human NRAS genes in malignant melanoma: rapid methods for oligonucleotide hybridization and manual and automated direct sequencing of products generated by the polymerase chain reaction
Dicker A P, Volkenandt M & Albino A P (1990) Gene Chromosome Cancer. 1, 257

Experimental models and biological mechanisms for tumor promotion
Drinkwater N R (1990) Cancer Cells. 2, 8

Biochemical markers as prognostic indices in breast cancer
Duffy M J (1990) Clin. Chem. 36, 188

NACM, a cytopathogenic protein from Naegleria gruberi. EGS — purification, production of monoclonal antibody, and the immunoidentification of a product that develops in NACM-treated vertebrate cell cultures
Dunnebacke T H & Dixon J S (1990) J. Protocol 37, Suppl. S11

Neural transplantation in animal models of dementia
Dunnett S B (1990) Eur. J. Neurosci. 2, 567

The pharmacology, metabolism, analysis, and applications of coumarin and coumarin-related compounds
Egan D & others (1990) Drug Metab. Rev. 22, 503

Nuclear and radiochemical analysis
Ehmann W D, Robertson J D & Yates S W (1990) Anal. Chem. 62, 550

Laboratory investigation of the porphyrias
Elder G H, Smith S G & Smyth S J (1990) Am. Clin. Biochem. 27, 395

Antibodies to lipopolysaccharides — some diagnostic and protective aspects
Fomsgaard A (1990) APMIS, 98, Suppl. 8, 5–38

Biological crystallography [In French]
Fourme R & Janin J (1990) Recherche. 21, 1358

Calorimetrically determined dynamics of complex unfolding transitions in proteins
Freire E, Vanosdol W W, Mayorga O L & Sancheerua J M (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 159

Recent progress in the molecular genetic analysis of erythroenzymopathy
Fujii H & Miwa S (1990) Am. J. Hematol. 34, 301

The immune response to cytokemalovirus infection and serological methods used in its diagnosis
Galca G (1990) Med. Lab. Sci. 47, 297

DNA fingerprinting
Gazit E & Gazit E (1990) Israel Med. Sci 26, 158

Chemilumescent multiplex DNA sequencing [Product review]
Gillevet P M (1990) Nature, 348, 657

A decade of development in immunosassay methodology
Golding I P (1990) Clin. Chem 36, 1408

Chromographic determination of bile acids in biological fluids with sensitive and selective detection [In Japanese; English abstract]
Goto J (1990) Yakugaku Zasshi, 110, 807

Genetic analysis of mammalian cell differentiation
Gourdeau H & Fourmier R E K (1990) Annu. Rev Cell Biol 6, 69

The application of compartmental analysis to research in nutrition
Green M H & Green J B (1990) Annu. Rev. Nutr. 10, 41

Isolation of eosinophils from human blood
Hansel 1, 1, Ponder J D & Thompson K A (1990) J. Immunol. Methods, 127, 153

Assay methods for cyclosporine monitoring following liver transplantation
Haven M C, Sobeski L M, Earl R A & Markin R S (1990) J. Clin. Lab Anal 4, 150

Plant protoplast fusion by electromanipulation
Hibi T (1989) Advan. Cell Culture, 7, 147

Recommendations for adopting standard conditions and analytical procedures in the measurement of serum fructosamine concentration
Hill R P, Hindle E J, Howey J E A, Lemon M & Lloyd D R (1990) Ann. Clin. Biochem 27, 41

High-performance electrophoresis including separation of nucleic acids and their degradation products. Interplay between theory and practical experiments [Plenary lecture]
Hjertén S (1990) Nucleotides Nucleotides, 9, 319

Determination of porphyres in physiological samples
Ho J W (1990) J. Liq. Chromatogr. 13, 3741
Crystalllography of biological macromolecules at ultra-low temperature
Hope H (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 107
DNA hybridization for the diagnosis of microbial disease
Hopkin J M & Wakefield A E (1990) Q. J. Med. 75, 415
The neurologic syndrome of vitamin E deficiency: laboratory and electrophysiologic assessment
Howard L J I (1990) Nutr. Rev. 48, 169
The tryptophan synthase multienzyme complex - exploring structure-function relationships with X-ray crystallography and mutagenesis
Hyde C C & Miles E W (1990) Bio/Technology, 8, 27
Three-dimensional structures of proteins determined by two-dimensional NMR and distance geometry calculations
Inagaki F (1990) Cell Struct. Funct. 15, 237
Immunoserology of infectious diseases
Jamee K (1990) Clin. Microbiol. Rev. 3, 132-152
Stable isotope methods for studies of mineral/trace element metabolism
Janghorbani M & Ting B T G (1990) J. Nutr. Biochem 1, 4
Errors in three dimensions
Janin J (1990) Biochimie, 72, 705-709
Laboratory diagnosis of invasive candidiasis
Jones J M (1990) Clin. Microbiol. Rev. 3, 32-45
Photosensitized processes in vivo: proposed phototherapeutic applications
Jori G (1990) Photochem. Photobiol 52, 439
Measurement of the complement system - general principles and prospects [In French; English abstract]
Juren N & others (1990) Ann. Biol. Clin Paris, 48, 349
Methods for checking up the integrity of membraneous filters for sterile filtration of liquids in the production of injectable drugs [In Russian]
Kagan A Y, Moiseenko L A & Sinitsyn M A (1990) Khim Farm. Zh. SSSR, 24, No. 2, 166
The risks of handling cytotoxic drugs. 1. Methods of testing exposure
Kaiser J P, Underberg W J M & Beijnen J H (1990) Pharmacuet. Weekbl. Sci Ed. 12, 217
The risks of handling cytotoxic drugs. 2. Recommendations for working with cytotoxic drugs
Kaiser J P, Underberg W J M & Beijnen J H (1990) Pharmacuet. Weekbl. Sci Ed. 12, 228
Genetic studies of human apolipoproteins. XV. An overview of IEF immunoblotting methods to screen apolipoprotein polymorphisms
Kamboh M I & Ferrell R E (1990) Hum. Hered. 40, 193
Molecular dynamics simulations in biology
Karplus M & Petsko G A (1990) Nature, 347, 631
The ‘Bayer bridges’ confronted with results from improved electron microscopy methods [Microreview]
Kellenberger E (1990) Mol. Microbiol. 4, 697
The use of molecular techniques in studying viral pathogenesis in the nervous system
Kennedy P G E (1990) Trends Neurosci. 13, 424
Methodological and ethical aspects of nucleic acid diagnostics — a review
Kessler C (1990) Arzneim. Forsch. 40, 952
Isolated cells as tool to investigate renal function [In German; English abstract]
Kinne R K-H, Grupp C & Grunewald R W (1990) Klin Wochenschr. 68, 199
Recent progress in the use of the technique of non-radioactive in situ hybridization histochemistry — new tools for molecular neurobiology
Kiyama H, Emerson P C & Tohyama M (1990) Neurosci. Res. 9, 1
Triglyceride measurements: a review of methods and interferences
Klotzsch S G & McNamara J R (1990) Clin. Chem. 36, 1605
Application of anhydrous hydrogen fluoride for the structural analysis of polysaccharides
Kniel V A, Vinogradov E V & Mott A J (1989) Advan Carbohydr. Chem. Biochem. 47, 167
Antibodies as a source of analytical errors
Kohse K P & Wissner H (1990) J. Clin. Chem. Clin. Biochem. 28, 881
Localization in situ of specific messenger RNA using thymine thymine dimerized DNA probes — sensitive and reliable non-radioactive in situ hybridization
Koji, T & Nakane P K (1990) Acta Puth. Jap. 40, 793
Lactography as an approach to monitor glucose metabolism on-line in brain and muscle [Mini-review]
Korf J & Deboer J (1990) Int. J. Biochem. 22, 1371
DNA cytometry of musculoskeletal tumors — a review
Kreiebers A (1990) Acta Orthopaed. Scand. 61, 282
Chemical and enzymatic methods for the synthesis of the peptide sweetening agent aspartame [In German; English abstract]
Kuhl P (1990) Pharmazie, 45, 881
Capillary electrophoresis
Kuhr W G (1990) Anal. Chem. 62, R403
Immunological assays of apolipoproteins in plasma: methods and instrumentation
Labeur C, Shepherd J & Rosseneu M (1990) Clin. Chem. 36, 591
Application of flow cytometry to the study of HIV infection [Editorial review]
Landay A, Ohlssonwilhelm B & Giorgi J V (1990) AIDS, 4, 479
Cytogenetic methods for the mouse: preparation of chromosomes, karyotyping, and in situ hybridization
Lee J J, Warburton D & Robertson E J (1990) Anal. Biochem. 189, 1
Retroviral-mediated gene transfer into the hematopoietic tissue in vivo [In French; English abstract]
Lehn P (1990) M/S Med. Sci. 6, 791
Uniform and selective deuteriation in 2 dimensional NMR of proteins
Lemaster D M (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 243
PET studies of the dopaminergic system
Lenzi G L, Perani D & Fazio F (1990) J. Nucl. Med. Allied Sci. 34, 1
Permibalized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions
Leppers A, Cucan R & Verberri A (1990) Biochimie, 72, 1
Epileptic Syndromes — Genetic, Diagnostic, and Therapeutic Aspects
Leppik E & others (1990) Epilepsia, 31, Suppl. 3, S1–S74
Differentiation signals in the CNS: type-2 astrocyte development
Lillien L E & Raff M C (1990) Neuron, 5, 11 l-119
Perceptual neural organisation: same approaches based on network models and information theory
Linsker R (1990) Annu. Rev. Neurosci. 13, 257
 Determination of amniotic fluid acetylcholinesterase activity in the antenatal diagnosis of foetal malformations — the first ten years
Loft A G R (1990) J. Clin. Chem. Clin. Biochem. 28, 893
Biosensors (Review)
Low C R & others (1990) J. Chromatogr 510, 347
An introduction to the study of xenobiotic metabolism using electroanalytical techniques
Lunte S M, Radzik D M & Kissinger P T (1990) J. Pharmaceut. Sci. 79, 557

Electroelution of protein fractions from polyacrylamide gel [In Russian; English abstract]
Luisyk M D, Oleshko P S & Vovkanych A S (1990) Ukr. Biokhim. Zh. SSSR, 62, 112

Molecular tools to elucidate problems in excitation-contraction coupling [International lecture]
Maclennan D H (1990) Biophys J. 58, 1355

Current approaches to macromolecular crystallization
McPherson A (1990) Eur. J. Biochem. 194, 1

Recent advances in the molecular analysis of inherited disease
Makotuku S (1990) Eur. J. Biochem. 194, 317

Minimal residual disease in leukemia: Studies in an animal model for acute myelocytic leukemia (BNML) [Concise review]
Marten A C M, Bekkum D W van & Hagenbeek A (1990) Int. J. Cell Cloning, 8, 27

Vision assisted robotics and tape technology in the life-science laboratory — applications to genome analysis
Martin W J & Walmersley R M (1990) Bio/Technology, 8, 1258

Review. Chromatographic and non-chromatographic assays of l-carnitine family components
Marzo A, Cardace G, Monti N, Muck S & Martelli E A (1990) J. Chromatogr. Biomed. Appl. 527, 247

Ability of short-term tests to predict carcinogenesis in rodents
Mason J M, Langenbach R, Shelby M D, Zeiger E & Tennant R W (1990) Annu. Rev. Pharmacol. Toxicol. 30, 149-168

The in vivo micronucleus assay in mammalian bone marrow and peripheral blood. A report of the U.S. Environmental Protection Agency Gene-Tox Program
Mavournin K H, Blakey D H, Cimino M C, Salamone M F & Heddle J A (1990) Mutat. Res. 237, 29

Mutation and the Environment. Part B: Metabolism, Testing Methods, and Chromosomes. 5th International Conference on Environmental Mutagens, Case Western Reserve University, Cleveland, OH, July 10-15, 1989
Miglaccio G, Miglaccio A R & Adamson J W (1990) Progr. Clin. Biol. Res 340. Pt B, 496 pp.

Chemiluminescence techniques for the characterization of materials
Mendehall G D (1990) Angew. Chem Int. Ed. 29, 362

Polyammonium macrocycles as catalysts for phosphoryl transfer — the evolution of an enzyme mimic
Mertes M P & Mertes K B (1990) Acc. Chem. Res. 23, 413

The biology of hematopoietic growth factors — studies in vitro under sperm-deprived conditions [Minireview]
Miglaccio G, Miglaccio A R & Adamson J W (1990) Exp. Hematol. 18, 1049

Quantitative characterization of reversible molecular associations via analytical centrifugation
Minton A P (1990) Anal. Biochem. 190, 1

Measuring plasma fibrinogen to predict stroke and myocardial infarction
Minou G di & Mancini M (1990) Arteriosclerosis, 10, 1

Research for development of immunoassay kits for hapten [In Japanese; English abstract]
Mochida F, Ogawa N, Shinkai H & Kudo T (1990) Yakugaku Zasshi, 110, 639

Laboratory models for research in vivo and in vitro on malaria parasites of mammals: current status
Mons B & Sinden R E (1990) Parasitol. Today. 6, 3

A review of techniques for the analysis of boron in the development of neutron capture therapy agents
Moores D E (1990) J. Pharmaceut. Biomed. Anal. 6, 547

The unusual origin of the polymerase chain reaction
Mullis K B (1990) Sci. Am. 262, No 4, 56

Immunochromatographic assays for narcotic agents (a review) [In Russian]
Mymagko M A & Lushnikova M V (1990) Khim. Farm. Zh. SSSR, 24, 76

The laboratory investigations for the study and the follow-up of monoclonal gammopathies
Myara I (1990) Path. Biol. 38, 134

Sero logical diagnosis of trichinosis by enzyme linked immunosorbent assay (ELISA)
Nakai Y & Oginoto K (1989) Jap. J. Med. Sci. Biol. 42, 149-161

Overview and principles of in situ hybridization
Nakamura R M (1990) Clin. Biochem. 23, 255

Current status of clinical laboratory tests for the human immunodeficiency virus
Nakamura R M, Bylund D J & Rooney K E (1990) J. Clin. Lab. Anal. 4, 295

Anabolic steroids — a review of the clinical toxicology and diagnostic screening
Nardiucci W A, Wagner J C, Hendrickson T P & Jeffrey T P (1990) J Toxicol. Clin. Toxical. 28, 287

A multi-factor ranking scheme for comparing the carcinogenic activity of chemicals [ICPEMC Working Paper 1/2]
Nesnow S (1990) Mutat. Res. 239, 83

Clinical review 12: The use and misuse of the sensitive thyrotropin assays
Nicoloff J T & Spencer C A (1990) J. Clin. Endocrinol. Metab. 71, 553

Light microscopy and morphometry of vmblastme in vivo cytotoxicity in the different developmental stages of rat incisor ameloblast epithelium
Nielsen H W (1990) APMIS, 98, Suppl. 11, 5-56

Two-quantum UV photochemistry of nucleic acids: Comparison with conventional low-intensity UV photochemistry and radiation chemistry
Nikogosyan D N (1990) Int. J Radiat. Biol. 57, 233

Human immunodeficiency virus antibody responses determined by site-directed serology [Minireview]
Norrby E (1990) Intervirology. 31, 315

Recent advances in capillary electrophoresis of proteins, peptides and amino acids
Novotny M V, Cobb K A & Liu J P (1990) Electrophoresis. 11, 735

The technique of pulsed field gel electrophoresis and its impact on molecular immunology
O'Reilly M A J & Kinmore C (1990) J Immunol. Methods, 131, 1

Immobilization of glycoconjugates by their oligosaccharides — use of hydroxide-derivatized matrix
Oshannessy D J & Wilchek M (1990) Anal Biochem. 191, 1

Kinetic catalysis effect as a promising tool in the investigation of enzyme molecule changes upon reaction: deacylation of acyl-chymotrypsins
Paberit M (1990) Bioorg. Chem. 18, 228
Dicarboxylic acid anhydrides as dissociating agents of protein-containing structures
Palacín E, González P J, Pfeifer M & Hernández F (1990) Mol. Cell. Biochem. 97, 101

A review: The potential for food irradiation
Patterson M F (1990) Lett. Appl. Microbiol. 11, 55

Syntheses, conformations and X-ray structure analyses of the saccharide chains from the core regions of glycoproteins
Paulsen H (1990) Angew Chem. 29, 823

A critical appraisal of the predictive value of in vitro chemosensitivity assays
Phillips R M, Bibby M C & Double J A (1990) J. Nat. Cancer Inst. 82, 1457

Techniques used for the determination of antimicrobial resistance and sensitivity in bacteria
Piddock L J V (1990) J. Appl. Bact. 68, 307

Breast cancer: Critical Overviews of Natural History, Etiology, Molecular Biology and Screening by Mammography
Ponten J & others (1990) Int. J. Cancer, Suppl. 5, 1–76

A review of the CLIP system for the quantitative analysis of two-dimensional electrophoresis gels
Potter D J (1990) Electrophoresis, 11, 415

Monoclonal antibodies to Candida albicans — from cell biology to diagnostic probes [In French; English abstract]
Poulain D, Faillé C, Michalski J C & Camus D (1990) M/S Méd. Sci. 6, 526

Nuclear transplantation as a method for cloning embryos [Minireview]
Prather R S (1990) Proc. Soc. Exp. Biol. Med. 195, 7

Nuclear transfer in mammalian embryos
Prather R S & First N L (1990) Int. Rev. Cytol. 120, 169

Biological relevance of the protein C system and laboratory diagnosis of protein C and protein S deficiencies [Editorial review]
Preissner K T (1990) Clin. Sci. 78, 351–364

Flow cytometry in virological studies [In Russian]
Pleshchonov V A, Lymar V T, Yalyshev M R & Pleshchonov A V (1990) Vopr. Virusol. 35, 279

Mechanisms of protein silver staining in polyacrylamide gels — a ten-year synthesis
Rabilloud T (1990) Electrophoresis, 11, 785

The Golgi apparatus — contribution of tridimensional electron microscopy to the study of its structure and functions
Rambourg A & Clermont Y (1990) M/S Méd. Sci. 6, 35

The generation and use of human T-cell clones
Rees A D M (1990) Mol. Cell. Probes, 4, 419

Sequence-dependent formation of alkyl DNA adducts — a review of methods, results and biological correlates
Richardson F C & Richardson K K (1990) Mutat. Res. 233, 127

Recent developments in electrophoretic methods
Righetti P G (1990) J. Chromatogr. 516, 3

Inosine monophosphate dehydrogenase inhibitors — probes for investigations of the functions of guanine nucleotide binding proteins in intact cells [Minireview]
Rizzo M T & others (1990) Cell. Signal. 2, 509

Flow cytometry — prospective analysis of short and long term advances [Minireview] [In French; English abstract]
Ronot X & Pierrez J (1990) M/S Méd. Sci. 6, 1000

Molecular scanning methods of mutation detection [Minireview]
Rossiter B J F & Caskey C T (1990) J. Biol. Chem. 265, 12753

Microalbuminuria in diabetes mellitus — review and recommendations for the measurement of albumin in urine
Rowe D J F, Dawny A & Watts G F (1990) Ann. Clin. Biochem. 27, 297

From comparisons of protein sequences and structures to protein modelling and design
Sali A, Overington J P, Johnson M S & Blundell T L (1990) Trends Biochem. Sci. 15, 235

Antibody interference in immunoassays [In French; English abstract]
Sapin R (1990) Ann. Biol. Clin. Paris, 48, 361

Environmental application of nucleic acid hybridization
Saylor G S & Layton A C (1990) Annu. Rev. Microbiol. 44, 625

Knowledge-based systems in clinical chemistry [Plenary lecture]
Schneider W (1990) Scand. J. Clin. Lab. Invest. 50, Suppl. 202, 20

Clinical assessment of the Hitachi 736—30 chemistry analyzer
Schotters S, B McBrine J H, Rodgerson D O, McGinley M H & Pisa M (1990) J. Clin. Lab. Anal. 4, 157

Pilot-scale and process-scale techniques for cell disruption
Schutte H, Kula M R (1990) Biotechnol. Appl. Biochem. 12, 599

Capillary electrophoresis
Schwer C & Kenndler F (1990) Chromatographia, 30, 546

PET imaging of dopamine receptors in human basal ganglia: relevance to mental illness
Sedvall G (1990) Trends Neurosci. 13, 302

Stable isotopically-enriched D-glucose: strategies to introduce carbon, hydrogen and oxygen isotopes at various sites
Serianni A S, Vuorinen T & Bondo P B (1990) J. Carbohydr. Chem. 9, 513

Limiting dilution analysis of human T-cells — a useful clinical tool
Sharrock C F M, Kaminski E & Man S (1990) Immunol. Today, 11, 281

Progress in affinophoresis [Review]
Shimura K (1990) J. Chromatogr. 510, 251

Use of Xenopus oocytes for the functional expression of plasma membrane proteins [Topical review]
Sigel E (1990) J. Membr. Biol. 117, 201

Indirect calorimetry: methodological and interpretative problems [Editorial review]
Simonson D C & DeFronzo R A (1990) Am. J. Physiol. 258, No 3, Pt I, E399

Entrapment vectors — a new tool for mammalian genetics
Skarnes W C (1990) Bio/Technology, 8, 827

New approaches for physical mapping of small genomes [Minireview]
Smith C L & Condemine G (1990) J. Bact. 172, 1167–1172

Prolactin and growth hormone — molecular heterogeneity and measurement in serum
Smith C R & Norman M R (1990) Ann. Clin. Biochem. 27, 542

Flash photolysis studies on excitation-contraction coupling, regulation, and contraction in smooth muscle
Sonby A P & Somlyo A V (1990) Annu. Rev. Physiol. 52, 857

Bispecific antibody — a tool for diagnosis and treatment of disease
Songvila S L & Lachmann P J (1990) Clin Exp Immunol 79, 315

Light scattering measurement in an arc lamp-based flow cytometer
Steen H B (1990) Cytometry, 11, 223

Application of DNA typing methods to Candida albicans epidemiology and correlations with phenotype
Stevens D A, Odds F C & Scherer S (1990) Rev. Infect. Dis. 12, 258

185
Immuno- and affinity probes for electron microscopy: a review of labeling and preparation techniques
Stirling J W (1990) J. Histochem. Cytochem. 38, 145

The Ayerst Award Lecture 1989. Biochemistry of natural freeze tolerance in animals: molecular adaptations and applications to cryopreservation
Storey K B (1990) Biochem. Cell Biol. 68, 687-698

Diagnostic molecular genetics of the fragile X
Sutherland G R & Mulley J C (1990) Clin. Genet. 37, 2

Isolation and purification of UDP-glucuronosyltransferases
Tephly T R (1990) Chem. Res. Toxicol. 3, 509

In vitro techniques for metabolism studies during drug development
Thenot J P, Durand A & Morselli P L (1990) Acta Pharmaceut Jugoslav 40, 395

Laboratory investigation of cerebrospinal fluid proteins
Thompson E J & Keir G (1990) Ann Clin Biochem. 27, 425

The identification, typing and fingerprinting of Salmonella: laboratory aspects and epidemiological applications
Tickfall E J & Frost J A (1990) J. Appl. Bact. 68, 5

Self-assembling bilayer lipid membranes on solid support
Tomoda H & Omura S (1990) J. Antibiot 43, 1207

A new approach for the analysis of HLA class II polymorphism: HLA oligotyping
Turey J-M, Jeannet M & Mach B (1990) Blood Rev. 4, 9

New strategy for discovery of enzyme inhibitors — screening with intact mammalian cells or intact microorganisms having special functions
Toma T & Omura S (1990) J. Antibiot 43, 1207

Chromosomal translocations in lymphoid neoplasia — a reappraisal of the recombine model
Tycok B & Sklar J (1990) Cancer Cells. 2, 1

A review and appraisal of deconvolution methods to evaluate in vivo neuroendocrine secretory events
Veldhuis J D & Johnson M L (1990) J. Neuroendocrinol 2, 755

Development and biological applications of chloride-sensitive fluorescent indicators
Verkman A S (1990) An. J. Physiol. 259, No 3, Pt 1, C375

International Symposium on Membrane Technology, Rome, Italy, June 19-24, 1989
Verma R, ed. (1989) Serona Symp. Pbl. 64, 155 pp

A review of techniques and results obtained in one laboratory by an integrated system of methods designed for routine clinical flow cytometric DNA analysis
Vindelov L L & Christensen I J (1990) Cytometry, 11, 753

Techniques in plant molecular biology — progress and problems
Walden R & Schell J (1990) Eur J Biochem. 192, 363

In vitro Methods in Toxicity Testing and Biomedical Research — Proceedings of the Third CTN Symposium, Stockholm, Sweden, 9-11 May 1988
Walum E & others (1990) Acta Physiol Scand 140, Suppl. 592, 5-141

Standards for the application of X-ray microanalysis to biological specimens
Warley A (1990) J. Microsc. Oxford, 157, 135

Endogenous interference in immunosassays in clinical chemistry. A review
Weber T H, Kanyayo K I & Tanner P (1990) Scand J Clin Lab Invest 50, Suppl. 201, 77

Immunological techniques — Editorial overview
Weir D (1990) Curr. Opin. Immunol. 2, 877

Towards perfection in radionuclide imaging
Williams E D (1990) Phys. Med. Biol 35, 1447

The fructosamine assay in diagnosis and control of diabetes mellitus. Scientific evidence for its clinical usefulness
Windeler J & Kobberling J (1990) J. Clin. Chem. Clin. Biochem. 28, 129

Construction of libraries of structural genes (cDNA) and “jumping” libraries in λ-vectors
Zabarovsky E P & Allikmets R L (1989) Mol. Biol. Eng. Tr 23, No 5, Pt 1, 949

A model for tumor cell killing by topoisomerase poisons
Zhang H, Darpa P & Liu L F (1990) Cancer Cells. 2, 23

Evaluation of procedures for assaying oxidative phosphorylation enzyme activities in mitochondrial myopathy muscle biopsies
Zhou X, Shoflu J M, Vojvasec A S & Wallace D C (1990) Biochem. Biophys. Acta. 1019, 1

Hyporellins and their use in photosensitization
Zhenjun D & Lown J W (1990) Photochem. Photobiol. 52, 609-616

Animal models of Parkinsonism using selective neurotoxins — clinical and basic implications
Zigmund M J & Stricker E M (1989) Int. Rev Neurobiol 31, 1

Immunochromical approaches to the study of histone H1 and high mobility group chromatin proteins
Zlatanova J S (1990) Mol. Cell. Biochem. 92, 1

TEETH

Collagen gene expression and tooth development. An overview
Andujar M B & Magloire H (1990) J. Biol Bucc. 18, 117

Retention of lead and cadmium in prehistoric and modern human teeth
Grandjean P & Jorgensen P J (1990) Envir Res. 53, 6

Application of Molecular Science to Caries and Periodontal Disease — Fourth European Symposium of Borderland Between Caries and Periodontal Disease
Lehner T & others (1990) Arch Oral Biol. 35, Suppl., R7, S1-S231

Light microscopy and morphometry of vinblastine in vivo cytoxocity in the different developmental stages of rat incisor ameloblast epithelium
Nielsen H W (1990) APJMS, 98, Suppl 11, 5 56

Development and evolutionary origins of vertebrate skeletogenic and odontogenic tissues
Smith M M & Hall B K (1990) Biol. Rev. 65, 277

TERPENES

Biosynthesis of marine isocyanoterpenoids in sponges [Minireview]
Chang C W J & Scheuer P J (1990) Comp Biochem Physiol. Pt B. 97, 227

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases
Davies N W (1990) J. Chromatogr. 503, 1

Recent developments in the isolation and structure elucidation of naturally occurring iridoid compounds
Junior P (1990) Planta Med 56, 1

Posttranslational modification of proteins by isopenoids in mammalian cells
Maltese W A (1990) FASEB J. 4, 3319
Biosynthesis of non-head-to-tail terpenes. Formation of 1’-1 and 1’-3 linkages
Poulter C D (1990) Acc. Chem. Res. 23, 70
Triterpenoid saponins, Part 6
Schöpke Th * Hiller K (1990) Pharmazie, 45, 313

THROMBOXANES
See: PROSTAGLANDINS

THYMUS
In and the thymus gland: A review
Cardarelli N (1990) Thymus, 15, 223
Immunomodulation of T cell deficiency in humans by thymic humoral factor: from crude extract to synthetic thymic humoral factor-γ2
Handzel Z T, Burstyn Y, Buchner V, Pecht M & Trainn N (1990) J. Biol. Resp. Modif. 9, 269
Evolution of class-I MHC genes and proteins: from natural selection to thymic selection
Lawlor D A, Zemmour J, Ennis P D & Parham P (1990) Annu. Rev. Immunol. 8, 23
Dynamics of positive and negative selection in the thymus: review and hypothesis [Minireview]
Marušić-Galešić S & Pavelić K (1990) Immunol. Lett. 24, 149
Imprint of thymic selection on autoreactive repertoires
Zauderer M & Natarajan K (1990) Immunol. Rev. 116, 159

THYROID HORMONES
See. HORMONES, MEDIATORS, REGULATORY SUBSTANCES AND RECEPTORS

TISSUE CULTURE
The use of cultured epithelial and endothelial cells for drug transport and metabolism studies
Audo K L, Bartel R L, Hidalgo I J & Borehardt R T (1990) Pharmaceut. Res. 7, 435
Renal proximal tubular cells in suspension or in primary culture as in vitro models to study nephrotoxicity
Boogaard P J, Nagelkerke J F & Mulder G J (1990) In Vitro, 26, 746
Influence of growth rate on susceptibility to antimicrobial agents: modification of the cell envelope and batch and continuous culture studies [Minireview]
Brown M R W, Collier P J & Gilbert P (1990) Antimicrob. Agents Chemother. 34, 1623-1628
Embryogenic cells in plant tissue cultures: occurrence and behavior
Carman J G (1990) In Vitro, 26, 746
Crustacean organ and cell culture
Chang E S & Brody M D (1989) Advan. Cell Culture, 1, 19
Recent advances in testicular cell culture — implications for toxicology
Chapin R E & Phelps J (1990) Toxicol. Vitro, 4, 543
Current developments in new media and cell culture systems for the large-scale production of insect cells
Cho T, Shuler M L & Granados R R (1989) Advan. Cell Culture, 7, 261
Insect cell cultures as tools in the study of bacterial protein toxins
Davidson E W (1989) Advan. Cell Culture, 7, 125
NACM, a cytopathogenic protein from Naegleria-grueneri, EGs — purification, production of monoclonal antibody, and the immunoidentification of a product that develops in NACM-treated vertebrate cell cultures
Dunnebacke T H & Dixon J S (1990) J. Protozool. 37, Suppl. S11
Photosensitization of cultured cells and viruses by pyrene lipids [Minireview]
Gatt S, Dinsu T, Abourabia S, Kotler M & Fishbe E (1990) Ind. J Biochem. Biophys. 27, 359
Vitronectin receptor: tissue specific expression or adaptation to culture?
Horton M (1990) Int. J. Exp. Path. 71, 741
Effects of visible radiation on cultured cells
Karu T I (1990) Photochem. Photobiol. 52, 1089
Rat fetal hepatocytes in culture — a model for metabolic and toxicological studies
Kremers P, Negro L & Gielgen J E (1990) Acta Pharmaceut. Jugoslav. 40, 383
Frontiers in mammalian cell culture
McKeenan W L & others (1990) In vitro, 26, 9
Terminally differentiating epithelial tissues in primary explant culture: a model of growth and development
Merchant D J (1990) In Vitro, 26, 543
Fish cell culture — an update
Nicholson B L (1989) Advan. Cell Culture, 7, 1
Transfer of phytohormone genes to induce morphogenesis in plants
Owens L D & Smigocki A C (1989) Advan. Cell Culture, 7, 183
The maintenance of cytochrome P-450 in rat hepatocyte culture: some applications of liver cell cultures to the study of drug metabolism, toxicity and the induction of the P-450 system
Paine A J (1990) Chem-Biol. Inter. 74, 1
Animal cell culture: Biological methods
Pollard J W & Walker J M, eds. (1990) Methods Mol. Biol. 5, 713 pp.
Role of microspores and anther culture in advancing technologies
Schaeffer G W (1989) Advan. Cell Culture, 7, 161
Biotransformation of exogenous substrates by plant cell cultures
Suga T & Hirata T (1990) Biochemistry, 29, 2393
Faula Memorial Lecture. Time, cells and X rays. Temporal aspects of some responses of cultured cells to X irradiation
Tolmach L J (1990) Radiat. Res. 123, 119
The interaction of UVA radiation with cultured cells
Tyrell R M & Keyse S M (1990) J Photochem. Photobiol. B-Biol. 4, 349
Gene transfer in insects
Walker V K (1989) Advan. Cell Culture, 7, 87
Dynamics of microbial growth and cell composition in batch culture
Wanner U & Egli T (1990) FEMS Microbiol. Rev. 75, 19
Validation of cell substrates used for human biologics — an overview of international regulatory documents
Zaninelli P & Barone D (1990) Toxicol. Vitro, 4, 720
The formation of phenolic compounds in plant cell and tissue cultures and the possibility of its regulation
Zaprometov M N (1989) Advan. Cell Culture, 7, 201
TOXINS AND TOXIC SUBSTANCES

Mechanisms of organophosphor ester-induced delayed neurotoxicity
Abou-Dinia M & Lapadula D M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 405-440

Renal failure caused by chemicals, foods, plants, animal venoms, and misuse of drugs — an overview
Abuelo J G (1990) Arch Intern. Med. 150, 505

Mechanisms for regulating oxygen toxicity in phytophagous insects
Ahmad S & Pardini R S (1990) Free Radical Biol. Med. 8, 401

Modification of low molecular weight GTP-binding proteins and of actin by clostridial toxins [Mini-review]
Aktories K (1990) Med. Microbiol. Immunol. 179, 123

An assessment of the toxicological properties of pyrethroids and their neurotoxicity
Aldridge W N (1990) Crit. Rev. Toxicol. 21, 89

Meso-2,3-dimercaptosuccinic acid: chemical, pharmacological and toxicological properties of an orally effective metal chelating agent
Aposhian H V & Aposhian M M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 279-306

Mechanisms responsible for the cardiotoxic effects of cocaine
Billman G E (1990) FASEB J. 4, 2469

Staphylococcal and streptococcal pyrogenic toxins involved in toxic shock syndrome and related illnesses
Bohach G A, Fast D J, Nelson R D & Schlievert P M (1990) Crit Rev Microbiol. 17, 751

Renal proximal tubular cells in suspension or in primary culture as in vitro models to study nephrotoxicity
Boogaard P J, Nagelkerke J F & Mulder G J (1990) Crit Rev Toxicol. 20, 327

Human hepatocytes in genotoxicity assays
Brambilla G & Martelli A (1990) Pharmacol. Res. 22, 381

An appraisal of bioassay methods for the detection of mycotoxins — a review
Buckle A E & Sanders M F (1990) Lett. Appl Microbiol. 10, 155

Consideration of both genotoxic and nongenotoxic mechanisms in predicting carcinogenic potential
Butterworth B E (1990) Mutat. Res. 239, 117

Pharmacotoxicological aspects in the use of cyclodextrins as drug vehicles [a review] [In Russian]
Chaika L A, Khadzhai Y I & Libina V V (1990) Khim. Farm. Zh. SSSR. 24, 19

Recent advances in testicular cell culture — implications for toxicology
Chapin R E & Phelps J (1990) Toxicol. Vitro, 4, 543

Okadaic acid: a new probe for the study of cellular regulation
Cohen P, Holmes C F B & Tsukitani Y (1990) Trends Biochem. Sci. 15, 98-102

Molecular and biochemical mechanisms of chemically induced nephrotoxicity: a review
Comanescu J N M & Versmold H N P E (1990) Chem. Res. Toxicol. 3, 171

The phosphoinositol/protein kinase C system as a potential target for neurotoxicity
Costa L G (1990) Pharmacol. Res. 22, 393

The effects of topographic and mechanical properties of materials on cell behavior
Curts A S G & Clark P (1990) Crit. Rev Biocompatibility, 5, 343

Insect cell cultures as tools in the study of bacterial protein toxins
Davidson E W (1989) Advan. Cell Culture, 7, 125

Toxicity to the immune system — a review
Dean J H, Cornacoff J B & Luster M I (1990) Immunopharmacol. Rev. 1, 377

The interactions of the beta-haloethyl benzylamines, xylamine and DSP-4 with catecholaminergic nerves
Dudley M W, Howard B D & Clow A K (1990) Annu. Rev Pharmacol. Toxicol. 30, 387-403

Reviews of genetic toxicology. Genotoxicity of chromium compounds. A review
Flora S de, Bagnasco M, Serra D & Zanacchi P (1990) Mutat. Res. 238, 99-172

The concept of critical levels of toxic heavy metals in target tissues
Foulkes E C (1990) Crit. Rev. Toxicol. 20, 327

Hepatic mechanisms for clearance and detoxification of bacterial endotoxins
Fox E S, Thomas P & Broitman S A (1990) J. Nutr. Biochem. 1, 620

Evaluation of the teratogenic potential of chemicals in the rat
Fritz H & Giese K (1989) Pharmacology. 40. Suppl. 1, 1-28

Transfer of persistent chemicals in milk
Gallenberg L A & Vodicnik M J (1989) Drug Metab Rev. 21, 277-317

Behavioral toxicology of solvents [Current trends review]
Glowa J R (1990) Drug Dev. Rev. 20, 411

Disintegrins — a family of integrin inhibitory proteins from viper venoms [Minireview]
Gould R J & others (1990) Proc. Soc. Exp. Biol. Med. 193, 168

Aminoglycoside-induced ototoxicity [Minireview]
Govaerts P J, Claes J, Ileyingar P I & van den, Jorens Ph G, Marquet J & De Broe M E (1990) Toxicol. Lett. 52, 227

Chloroethylenes: a mechanistic approach to human risk evaluation
Green T (1990) Annu. Rev. Pharmacol. Toxicol. 30, 73-89

Metabolism and toxicity of xenobiotics in the adrenal cortex, with particular reference to 7,12-dimethylbenz(a)anthracene
Hallberg E (1990) J. Biochem. Toxicol. 5, 71

Symposium on Protein and Peptide Neurotoxins — Twenty-First Annual Meeting of the American Society for Neurochemistry
Harris J & others (1990) J. Toxicol. Toxin Rev. 9, 175-285

Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr. Biochem. 1, 396

Evaluation of vitamin A toxicity
Hatchcock J N & others (1990) Am. J. Clin. Nutr. 52, 183

Toxicogenic clostridia
Hatheway C I. (1990) Clin Microbiol. Rev. 3, 66-98

Formaldehyde toxicity — new understanding
Heck H d’A, Cassanova M & Starr T B (1990) Crit. Rev. Toxicol. 20, 397

Calcium and pH in anoxic and toxic injury
Herman B & others (1990) Crit. Rev. Toxicol. 21, 127

Environmental behavior of chlorinated dioxins and furans
Hites R A (1990) Acc. Chem. Res. 23, 194

Activation of 3,3'-dichlorobenzimid - enzymic basis and toxicological consequences
Iba M M (1990) Drug Metab. Rev. 21, 377

Metabolism and toxicity of chemicals in diabetes
Ioannides C (1990) Acta Pharmacol. Jugoslav 40, 423

The mast cell system in reproductive toxicology
Ionov I D (1990) Reprod Toxicol. 4, 251
Structure-function analyses of Shiga toxin and the Shiga-like toxins [Mini-review]
Jackson M P (1990) Microb. Pathogen. 8, 235

The enzymes of detoxication [Mini-review]
Jakoby W B & Ziegler D M (1990) J. Biol. Chem. 265, 20715

The search for chelate antagonists for chronic cadmium intoxication
Jones M M & Cherian M G (1990) Toxicology, 62, 1

Pathogenic factors in aminoglycoside-induced nephrotoxicity [Mini-review]
Kacew S & Bergeron M G (1990) Toxicol. Lett. 51, 241

The risks of handling cytotoxic drugs. 1. Methods of testing exposure
Kaiser G P, Underberg W J M & Beijnen J H (1990) Pharmaceut. Weekbl. Sci. Ed. 12, 217

The risks of handling cytotoxic drugs. 2. Recommendations for working with cytotoxic drugs
Kaiser G P, Underberg W J M & Beijnen J H (1990) Pharmaceut. Weekbl. Sci. Ed. 12, 228

The toxicity of inhaled methanol vapors
Kavet R & Nauss K M (1990) Crit. Rev. Toxicol. 21, 31

Toxicology of fluoride-containing monomers
Kennedy G L (1990) Crit. Rev. Toxicol. 21, 149

Effects of snake venom proteins in blood platelets
Kim R M & Evans H J (1990) J. Pharmacol. Exp. Ther. 252, 91

Rat fetal hepatocytes in culture — a model for metabolic and toxicological studies
Kremers P, Negro L & Gielen J E (1990) Toxicol. Left. 51, 241

Modern concepts of neurotoxicity [In Russian; English abstract]
Kvitnitskyryzhov Y N (1990) Farmakol. Toksikol. 53, 77

Cytotoxic mechanism of tumor necrosis factor-alpha
Larrick J W & Wright S C (1990) FASEB J. 4, 3215

Septic shock and metabolic disturbances [In French, English abstract]
Lefèvre G, Dhainaut J F, Tallet F & Raichvarg D (1990) Path. Biol. 38, 650

Chronic toxicities of surfactants and detergent builders to algae — a review and risk assessment
Lewis M A (1990) Ecotoxicol. Environ. Safety, 20, 123

Airborne toxic elements and organic substances (ATEOS) project — overview
Lioy P J (1990) Toxicol. Industr. Hlth, 6, 53

The neurotoxicity of MPTP and the relation to Parkinson’s disease [Mini-review]
McCrodden J M, Tipton K F & Sullivan J P (1990) Pharmacol. Toxicol. 67, 8

Spontaneous occurrence and chemical induction of neurogenic tumors in rats — influence of host factors and specificity of chemical structure
Maekawa A & Mitsumori K (1990) Crit. Rev. Toxicol. 20, 287

Effect of cis-platinum on heme, drug, and steroid metabolism pathways: possible involvement in nephrotoxicity and infertility
Maines M S (1990) Crit. Rev. Toxicol. 21, 1

Ablusive stimulation of excitatory amino acid receptors: a strategy to limit neurotoxicity
Manev H, Costa E, Wroblewski J T & Guidotti A (1990) FASEB J. 4, 2789

The MPTP story — MAO activates tetrahydropyridine derivatives to toxins causing Parkinsonism
Maret G, Testa B, Jennet P, Eltayar N & Carrupt P A (1990) Drug Metab. Rev. 22, 291

Pathophysiology and toxicology of cyclosporine in humans and animals
Mason J (1989) Pharmacol. Rev. 41, 423

Bhopal tragedy’s health effects — a review of methyl isocyanate toxicity
Mehta P S, Mehta A S, Mehta S J & Makhijani A B (1990) J. Am. Med. Assn. 264, 2781

FAA pharmacology: excitatory amino acid neurotoxicity and neurodegenerative disease
Meldrum B & Garthwaite J (1990) Trends Pharmacol. Sci. 11, 379

Metabolic activation of carcinogenic N-nitrosodialkylamines [In Japanese; English abstract]
Mochizuki M (1990) Yakugaku Zasshi, 110, 359

Alteration of intracellular traffic by monensin; mechanism specificity and relationship to toxicity
Mollenhauer H H, Morre D J & Rowe L D (1990) Biochim. Biophys. Acta, 1031, 225

Biochemical basis of ozone toxicity
Mustafa M G (1990) Free Radical Biol. Med. 9, 245

Longevity hormesis. A review
Neafsey P J (1990) Mech. Ageing Dev. 51, 1

Covalent and noncovalent interactions in acute lethal cell injury caused by chemicals
Nelson S D & Pearson P G (1990) Annu. Rev. Pharmacol. Toxicol. 30, 169–195

Metal toxicity and the respiratory tract
Nemery B (1990) Eur. Resp. J. 3, 202

Protein toxins with intracellular targets [Mini-review]
Olnes S & others (1990) Microb. Pathogen. 8, 163

The role of metabolism studies in the safety evaluation of new chemicals
Parke D V & Ioannides C (1990) Acta Pharmaceut Jugoslav 40, 363

Acute carbon monoxide poisoning: animal models: A review
Penny D G (1990) Toxicology, 62, 123–160

Adhesins of enterotoxigenic E. coli — their role in the pathogenesis of diarrhea and genetic control [In Russian; English abstract]
Petrovskaya V G & Bondarenko B M (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. SSSR, No 5, 110

Enterotoxins of enterotoxigenic Escherichia coli — characterization, mechanism of effect and genetic control [In Russian; English abstract]
Petrovskaya V G & Bondarenko V M (1990) Zh. Mikrobiol. Epidemiol. Immunobiol. No 7, 92

Neurotoxins from venoms of the Hymenoptera — twenty-five years research in Amsterdam
Piek T (1990) Comp. Biochem. Physiol. Pt C, 96, 223

Effects of gossypol on the motility of mammalian sperm
Porat OJ & Kubelka M (1990) Mol. Reprod. Dev. 25, 400

Transport of toxic metals in plants — a review of recent experiments with P-31 NMR spectroscopy
Ratkovic S (1990) Stud. Biophys. 138, 175

Tetrapyrrrole-dependent photodynamic herbicides
Rebicz C A, Reddy K N, Nandihalli U B & Velu J (1990) Photochem. Photobiol. 52, 1099

Glutathione: toxicological implications
Reed D J (1990) Annu. Rev. Pharmacol. Toxicol. 30, 603–631

Occupational exposure and defects of the central nervous system in offspring: review
Roeleveld N, Zielhuis G A & Gabriëls F (1990) Br. J. Industr. Med. 47, 580
Reviews in genetic toxicology: Special issue. Carcinogenic risk by endogenous factors and processes
Rüdiger H W, ed. (1990) Mutat. Res. 238, 173
Polychlorinated biphenyls (PCBs), dibenzo-p-dioxins (PCDDs), dibenzofurans (PCDFs), and related compounds: environmental and mechanistic considerations which support the development of toxic equivalency factors (TEFs)
Safe S (1990) Crit. Rev. Toxicol. 21, 51
Oxygen toxicity in the neonatal period
Saugstad O D (1990) Acta Paediatr. Scand. 79, 881
Calcium, excitotoxins, and brain damage
Siesjo B K (1990) News Physiol. Sci. 5, 120
Carcinogenicity of polyhalogenated biphenyls. PCBs and PBBs
Silberhorn E M, Glaeuer H P & Robertson L W (1990) Crit. Rev. Toxicol. 20, 439
Fourteenth Gif Lecture in Neurobiology: The study of clostridial and related toxins — the search for unique mechanisms and common denominators
Simpson L L (1990) J. Physiol. Paris, 84, 143
Mechanism of the neurotoxicity of MFTP — an update
Singer T P & Ramsay R R (1990) FEBS Lett. 274, 1-8
Sensitivity to endotoxin is induced by increased membrane fatty-acid unsaturation and oxidant stress
Stark J M & Jackson S K (1990) J. Med. Microbiol. 32, 211
Oxidative stress induced by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)
Stohs S J (1990) Free Radical Biol. Med. 9, 79
Special issue: Proceedings of the Second Meeting of the International Neurotoxicology Association
Stoltenburg-Düger G & others (1990) Neurotoxicol. Teratol. 12, 573-677
Resmunferatoxin and its analogs provide novel insights into the pharmacology of the vanilliod (capsaicin) receptor [Mini review]
Szallasi A & Blumberg P M (1990) Life Sci. 47, 1399
Do environmental toxins cause Parkinson’s disease? — A critical review
Tanner C M & Langston J W (1990) Neurology. 40, No 10. Suppl 3, 17
UDP-glucuronosyltransferases: a family of detoxifying enzymes
Tephy T R & Burchell B (1990) Trends Pharmacol. Sci. 11, 276
Mutational spectrometry in animal toxicity testing
Thilly W G (1990) Annu. Rev. Pharmacol. Toxicol. 30, 369-385
Recent progresses in toxicological risk evaluation of chemical carcinogens [In French: English abstract]
Trusnault R (1990) J. Pharm Belg. 45, 131
Lindane-induced liver oxidative stress
Videla L A, Barros S B M & Junqueira V B C (1990) Free Radical Biol. Med. 9, 169
Neurotoxicological effects and the mode of action of pyrethroid insecticides
Vijverberg H P M & Vandenberghe J (1990) Crit Rev Toxicol. 21, 105
Intestinal barriers to bacteria and their toxins
Walker R I & Owen R L (1990) Annu. Rev. Med. 41, 393
In vitro Methods in Toxicity Testing and Biomedical Research — Proceedings of the Third CFN Symposium, Stockholm, Sweden, 9-11 May 1988
Walum E & others (1990) Acta Physiol. Scand. 140, Suppl. 592, 5-141
Neurobehavioral effects of toxicity due to metals, solvents and insecticides
White R F, Feldman R G & Travers P H (1990) Clin. Neuropharmacol. 13, 392
Genetic and molecular aspects of 2,3,7,8-tetrachlorodibenzo-p-dioxin action
Whitlock J P Jr (1990) Annu. Rev. Pharmacol. Toxicol. 30, 251-277
Structure, function, and regulation of Pseudomonas aeruginosa exotoxin A
Wick M J, Frank D W, Storey D G & Iglewski B H (1990) Annu. Rev. Microbiol. 44, 335
Analysis of the structure-function relationship of Pseudomonas aeruginosa exotoxin A [Mini review]
Wick M J, Hamood A N & Iglewski B H (1990) Mol. Microbiol. 4, 527
Aluminum toxicokinetics [Mini review]
Wilhelm M, Jäger D E & Ohnesorge F K (1990) Pharmacol. Toxicol. 66, 4
Mast cell degranulating peptide: a multi-functional neurotoxin
Zhai M R, Russek S, Wang H-C, Beer B & Blume A J (1990) J. Pharm. Pharmacol. 42, 457
Animal models of parkinsonism using selective neurotoxins — clinical and basic implications
Zigmond M J & Stricker E M (1989) Int. Rev. Neurobiol. 31, 1

TRACE ELEMENTS

Studies on zinc in wound healing
Agren M S (1990) Acta Dermato-Venereol. Suppl 154, 1-36
Complexes of metal cations with carbohydrates in solution
Angyal S J (1989) Advan. Carbohydr. Chem Biochem. 47, 1
Meso-2,3-dimercaptosuccinic acid: chemical, pharmacological and toxicological properties of an orally effective metal chelating agent
Aposhian H V & Aposhian M M (1990) Annu. Rev. Pharmacol. Toxicol. 30, 279-306
New trends in the design of luminescent metal complexes
Balzani V & Ballardini R (1990) Photochem. Photobiol. 52, 490
Zinc finger domains — hypotheses and current knowledge
Berg J M (1990) Annu. Rev. Biochem. Biophys. Chem. 19, 405
Zinc fingers and other metal-binding domains. Elements for interactions between macromolecules [Mini review]
Berg J M (1990) J. Biol. Chem. 265, 6513
The influence of the ligands on the luminescence of metal ions
Blesse G (1990) Photochem. Photobiol 52, 417
The physiological role of zinc as an antioxidant
Bray I M & Bettgere W J (1990) Free Radical Biol. Med. 8, 281
Metallothionein and the trace minerals
Bremner I & Beattie J H (1990) Trends. Biochem. Sci. 15, 527
Zinc and the thymus gland: A review
Cardarelli N (1990) Thymus, 15, 223
Models of regulation and accumulation of trace metals in marine invertebrates [Mini review]
Depledge M H & Rainbow P S (1990) Comp. Biochem. Physiol. Pt C, 97, 1
Role of mineral ions in the control of plant morphogenesis: example of the inhibition of the growth of the hypocotyl of Bidens pilosa L. [In French: English abstract]
Desbiez M O, Frachisse J M & Thellier M (1989) C R. Soc. Biol. 183, 493
C 13 nuclear magnetic resonance - spectral studies of the interactions of metal ions with carbohydrates — use of relaxation probes
Dill K & Carter R D (1989) Advan. Carbohydr. Chem. Biochem. 41, 125

Thallium in Biochemistry [Minireview]
Douglas K T, Bunn M A & Baindur S R (1990) Int. J. Biochem. 22, 479

Reviews of genetic toxicology. Genotoxicity of chromium compounds. A review
Flora S de, Bagnasco M, Serra D & Zanacchi P (1990) Mutat. Res. 238, 99–172

The concept of critical levels of toxic heavy metals in target tissues
Foulkes E C (1990) Crit. Rev. Toxicol. 20, 327

Neurobiology of zinc and zinc-containing neurons
Frederickson C J (1989) Int. Rev. Neurobiol. 31, 145

Regulation of bacterial gene expression by metal–protein complexes [Microreview]
Hennecke H (1990) Mol. Microbiol. 4, 1631

Stable isotope methods for studies of mineral/trace element metabolism
Janghorbani M & Ting B T G (1990) J. Nutr. Biochem. 1, 4

Cobalt exposure and cancer risk
Jensen A A & Tüchsen F (1990) Crit. Rev. Toxicol. 20, 427

Zinc deficiency and immune function
Keen C L & Gershwin M E (1990) Annu. Rev. Nutr. 10, 415

Clinical interest and limit of trace elements analysis in hair [In French; English abstract]
Lamand M, Favier A & Pineau A (1990) Ann. Biol. Clin. Paris. 48, 433

Mutagenicity, carcinogenicity and teratogenicity of cobalt metal and cobalt compounds
Léonard A & Lauwerys R (1990) Mutat. Res. 239, 17

Metalloproteinases and their inhibitors in matrix remodeling
Matsunari L M (1990) Trends Genet. 6, 121

A review of techniques for the analysis of boron in the development of neutron capture therapy agents
Moore D E (1990) J. Pharmaceut Biomed. Anal. 8, 547

Metal toxicity and the respiratory tract
Nemery B (1990) Eur. Resp. J. 3, 202

Studies on the relationship between boron and magnesium which possibly affects the formation and maintenance of bones [Mini-review]
Nielsen F H (1990) Magnesium Trace Elem. 9, 61

Magnesium and glucose homeostasis
Paolillo G, Scheen A, Donofrio F & Lefebvre P (1990) Diabetologia, 33, 511

The role of redox-active metals in the mechanism of action of blemycin
Petering D H, Byrnes R W & Antholine W E (1990) Chem-Biol. Inter. 73, 133

Lithium and serotonin function: implications for the serotonin hypothesis of depression
Price L H, Charney D S, Delgado P L & Heninger G R (1990) Psychopharmacology, 100, 3

Transport of toxic metals in plants — a review of recent experiments with P-31 NMR spectroscopy
Ratkovic S (1990) Stud. Biophys. 138, 175

Aspartic and glutamic acid as ligands to alkali and alkaline-earth metals — structural chemistry as related to magnesium therapy Schmidbaur H, Classen H G & Helbig J (1990) Angew. Chem. 29, 190

Heavy metal concentrations in humans [Minireview]
Schweinsberg F & Karsa L von (1990) Comp. Biochem. Physiol. Pt C, 95, 117

Selenium — essentiality, content in food, supplementation, deficiencies [In French; English abstract]
Simonoff M (1990) J. Pharm. Belg. 45, 141

Conference Science Award Lecture. Uncultured lobster muscle, cultured neurons and brain slices: the neurophysiology of zinc
Smart T G (1990) J. Pharm. Pharmacol. 42, 377

The heavy metal-binding peptides of plants
Steffens J C (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 553–575

Molecular biology of selenoproteins
Sunde R A (1990) Annu. Rev. Nutr. 10, 451

Endomyocardial fibrosis — the possible connexion with myocardial levels of magnesium and cerium
Valiathan S M & Kartha C C (1990) Int. J. Cardiol 28, 1

Effects of metals on enzyme activity in plants: commissioned review
Van Assche F & Clissters H (1990) Plant Cell Environ. 13, 195

Effects of magnesium on skeletal metabolism [Minireview]
Wallach S (1990) Magnesium Trace Elem. 9, 1

Neurobehavioral effects of toxicity due to metals, solvents and insecticides
White R F, Feldman R G & Travers P H (1990) Clin Neuropharmacol. 13, 392

Aluminium toxicokinetics [Minireview]
Wilhelm M, Jäger D E & Ohnesorge F K (1990) Pharmacol. Toxicol. 66, 4

Seventh Sir Frederick Gowland Hopkins Memorial Medal Lecture: The mineral elements in homoeostasis and morphogenesis
Williams R J P (1990) Biochem. Soc. Trans 18, 689

TRANSMETHYLATION
See: METHYLATION

TRANSPORT

Exocytosis
Almers W (1990) Annu. Rev. Physiol. 52, 607

Transmitter release from synapses: does a preassembled fusion pore initiate exocytosis?
Almers W & Tse F W (1990) Neuron. 4, 813–818

2nd World Congress of Neuroscience (Ibro): Chloride Channels and Carriers in Nerve, Muscle, and Gland Cells, Budapest, Hungary, August 1987
Alvarezleefmans F J & Russell J M, eds (1990) Wld. Congr. Neurosci. 2, 425 pp.

Energy coupling in bacterial periplasmic permeases [Minireview]
Ame G F-L & Joshi A K (1990) J. Bact. 172, 4133–4137

Bacterial periplasmic permeases belong to a family of transport proteins operating from Escherichia coli to human: traffic ATPases Ame G F-L, Minuita C S & Shyamala V (1990) FEBS Microbiol. Rev. 75, 429
The plasma membrane H⁺-ATPase of higher plant cells: biochemistry and transport function
Briskin D P (1990) Biochim. Biophys. Acta, 1019, 95

β-Lactamase as a probe of membrane protein assembly and protein export [Microreview]
Droock-Smuth J K, Tadayyon M & Zhang Y (1990) Mol. Microbiol. 4, 1637

Walter B. Cannon Lecture: Introduction Regulation of heartbeat by G-protein-coupled ion channels
Brown A M (1990) Am. J. Physiol. 259, No 6, Pt 2, H1621

Ionic channels and their regulation by protein subunits
Brown A M & Birnbaumer L (1990) Annu Rev. Physiol. 52, 197

G proteins and potassium currents in neurons
Brown D A (1990) Annu. Rev. Physiol. 52, 215

Secretory vesicle-associated proteins and their role in exocytosis
Borgoyne R D (1990) Annu. Rev. Physiol. 52, 647

Warner-Lambert/Park-Davis Award Lecture Cellular and molecular mechanisms that direct leukocyte traffic
Butcher E C (1990) Am. J. Path. 136, 3

Pathways to regulated exocytosis in neurons
Cosimi P de & Jahn R (1990) Annu. Rev. Physiol. 52, 625

Role of amino acid transport and countertransport in nutrition and metabolism
Christensen H N (1990) Physiol. Rev. 70, 43

Significance of Na⁺-K⁺ pump regulation in skeletal muscle
Clausen T (1990) News Physiol. Sci. 5, 148

Angiotensin II: a powerful controller of sodium transport in the early proximal tubule [Brief review]
Cogan M G (1990) Hypertension, 15, 451

The mechanochemistry of kinesin. a review
Cohn S A (1990) Mol. Chem. Neuropath. 12, 83

29th Annual A.N. Richards Symposium on Potassium Channels: Basic Function and Therapeutic Aspects, Valley Forge, PA, May 16-17, 1988
Colatsky T J. ed (1990) Progr. Clin. Biol. Res. 334, 348 pp.

Water transport in extracellular matrices
Comper W D, Williams R P W & Zamparo O (1990) Connective Tissue Res. 25, 89

Special issue: 22nd Lunteren Lectures on Molecular Genetics: The Stress Response in Microorganisms. A review of the role of 70kDa heat shock proteins in protein translocation across membranes
Craig E, Kang P J & Boorsteen W (1990) Anton. Leeuwenhoek Int J Gen. Microbiol. 58, 37

Structure and dynamics of the colchinin E1 channel [Microreview]
Cramer W A, Cohen F S, Merrill A R & Song H Y (1990) Mol Microbiol. 4, 519

A review of protease secretion instability in Proteus—mirabilis
Dacosta S O P (1990) Rev. Brasil. Genetica. 13, 165

Diffusion and kinetic approaches to describe permeation in ionic channels [Microreview]
Dam J A & Levitt D G (1990) J. Theoret. Biol. 146, 289

Immunoglobulin secretion in the airways
Daniele R P (1990) Annu. Rev. Physiol. 52, 177

Basolateral K conductance: role in regulation of NaCl absorption and secretion
Dawson D C & Richards N W (1990) Am J Physiol. 259, No 2, Pt 1, C181
The gap junction family — structure, function and chemistry

Dermietzel R, Hwang T K & Spray D S (1990) Anat. Embryol. 182, 517

G protein modulation of calcium currents in neurons

Dolphin A C (1990) Annu. Rev. Physiol. 52, 243

Structure activity relationships of K" channel openers

Biomembrane, Pt U. Cellular and subcellular transport: eukaryotic

phosphorylation, and intracellular trafficking

The cystic fibrosis defect approached from different angles — new

perspectives on the gene, the chloride channel, diagnosis and therapy

Halley D J J & others (1990) FEBS Lett. 258, No 3, Pt 1, C755

The dynamic aspects of proton transfer processes

Gutman M & Nachholf F (1990) Biochim. Biophys. Acta, 1015, 301

Morphology, physiology, and molecular biology of rennin secretion

Hacketal H, Paul M, Ganten D & Taupner R (1990) Physiol. Rev 70, 1067

The cystic fibrosis defect approached from different angles — new

perspectives on the gene, the chloride channel, diagnosis and therapy

Hale D J J & others (1990) Eur. J. Pediatr. 149, 670

Proton-linked sugar transport systems in bacteria [Minireview]

Henderson P J F (1990) J. Bioenerget. Biomembr. 22, 525

Calcium channels in vertebrate cells

Hess P (1990) Annu. Rev. Neurosci. 13, 337

Molecular machinery required for transport from the endoplasmic reticulum to the Golgi complex

Hicke L & Schekman R (1990) BioEssays, 12, 253

Binding protein-dependent transport systems [Mini-review]

Higgins C F & others (1990) J. Bioenerget. Biomembr. 22, 571

Coupling of catalytic and channel function in the Ca" transport

ATPase [Topical review]

Inesi G & Kritley M F (1990) J Membr Biol 116, 1

Relationships of molecular structure and function in Ca"-transport

ATPase

Inesi G, Sunbilla C & Kritley M E (1990) Physiol. Rev. 70, 749

How might the diversity of potassium channels be generated?

Jan L Y & Jan Y N (1990) Trends Neurosci. 13, 415

Biophysics of the structure and function of porins

Jab B K & Walian P J (1990) Q. Rev. Biophys. 23, 367

Transport of viral specimens

Johnson F B (1990) Clin. Microbiol. Rev. 5, 120-131

Regulation of glucose-transporter gene expression in vitro and in vivo

Kahn B B & Flier J S (1990) Diabetes Care, 13, 548

Transport membrane 45Ca flux measurements and desensitization of the

γ-aminobutyric acidA receptor [Short review]

Kardos J & Cash D J (1990) J. Neurochem. 55, 1095

Membrane potentials and the mechanism of intestinal Na"-dependent

sugar transport

Kimich G A (1990) J. Membr. Biol. 114, 1

Towards an understanding of the structural basis of 'forbidden',

transport pathways in the Escherichia coli lactose carrier: mutations

probing the energy barriers to uncoupled transport [Macroreview]

King S C & Wilson T H (1990) Mol. Microbiol. 4, 1433

The vasopressin-regulated urea transporter in renal inner medullary

collecting duct [Editorial review]

Knepper M A & Star R A (1990) Am. J. Physiol. 259, No 3, Pt 2, F393

Calcium channels in cellular membranes

Kostyuk P G (1990) J. Mol. Neurosci. 2, 123

Modulation of calcium channel function in nerve cell membrane

[Minireview]

Kostyuk P G & Doroshenko P A (1990) Gen. Physiol. Biophys. 9, 433

Electrogenic properties of the Na:Ca exchange

Lagnado L & McNaughton P A (1990) J. Membr. Biol. 117, 173

Regulation of the abundance of sodium pumps in isolated animal cells

[Minireview]

Lamb J F (1990) Int. J. Biochem. 22, 1365

Regulation of prolactin secretion at the level of the lactotroph

Lamberts S W J & Macleod R M (1990) J. Membr. Biol. 116, 177

Insulin-receptor tyrosine kinase and glucose transport

Langosch D, Becker C M & Betz H (1990) Eur. J. Biochem. 194, 1

Halorhodopsin, a light-driven electrogenic chloride-transport system

Lanyi J K (1990) Diabetologia, 33, 565

Insertion and translocation of proteins into and through membranes

[Minireview]

Lazdunski C J & Benedetti H (1990) FEBS Lett. 268, 408-414
Ion channels and signal transduction in lymphocytes
Lewis R S & Cahalan M D (1990) Annu. Rev. Physiol. 52, 415

Ion channels and cell volume regulation — chaos in an organized system
Lewis S A & Donaldson P (1990) News Physiol. Sci. 5, 112

Ionic regulatory mechanisms in crustacean gill epithelia
Lucu C (1990) Comp. Biochem. Physiol. Pt A, 97, 297

EAAs pharmacology: Mechanisms of blockade of excitatory amino acid receptor channels
MacDonald J F & Nowak I M (1990) Trends Pharmacol. Sci. 11, 167

The sodium pump needs its β subunit
McDonough A A, Geering K & Farley R A (1990) FASEB J. 4, 1598

Anion exchange reactions in bacteria [Minireview]
Maloney P B (1990) J. Bioenerg. Biomembr. 22, 509

Anion-exchange mechanisms in bacteria
Maloney P C, Ambudkar S V, Anantharam V, Sonna L A & Varadachary A (1990) Microbiol. Rev. 54, 1-17

Binding of some antidepressants to the 5-hydroxytryptamine transporter in brain and platelets
Marcusson J O & Ross S B (1990) Psychopharmacology, 102, 145

Intracellular fatty acid trafficking and the role of cytosolic lipid binding proteins
Matasse V, Stone R L, Waggoner D W & Bernlohr D A (1989) Progr. Lipid Res. 28, 243

Receptor-mediated regulation of calcium channels and neurotransmitter release
Miller R J (1990) FASEB J. 4, 3291

Prokaryotic secretion [Minireview]
Model P & Russel M (1990) Cell. 61, 739-741

Alteration of intracellular traffic by mannensin; mechanism specificity and relationship to toxicity
Mollenhauer H H, Møré D J & Rowe L D (1990) Biochim. Biophys Acta, 1031, 225

Molecular anatomy and molecular design of channel proteins
Montal M (1990) FASEB J. 4, 2623

Mechanosensitive ion channels [Topical review]
Morris C E (1990) J. Membr. Biol. 113, 93

The dihydropyridine-sensitive calcium channel of the skeletal muscle — biochemistry and structure [Minireview]
Nastainczyk W, Ludwig A & Hofmann F (1990) Gen. Physiol. Biophys. 9, 321

Calcium channels, potassium channels, and voltage dependence of arterial smooth muscle tone [Brief review]
Nelson M T, Patlak J B, Worley J F & Stauden N B (1990) Am. J Physiol. 259, No 1, Pt 1, C3

In vitro model systems for the evaluation of the absorption from the gastro-intestinal tract
Neubert R (1990) Pharmazie, 45, 233

Stimulus-secretion coupling in vascular endothelial cells
Newby A C & Henderson A H (1990) Annu. Rev. Physiol. 52, 661

Defining components required for transport from the ER to the Golgi complex in yeast
Newman A P & Perronovick S (1990) BioEssays, 12, 485

Targeting of proteins into the eukaryotic secretory pathway — signal peptide structure function relationships
Nothwehr S F & Gordon J I (1990) BioEssays, 12, 479

Calcium ion and turgor regulation in plant cells [Topical review]
Okazaki Y & Tazawa M (1990) J Membr. Biol. 114, 189

Chemical modification as an approach to elucidation of sodium pump structure-function relations
Pedemonte C H & Kaplan J H (1990) Am. J. Physiol. 258, No 1, Pt 1, C1

Controlling the nuclear translocation of proteins — an additional level to the regulation of gene expression [In French; English abstract] [Minireview]
Pichonczuk M & Roux P (1990) M/S Med. Sci. 6, 803

Regulation of membrane fusion during exocytosis
Plattner H (1989) Int. Rev. Cytol. 119, 197

SyneXin (Annexin VII): a cytosolic calcium-binding protein which promotes membrane fusion and forms calcium channels in artificial bilayer and natural membranes [Topical review]
Pollard H B, Burns A L & Rojas E (1990) J. Membr. Biol. 117, 101

The plasma membrane and thyroid hormone entry into cells [Brief review]
Pontecorvi A & Robbins J (1989) Trends Endocrinol. 1, 90

Precursor/product antiport in bacteria [Microreview]
Poolman B (1990) Mol. Microbiol. 4, 1629

Genetic dissection of Ca²⁺-dependent ion channel function in Paramecium
Preston R R (1990) BioEssays, 12, 269

Genetics of extracellular protein secretion by Gram-negative bacteria
Pugsley A P, Deiicui C, Reves I & Kornacker M G (1990) Annu. Rev. Genet. 24, 67

Plasma lipid transfer activities
Quig D W & Zilversmit D B (1990) Annu. Rev. Nutr. 10, 169

Cystic fibrosis: a disease in electrolyte transport
Quinton P M (1990) FASEB J. 4, 2709

New ligands for L-type Ca²⁺ channels
Rampe D & Triggle D J (1990) Trends Pharmacol. Sci. 11, 112

Molecular aspects of phosphate transport in Escherichia coli [MicroReview]
Rao N N & Torriani A (1990) Mol. Microbiol. 4, 1083

Protein transport across the ER membrane
Rapoport T A (1990) Trends Biochem. Sci. 15, 355

Involvement of cytoskeleton in polypeptide hormone secretion from the anterior pituitary lobe: a review
Ravindra R & Grosvener C E (1980) Mol. Cell. Endocrinol. 71, 165

Mechanisms of sodium homeostasis: sodium and water excretion in mammals — haemodynamic, endocrine, and neural mechanisms
Reinhardt H W & others (1990) Annu. Rev. Physiol. Scand. 139, Suppl 591, 3-107

Is atrial natriuretic factor a physiological regulator of sodium excretion? — A review of the evidence
Richards A M (1990) J Cardiovasc. Pharmacol. 16, Suppl. 7, S39

Cardiovascular and biological effects of K⁺ channel openers, a class of drugs with vasorelaxant and cardioprotective properties [Minireview]
Richer C & others (1990) Life Sci. 47, 1693

Receptor-mediated calcium entry [Minireview]
Rink T J (1990) FELS Lett. 268, 381-385

ATP-Regulated K⁺ channels and diabetes-mellitus
Rorsman P, Berggren P O, Bokvist K & Efendic S (1990) News Physiol. Sci. 5, 143
Signal transduction by the bacterial phosphotransferase system.
Diauxie and the crp gene (J. Monod revisited) [Minireview]
Roseman S & Meadow N D (1990) J. Biol. Chem. 265, 2993-2996
Movement of proteins through the Golgi stack: a molecular dissection of vesicular transport
Rothman J E & Orci L (1990) FEBS J 4, 1460
Lipid transfer proteins
Rueckert D G & Schmidt K (1990) Chem. Phys. Lipids. 56, 1
Molecular probes in neuro-oncology: a review
Ravik J T, Trent J M & Rosenblum M I (1980) Cancer Invest. 8, 425
Kinetic modeling of plant and fungal membrane transport systems
Sanders D (1990) Annu. Rev. Plant Physiol. Plant Mol. Biol. 41, 77-107
The membrane skeleton of erythrocytes: models of its effect on lateral diffusion [Minireview]
Saxton M J (1990) Int. J. Biochem. 22, 801
Genetic analysis of protein export in Escherichia coli
Schatz P J & Backhuis J (1990) Annu. Rev. Genet. 24, 215
Regulation of renal transport processes and hemodynamics by macrophages and lymphocytes [Editorial review]
Schreiner G F & Kohan D E (1990) J. Lab. Exp. Med. 171, 717101
Role of G proteins in calcium channel modulation
Schultz G, Rosenthal W, Hescheler J & Trautwein W (1990) FEBS J 251, 215
Cell biology of intracellular protein trafficking
Schwartz A L (1990) Annu. Rev. Immunol. 8, 195
Dopamine receptors and transporters in Parkinson's disease and schizophrenia
Seeman P & Niznik H B (1990) Annu. Rev. Biophys. Biophys Chem. 19, 7
Polyamine transport in mammalian cells [Minireview]
Seiler N & Dezeure F (1990) Int. J. Biochem. 22, 211
The proton-translocating ATPase in Escherichia coli
Senior A E (1990) Annu. Rev. Biophys. Biophys Chem. 19, 7
Role of ion movements in neutrophil activation
Sha'afi R I & Molski T F P (1990) Annu Rev Physiol. 52, 365
Mechanisms of mammary gland ion transport [Minireview]
Shennan D B (1990) Comp. Biochem. Physiol. Pt A, 97, 317
Functional analysis of the modes of anion transport in neutrophils and HL-60 cells
Simchowitz L & Bibb J A (1990) Annu. Rev. Physiol. 52, 381
Polarized sorting in epithelia [Minireview]
Simons K & Wandinger-Ness A (1990) Cell, 62, 207-210
Mitochondrial import: properties of precursor proteins
Skerjanc I (1990) Biochem. Cell Biol. 68, 9-16
Fourth Datta Lecture: The energy coupled exchange of Na+ for K+ across the cell membrane — the Na+,K+-pump
Skou J C (1990) FEBS Lett. 268, 314-324
Protein transport into and within chloroplasts
Smeekens S, Weisbeek P & Robinson C (1990) Trends Biochem. Sci. 15, 73
Drug transport in the central nervous system: role of carriers [Minireview]
Spector R (1990) Pharmacology, 40, 1
Structure-activity relations of the cardiac gap junction channel
Spray D C & Burt J M (1990) Am. J. Physiol. 258, No 2, Pt I, C195
Structure and function of the nuclear pore complex: New perspectives
Starr C M & Hanover J A (1990) BioEssays, 12, 323
The G protein – channel connection
Sternweis P C & Pang J-H (1990) Trends Neurosci. 13, 122
Biliary Cholesterol Transport and Precipitation: Proceedings of the Workshop on Frontiers in Gallstone Formation — Warrenton, Virginia, April 16-19, 1989
Strasberg S M & others (1990) Hepatology, 12, No. 3, Pt. 2, Suppl., 1S—219S
G protein-mediated regulation of K+ channels in heart
Szabo G & Otero A S (1990) Annu. Rev. Physiol. 52, 293
Plasmodium and the infected erythrocyte: glucose transport in malaria infected erythrocytes
Tanabe K (1990) Parasitol. Today, 6, 225
Regulation of ferritin and transferrin receptor mRNAs
Theil E C (1990) J. Biol. Chem. 265, 4771
The role of transferrin in the mechanism of cellular iron uptake
Thorstensen K & Romslo I (1990) Biochem. J. 271, 1
Transport systems encoded by bacterial plasmids [Mini-review]
Tisa L S & Rosen B P (1990) J. Bioenerget Biocembr. 22, 493
Regulation of cardiac L-type calcium current by phosphorylation and G proteins
Trautwein W & Hescheler J (1990) Annu. Rev Physiol. 52, 297
Respiratory and ion regulation in invertebrates exposed to water and air
Truchot J P (1990) Annu. Rev. Physiol. 52, 61
The protonotive Q cycle. Energy transduction by coupling of proton translocation to electron transfer by the cytochrome bc1 complex [Minireview]
Trumppower B L (1990) J. Biol. Chem. 265, 11409
Calcium channels, stores, and oscillations
Tzien R W & Tsien R Y (1990) Annu. Rev. Cell Biol. 6, 715
Xylem-phloem exchange via the rays — the undervalued route of transport
Vanbel A J E (1990) J. Exp. Bot. 41, 631
Lipoprotein assembly and secretion by hepatocytes
Vance J E & Vance D E (1990) Annu. Rev. Nutr. 10, 337
Lipid transport function of lipoproteins in flying insects
Vanderhorst D J (1990) Biochim. Biophys. Acta. 1047, 195
A review and appraisal of deconvolution methods to evaluate in vivo neuroendocrine secretory events
Veldhuis J D & Johnson M L (1990) J. Neuroendocrinol. 2, 755
Goblet cell secretion and mucogenesis
Verduco P (1990) Annu. Rev. Physiol. 52, 157
Reconstitution of ion–motive transport ATPases in artificial lipid membranes
Villalobo A (1990) Biochim. Biophys. Acta, 1017, 1
Mutual inhibition of sugars and amino acid intestinal absorption [Minireview]
Vinarde D M P (1990) Comp. Biochem. Physiol. Pt A, 95, 17
Active transport of proteins into the nucleus [Review letter]
Wagner P, Kunz J, Koller A & Hall M N (1990) FEBS Lett. 275, 1-5
Gramicidin channels and pores
Wallace B A (1990) Annu. Rev. Biophys. Biophys. Chem. 19, 127
Salvage receptors: two of a kind? [Minireview]
Warren G (1990) Cell, 62, 1-2
Abnormal regulation of ion channels in cystic fibrosis epithelia
Welch M J (1990) FEBS J 4, 2718
Phospholipids and electrolyte transport [Minireview]
Yorio T & Frazier L W (1990) Proc. Soc. Exp. Biol. Med. 195, 293
Renal action of atrial natriuretic peptide: regulation of collecting duct sodium and water transport
Zeidel M L (1990) Annu. Rev. Physiol. 52, 747

Widening potential for Ca\(^{2+}\) antagonists: non-L-type-Ca\(^{2+}\) channel interaction
Zornig G (1990) Trends Pharmacol. Sci. 11, 38

Ribonucleoparticle-independent transport of proteins into mammalian microsomes [Minireview]
Zimmermann R & others (1990) J. Bioenerget. Biomembr. 22, 711

Mini-review series: Protein Transport in Membranes of Fission Yeasts
Zimmermann R & others (1990) J. Bioenerget. Biomembr. 22, 711–789

**URINARY TRACT**
See: **KIDNEYS AND URINARY TRACT**

**VIRUSES**
See also: **BACTERIOPHAGES**

Molecular mimicry of growth factors by products of tumor viruses
Aaronson S A & Pierce J H (1990) Cancer Cells, 2, 212

Human endogenous retroviruses and immune disease [Short analytical review]
Abraham G N & Khan A S (1990) Clin. Immunol. Immunopath. 56, 1

The search for scrapie agent nucelic acid
Aiken J M & Marsh R F (1990) Microbiol. Rev. 54, 242–246

International Symposium on Pathogenesis and Control of Viral Infections, Beijing, People’s Republic of China, April 1989
Aiuti F. ed. (1989) Serono Symp. Publ. 59, 338 pp.

Immunology of hepatitis B virus infection
Alexander G J M (1990) Br. Med. Bull. 46, 354

Herpesviruses, the Immune System, and AIDS
Aurelian L. ed. (1990) Dev. Med. Viral. 6, 377 pp.

Inactivation of viral antigens for vaccine preparation with particular reference to the application of binary ethylenimine
Bahmann H G (1990) Vaccine. 8, 299

HIV-1 reverse transcriptase: structure predictions for the polymerase domain [Minireview]
Barber A M, Hizi A, Maizel J V jr & Hughes S H (1990) AIDS Res Hum. Retrovirus. 6, 1061

Human immunodeficiency virus, type-2 [In Russian]
Bektimirov T A (1990) Vopr. Virusol. 35, 180

Cytoplasmic polyhedrosis viruses -- Reoviridae
Bellonci S (1989) Advan. Virus Res. 37, 173

Parvovirus replication
Berk K I (1990) Microbiol. Rev. 54, 316–329

Retroviruses and oncogenes 2.
Bishop J M (1990) Angew. Chem. 29, 716

Nobel Lecture: Retroviruses and oncogenes. 2
Bishop J M (1990) Biosci. Rep. 10, 473

Proceedings of the International Conference on Prospects for Eradication of Hepatitis B Virus, Geneva, 23–24 February 1989
Blumberg B S & others (1990) Vaccine. 8, Suppl. S4

The 3-D structure of HIV-1 protease and the design of antiviral agents for the treatment of AIDS
Blundell T L & others (1990) Trends Biochem. Sci. 15, 425

Viruses and malignant blood diseases [In French; English abstract]
Boiron M (1990) Path. Biol. 38, 57

Binding and unwinding — how T antigen engages the SV40 origin of DNA replication [Minireview]
Borowiec J A, Dean F B, Bullock P A & Hurwitz J (1990) Cell, 60, 181–184

Polymerase chain reaction — a new tool for the study of viral infections in hepatology
Brechot C (1990) J. Hepatol 11, 124

Central nervous system effects of human immunodeficiency virus type 1
Bridge T P & Ingraham L J (1990) Annu. Rev. Med. 41, 159

Haematologic abnormalities in the acquired immunodeficiency syndrome
Brizzi M F, Porcu P, Porteri A & Pegoraro L (1990) Haematologica. 75, 454

Ecology of indirviruses [In Russian; English abstract]
Buchatsky L P (1990) Vopr. Virusol. 35, 93

Flavivirus genome organization, expression, and replication
 Chambers T J, Hahn C S, Galler R & Rice C M (1990) Annu. Rev. Microbiol. 44, 649

Novel features of retroviruses associated with human diseases [Minireview]
Chandra A S, Gerber T & Chandra A (1990) FEBS Lett. 268, 415–421

Herpes viruses — a study of parts
Chee M & Barrett B (1990) Trends Genet. 6, 80

Host genetic control of spontaneous and induced immunity to Friend murine retrovirus infection
Chesebro B, Miyazawa M & Britt W J (1990) Annu. Rev. Immunol. 8, 477

Hepatitis C virus: the major causative agent of viral non-A non-B hepatitis
Choo Q-L & others (1990) Br. Med. Bull. 46, 423

Targets and strategies for the antiviral chemotherapy of AIDS
Carter E de (1990) Trends Pharmacol. Sci. 11, 198

Fibroblast growth factor and herpes simplex virus receptors [In French; English abstract]
Courtois Y (1990) M./S. Méd. Sci. 6, 674

The HIV-1 TAT protein — an RNA sequence-specific processivity factor [Minireview]
Cullen B R (1990) Cell, 63, 655–657

Functions of the auxiliary gene products of the human immunodeficiency virus type 1 [Minireview]
Cullen B R & Greene W C (1990) Virology, 178, 1

Reciprocity in the interactions between the poxviruses and their host cells
Dales S (1990) Annu. Rev. Microbiol. 44, 173

Human immunodeficiency virus protease — a target for AIDS therapy [Current trends review]
Debouck C & Metcalf B W (1990) Drug Dev. Res. 21, 1

The simian immunodeficiency viruses
Desrosiers R C (1990) Annu. Rev. Immunol. 8, 557

An immunopharmacological approach for prevention of retrovirus-associated disease in human pathology
Donofrio C & Bonmassar E (1990) Pharmacol. Rev. 42, 645

Virus Biogenesis, Virus Receptor Interaction and Viruses as Tools — Milk and Mammary Gland
Drukker J & others (1990) Acta Histochem. Suppl. 40, U8, 29–147

Molecular biology of the Bunyaviridae
Elliott R M (1990) J. Gen. Virol. 71, 501

Volume 298, Supplement
Review article — Some highlights of virus research in 1989
Elliott R M, Hull R & Megeoch D J (1990) J. Gen. Virol. 71, 1413

Molecular biology of cytomegalovirus [Current status review]
Emery V C & Griffiths P D (1990) Int. J. Exp. Path. 71, 905

Wallace P. Rowe Lecture: Poxviruses of laboratory animals
Fenner F (1990) Lab. Animal Sci. 40, 469

Genetic engineering of plants for virus resistance [Brief review]
Gaddam P, Mansky L M, Medicci K, Miller W A & Hill J H (1990) Arch. Virol. 115, 1

The immune response to cytomegalovirus infection and serological methods used in its diagnosis
Galet G (1990) Med. Lab. Sci. 47, 297

Human papilloma viruses and carcinomas
Galloway D A & McDougall J K (1989) Advan. Virus Res. 37, 125

Photosensitization of cultured cells and viruses by pyrene lipids [Minireview] 
Gatt S, Dmuk T, Abourabia S, Kotler M & Fibach E (1990) Ind J Biochem. Biophys. 27, 359

The immune response to influenza vaccines
Ghendon Y (1990) Acta Virol. 34, 295

Integration of retroviral DNA into the genome of the infected cell
Goff S P (1990) Cancer Cells, 2, 172

Retroviral reverse transcriptase: synthesis, structure, and function
Goff S P (1990) J. Acq Immun. Defic. Syndrome, 3, 817

Symposium: AIDS, Other Immunodeficiency Disorders, and the Lymphatic System: Pathophysiology, Diagnosis, and Immunotherapy
Good R A & others (1990) Lymphology, 22, 55-98

Molecular mechanisms by which adenoviruses counteract antiviral immune defenses
Gooding L R & Wold W S M (1990) Crit. Rev. Immunol. 10, 53

Unraveling retrovirus integration [Minireview]
Grandgenett D P & Mumm S R (1990) Cell, 60. 34

Regulation of human T-cell leukemia virus expression
Green P L & Chen I S Y (1990) FASEB J, 4, 169

Regulation of HIV-1 gene expression
Greene W C (1990) Annu. Rev Immunol. 8, 453

Symposium on Human Retroviruses, Tamarron, CO, February 4-1, 1989
Groopman J E, Chen I S Y, Essex M & Weiss R A, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 119, 410 pp.

Glycoproteins encoded by Varicella-Zoster virus: biosynthesis, phosphorylation, and intracellular trafficking
Grose C (1990) Annu. Rev Microbiol. 44, 59

Virologic and pathogenetic aspects of cytomegalovirus infection
Grundy J E (1990) Rev. Infect. Dis. 12, Suppl. 7, S711

The inhibitors of the HIV-1 pol-protease [In French; English abstract]
Guei R, Condom R, Ayi A I & Tran T T (1990) M/S Med. Sci 6, 552

Hepatitis B virus DNA in peripheral blood leukocytes: a brief review
Harrison T J (1990) J. Med. Virol. 31, 33

Influenza A virus and the neutrophil: a model of natural immunity
Hartshorn K L, Karnad A B & Tauber A I (1990) J. Leukocyte Biol. 47, 176

The where, what and how of ribosomal frameshifting in retroviral protein synthesis
Hatfield D & Orozcan S (1990) Trends Biochem. Sci. 15, 186

Malnutrition in patients with AIDS
Hecker L M & Kotler D P (1990) Nutr Rev 48, 393

Pulmonary neoplastic and lymphoproliferative disease in AIDS — a review
Heitzman E R (1990) Radiology, 177, 347

The dengue viruses
Henchal E A & Putnak J R (1990) Clin Microbiol. Rev. 3, 376

Electrotransfection of plant protoplasts with viral nucleic acids
Hibi I (1989) Advan. Virus Res. 37, 329

Membrane fusion of enveloped viruses: especially a matter of proteins [Minireview]
Hoeekstra D (1990) J Bioenerget. Biomembr. 22, 121

Vaccinia virus vectors: new strategies for producing recombinant vaccines
Hruby D E (1990) Clin. Microbiol. Rev. 3, 153-170

Human immunodeficiency virus type 2 (HIV2)
Hughes A & Corrah T (1990) Blood Rev. 4, 158

The in vitro replication of DNA containing the SV40 origin [Minireview]
Hurwitz J, Dean F B, Kwong A D & Lee S-H (1990) J. Biol. Chem. 265, 18043

Integral characteristics of experimental viral infections — statistical aspects [In Russian]
Ivonov S N, Kirillova S L & Pshenchnov V A (1990) Vopr. Virolog. 35, 448

The novel mechanism of initiation of picornavirus RNA translation
Jackson R J, Howell M T & Kaminski A (1990) Trends Biochem. Sci. 15, 477

Transport of viral specimens
Johnson F B (1990) Clin. Microbiol. Rev. 3, 120-131

Generation of diversity in retroviruses
Katz R A & Skalka A M (1990) Annu Rev Genet 24, 409

Viral proteinases: weakness in strength
Kay J & Dunn B M (1990) Biochim. Biophys. Acta. 1048, 1

The use of molecular techniques in studying viral pathogenesis in the nervous system
Kennedy P G E (1990) Trends Neurosci. 13, 424

Nutritional aspects of AIDS
Keusch G T & Farthing M J G (1990) Annu. Rev. Nutr. 10, 475

Genetics of response to slow virus (prion) infection
Kingsbury D T (1990) Annu. Rev. Genet 24, 115

Macrophages in HIV infection. Symposium organized under the Franco–German Agreement for Cooperation in AIDS Research, Frankfurt, FRG, May 5-6, 1989
Kirk A & Stute H J, eds (1990) Res Virol. 141, 129

The role of viral and cellular nuclear proteins in herpes simplex virus replication
Knipe D M (1989) Advan. Virus Res. 37, 85

Repertoire of cytotoxic lymphocyte-T antigenic specificity in viral infections [In Russian, English abstract]
Kolontsov A A & Makarov V V (1990) Vopr Virusol. 35, 97

Circulating immune complexes in HIV-infected persons
Krapf F E, Herrmann M, Leitmann W, Schwartlander B & Kalden J R (1990) Klin. Wochenschr. 68, 299

Genetic variability of hepatitis-B virus and the serological expression of the viral infection
Kremsdorf D & others (1990) M/S Med. Sci. 6, 108

Retroviruses and autoimmunity
Krieg A M & Steinberg A D (1990) J Autoimmun 3, 137
HIV DNA integration: observations and inferences
Kulkosky J & Skalka A M (1990) J. Acq. Immun. Defic. Syndrome, 3, 839

Does HIV cause AIDS — an updated response to Duesberg's theories [Minireview]
Kurth R (1990) Interferonology, 31, 301

Viruses as transneuronal tracers
Kaypers H G J M & Ugolini G (1990) Trends Neurosci. 13, 71

Coronavirus: organization, replication and expression of genome
Iasi M C (1990) Annu Rev Microbiol. 44, 303

Application of flow cytometry to the study of HIV infection [Editorial review]
Landay A, Ohlssonwilhelm B & Giorgi J V (1990) AIDS, 4, 479

Molecular biology of herpes simplex virus latency
Latchman D S (1990) J Exp Path. 71, 133

Novel vaccination and antireceptor strategies against HIV
Laurence J (1990) AIDS Res. Hum. Retrovirus. 6, 175

Retroviral-mediated gene transfer into the hematopoietic tissue in vivo [In French; English abstract]
Lellin P (1990) M/S Méd. Sci. 6, 791

Mapping of viral epitopes with prokaryotic expression products [Brief review]
Lenstra J A, Kusters J G & Van der Zeijst B A M (1990) Arch Virol. 110, 1

The recognition event between virus and host cell receptor — a target for antiviral agents
Lentz T L (1990) J Gen. Virol. 71, 751

Immunologic and pathologic manifestations of the infection of Rhesus monkeys with simian immunodeficiency virus of macaques
Levin N L & King N W (1990) J. Acq. Immun. Defic. Syndrome, 3, 1023

The p31 protein and its interactions with the oncogene products of the small DNA tumor viruses [Minireview]
Levine A J (1990) Virology, 177, 419

Changing concepts in HIV infection — challenges for the 1990s [Editorial review]
Levy J A (1990) AIDS, 4, 1051

Retroviruses and human mammary gland cancer
Litvinov V S & V (1990) Vopr. Virusol. 35, 8

Organic mental disorders in HIV-1 infection [Editorial review]
Maj M (1990) AIDS, 4, 831

Review. Chromatographic and non-chromatographic assays of l-carnitine family components
Marzo A, Cardace G, Monti N, Muck S & Martelli E A (1990) J Chromatogr. Biomed. Appl 527, 247

Interferons, interleukins, virus-host interactions — relation to leukotrienes and other lipoxxygenase derivatives of the arachidonic acid
Mayer M (1990) Acta Virol. 34, 99

Efficacy of cytotoxic T lymphocytes against virus-induced tumors
Melef C J M & Kast W M (1990) Cancer Cells, 2, 116

Role of mononuclear phagocytes in the pathogenesis of human immunodeficiency virus infection
Meltzer M S, Skillman D R, Gomatos P J, Kalter D C & Gendelman H E (1990) Annu. Rev. Immunol. 8, 169

Hepatitis-B — aspects of research [In Russian]
Mikhailov M I (1990) Vopr. Virusol. 35, 279

Retrovirus packaging cells
Miller A D (1990) Hum. Gene Ther. 1, 5

Nuclear medicine and AIDS
Miller R F (1990) Eur. J. Nucl. Med. 16, 103

Effect of human immunodeficiency virus (HIV) infection on the course of syphilis and on the response to treatment
Musher D M, Hamill R J & Baughn R E (1990) Ann. Int. Med. 113, 872

Current status of clinical laboratory tests for the human immunodeficiency virus
Nakamura R M, Bylund D J & Rooney K E (1990) J. Clin. Lab. Anal 4, 295

Reproductive immunology of human immunodeficiency virus (HIV-1) infection — review
Naz R K & Ellaurie M (1990) Ant. J. Reprod Immunol. 23, 107

Role of opportunistic viral infections in AIDS [Editorial review]
Nelson J A, O'Gara P & Wiley C A (1990) AIDS, 4, 1

Mechanisms of viral-mediated trans-activation of transcription
Nejins J R (1989) Advan. Virus Res 37, 35

Human immunodeficiency virus antibody responses determined by site-directed serology [Minireview]
Norrby E (1990) Interferonology, 31, 315

The structural organization of viruses, members of Baculoviridae family [In Russian]
Obukhov M L (1990) Vopr. Virusol. 35, 356

The role of tumor necrosis factor-α in acquired immunodeficiency syndrome
Odeh M (1990) J. Intern. Med. 228, 259

Relationship between the prostaglandin cascade and virus infection
Ongradi J & TELEKES A (1990) Acta Virol. 34, 380

Proteolytic processing of picornaviral polyprotein
Palmenberg A C (1990) Annu. Rev. Microbiol. 44, 603

Cell-mediated immunity in experimental cytomegalovirus infections. a perspective
Pasternack M S, Medearis D N jr & Rubin R H (1990) Rev. Infect. Dis. 12, Suppl. 7, S720

Viruses of protozoan parasites [Minireview]
Patterson J L (1990) Exp. Parasitol. 70, 111

Molecular mechanisms of action of ribavirin
Patterson J L & Fernandezlarsson R (1990) Rev. Infect. Dis. 12, 1139

Molecular interactions between HIV and the lymphocyte-T
Phillips R E (1990) Biochem. Biophys. Acta. 1066, 11

Lymphocyte subsets and abnormalities in retrovirally infected mice
Popp D M (1990) Crit. Rev. Immunol. 10, 73

The replication functions of SV40 T antigen are regulated by phosphorylation [Minireview]
Prives C (1990) Cell, 61, 735–738

Liposomes in experimental virology [In Russian]
Pshenichnov V A, Kharitonov R A & Koloskov A V (1990) Vopr. Virusol. 35, 4

Flow cytometry in virological studies [In Russian]
Pshenichnov V A, Lymar V T, Yalyshev M R & Pshenichnov A V (1990) Vopr. Virusol. 35, 279

Molecular biology of hepaviruses
Pugh J C & Bassendine M F (1990) Br. Med. Bull. 16, 429

Anticancer and antiviral activities in Indian medicinal plants: a review
Rastogi R P & Dhawan B N (1990) Drug Dev. Res. 19, 1

Immune suppression by herpesviruses
Rinaldo C R jr (1990) Annu. Rev. Med. 41, 331
CD4: Collaborator in immune recognition and HIV infection [Minireview]
Robey E & Axel R (1990) Cell, 60, 697–700
Recent advances in hepatitis-B viruses and hepatocellular carcinoma [Meeting review]
Rogler C E (1990) Cancer Cells, 2, 366
Oncosuppression by paroviruses [In French; English abstract]
RomeroF U (1990) MUS Med Sci, 6, 534
Tat and rev — positive regulators of HIV gene expression [Editorial review]
Rosen C A & Pavlakis G N (1990) AIDS, 4, 499
Invertrons, a class of structurally and functionally related genetic elements that includes linear DNA plasmids, transposable elements, and genomes of adenovirus-type viruses
Sakaguchi K (1990) Microbiol. Rev. 54, 66–74
Expression of animal and human retroviral gene products in Escherichia coli with the AP promoter pJL6 vector system
Samuel K P & others (1990) Genet Anal. 7, 178
Integration specificity of retrotransposons and retroviruses
Sandmeyer S B, Hansen L J & Chalker D L (1990) Annu. Rev. Genet. 24, 49
Virus-induced autoimmunity
Schattner A & Rager-Zisman B (1990) Rev. Infect. Dis. 12, 204
Hepatitis-B virus related hepatocellular carcinoma — chronicity of infection — the opening to different pathways of malignant transformation
Schröder C H Zentgraf H (1990) Biochim. Biophys. Acta, 1032, 137
Eastern equine encephalomyelitis virus — epidemiology and evolution of mosquito transmission
Scott T W & Weaver S C (1989) Advan. Virus Res. 37, 277
Recent advances in hepatitis-A vaccine development
Siegl G & Lemon S M (1990) Virus Res. 17, 75
The pathobiology of HIV infection — a review
Smith R D (1990) Arch. Path. Lab. Med. 114, 235
Control of papillomavirus gene expression
Sousa R, Dostatni N & Yaniv M (1990) Biochim. Biophys. Acta, 1032, 19
Animal cytomegaloviruses
Stacek R (1990) Microbiol. Rev. 54, 747–765
Structure, function and evolution of picornaviruses
Stanway G (1990) J. Gen. Virol. 71, 2483
Cellular immortalization — an essential step or merely a risk factor in DNA virus-induced transformation
Struss M & Griffin B E (1990) Cancer Cells, 2, 360
The role of vitamin D in bone and intestinal cell differentiation
Suda T, Shinki T & Takahashi N (1990) Annu. Rev. Nutr. 10, 195
Basic concepts and practical applications of recombinant DNA techniques in detection of human papillomavirus (HPV) infections
Syrijänen S M (1990) APMTS, 98, 95
Poxvirus-based vectors as vaccine candidates
Tartaglia J, Pincus S & Paolelli E (1990) Crit. Rev. Immunol. 10, 13
Recent progress in interferon research: molecular mechanisms of regulation, action, and virus circumvention
Taylor J L & Grossberg S E (1990) Virus Res. 15, 1
Hepatitis delta virus: cis and trans functions required for replication [Minireview]
Taylor J M (1990) Cell, 61, 371–373
Poxviruses: an emerging portrait of biological strategy [Meeting review]
Traktman P (1990) Cell, 62, 621–626
Identification of hepatitis-C virus (HCV) does represent a major breakthrough for public health
Trepo C (1990) MUS Med. Sci. 6, 98
The Paramyxoviridae — aspects of molecular structure, pathogenesis, and immunity
Vainionpaa R, Marusyk R & Salmi A (1989) Advan. Virus Res. 37, 211
Tumorigenesis by slow-transforming retroviruses — an update
Vanhouzen M & Berns A (1990) Biochim. Biophys. Acta. 1032, 213
Retroviruses and oncogenes. 1
Varmus H E (1990) Angew. Chem. 29, 707
Nobel Lecture: Retroviruses and oncogenes-1
Varmus H E (1990) Biosci. Rep. 10, 413
Cytotoxic T lymphocytes against HIV [Editorial review]
Walker B D & Plata F (1990) AIDS, 4, 177
Viruses and autoimmunity
Weetman A P & Borsywiecz L K (1990) Autoimmunity, 5, 277
Transforming properties of the HTLV-I tax gene
Weiss R A & Schulz T F (1990) Cancer Cells, 2, 281
Viral and cellular membrane fusion proteins
White J M (1990) Annu. Rev. Physiol. 52, 675
Parasitoids, polydnaviruses and endosymbiosis
Whitelield J B (1990) Parasitol. Today, 6, 381
Expression of introduced genetic sequences in hematopoietic cells following retroviral-mediated gene transfer
Williams D A (1990) Hum. Gene Ther. 1, 229
Structural basis of immune recognition of influenza virus hemagglutinin
Wilson I A & Cox N J (1990) Annu. Rev. Immunol. 8, 737
Activation of human immunodeficiency virus by ultraviolet radiation
Zmudzka B Z & Beer J Z (1990) Photochem. Photobiol. 52, 1153

VISION
See: SENSORY SYSTEMS

VITAMINS AND COENZYMES
Nutritional significance of factors affecting carnitine dependent transport of fatty acids in neonates — a review
Atkins J & Claudinin M T (1990) Nutr. Res. 10, 117
Cobalamin-dependent methionine synthase
Banerjee R V & Matthews R G (1990) FASEB J. 4, 1450
The participation of coenzyme-Q in free radical production and antioxidation
Beyer R E (1990) Free Radical Biol. Med. 8, 545
Absorption, transport and distribution of vitamin E
Björnboe A, Björnboe G-E A & Drevon C A (1990) J. Nutr. 120, 731
Uptake of chylomicron remnant retinyl ester via the low density lipoprotein receptor — implications for the role of vitamin-A as a possible preventive for some forms of cancer
Blomhoff R, Skrede B & Norum K R (1990) J. Intern. Med. 228, 207
Microbial processes for ascorbic acid biosynthesis: a review
Boudrant J (1990) Enzyme Microb. Technol. 12, 322
Review — Induction of drug-metabolizing enzymes by xenobiotics
Bock K W, Lipp H P & Bockhennig B S (1990) Xenobiotica, 20, 1101

Interactions of xenobiotics in the respiratory tract following non-inhalation routes of exposure
Brittos E B & Brandt I (1990) Int. J. Epidemiol. 19, Suppl. 1, S24

A review of recent studies on the metabolism of exogenous and endogenous malondialdehyde
Draper H H & Hadley M (1990) Xenobiotica, 20, 901

Prostaglandins H synthase and xenobiotic oxidation
Eling T E, Thompson D C, Foureman G L, Curtis J F & Hughes M F (1990) Annu. Rev. Pharmacol. Toxicol. 30, 1-45

Enzymatic oxidation of xenobiotic chemicals
Gversch F F (1990) Crit. Rev. Biochem. Mol. Biol. 25, 97

Metabolism and toxicity of xenobiotics in the adrenal cortex, with particular reference to 7,12-dimethylbenz(a)anthracene
Hallberg E (1990) J. Biochem. Toxicol. 5, 71

Nutritional modulation of xenobiotic metabolism
Hart R W & others (1990) J. Nutr. Biochem. 1, 396

Catabolism of xenobiotics
Kao J & Carver M P (1990) Drug Metab. Rev. 22, 363

Prediction of xenobiotic metabolism by non-invasive methods
[Vinireview]
Loft S & Poulsen H E (1990) Pharmacol. Toxicol. 67, 101

An introduction to the study of xenobiotic metabolism using electroanalytical techniques
Lunte S M, Radzik D M & Kissing P T (1990) J. Pharmaceut. Sci. 79, 557

The biodegradation of halogenated organic compounds
Neilson A H (1990) J. Appl. Bact. 69, 445

Human placental xenobiotic and steroid biotransformations catalyzed by cytochrome P450, epoxide hydrolase, and glutathione S-transferase activities and their relationships to maternal cigarette smoking
Pasen M & Pelkonen O (1990) Drug Metab. Rev. 21, 427

Glutathione S-transferases in relation to their role in the biotransformation of xenobiotics
Vos R M E & Bladeren P J van (1990) J. Biol. Chem. 265, 14057

Yeast as a model system for understanding the control of DNA replication in eukaryotes
Bartlett R & Nurse P (1990) BioEssays. 12, 457

Centromeres of budding and fission yeasts
Clarke L (1990) Trends Genet. 6, 150

Control of mitochondrial gene expression in Saccharomyces cerevisiae
Costenko M C & Fox T D (1990) Annu. Rev. Genet. 24, 91

Symposium on Developmental Biology. Laramme, CO, March 12-19, 1989/Symposium on Molecular and Cellular Biology of Yeasts and Filamentous Fungi. Steamboat Spring, CO, April 3-9, 1989
Davidson E H, Ruderman J V & Posakony J W, eds (1990) UCLA Symp. Mol. Cell. Biol. NS, 125, 388 pp.

Actin and actin-binding proteins in yeast
Drubin D G (1990) Cell Motil. Cytoiskel. 15, 7

Sexual differentiation in fission yeast
Egel R, Nielsen O & Weigulyn D (1990) Trends Genet. 6, 369

Pheromone response in yeast
Fields S (1990) Trends Biochem. Sci. 15, 270

Yeasts in dairy products
Fleet G H (1990) J. Appl. Bact. 68, 199

Cell fates in C. elegans — in medias res
Greenwald I & Broach J R (1990) Cell, 63, 1113-1116

The role of PSO and SNM genes in DNA repair of the yeast Saccharomyces cerevisiae
[Minireview]

Henriques J A P & Brendel M (1990) Curr. Genet. 18, 387

Aging and senescence of the budding yeast Saccharomyces cerevisiae
[J Microreview]

Jazwinski S M (1990) Mol. Microbiol. 4, 379

Laboratory diagnosis of invasive candidiasis
Jones J M (1990) Clin. Microbiol. Rev. 3, 52-45

Impact of physiological body’s status on mutagenic activity of drugs and other xenobiotics
[In Russian]

Zolotareva G N, Radchenko L U, Loginova N S & Faddeeva I N (1990) Khiim. Farm. Zh. SSSR, 24, No. 12, 4

YEASTS

Liposomal amphotericin-B as a therapeutic measure to control experimental aspergillosis in BALB/c mice
Ahmad I, Sankai A K & Bachhawat B K (1990) Ind. J. Biochem. Biophys. 27, 370

Molecular analysis of the REV2 gene of Saccharomyces cerevisiae — a review. Paper presented at a meeting on DNA Repair Network — Molecular Radiation Biology, Munchen–Neuerberg, March 21-23, 1990
Ahne F, Wendel S & Eckardt-Schupp F (1990) Radiat. Environ. Biophys. 29, 703

Respiratory efficiency and metabolite partitioning as regulatory phenomena in yeasts
Alexander M A & Jeffries T W (1990) Enzyme Microb. Technol. 12, 2

Regulation of cell cycle-dependent gene expression in yeast
[Minireview]
Andrews B J & Herskowitz I (1990) J. Biol. Chem. 265, 14057
Yeast artificial chromosomes — tools for mapping and analysis of complex genomes
Schlessinger D (1990) Trends Genet. 6, 248

The yeast microtubule cytoskeleton: genetic approaches to structure and function
Stearns J (1990) Cell Motil. Cytoskel. 15, 1

An element of symmetry in yeast TATA-box binding protein transcription factor IID — consequence of an ancestral duplication?
Stucka R & Feldmann H (1990) FEBS Lett. 261, 223

PET genes of Saccharomyces cerevisiae
Tzagoloff A & Dieckmann C L (1990) Microbiol. Rev. 54, 211–225

The yeast phosphatase system [Microreview]
Vogel K & Hinnen A (1990) Mol. Microbiol. 4, 201

Reductive biotransformations of organic compounds by cells or enzymes of yeast
Ward O P & Young C S (1990) Enzyme Microb. Technol. 12, 482

Regulation of sugar and ethanol metabolism in Saccharomyces cerevisiae
Wills C (1990) Crit. Rev. Biochem. Mol. Biol. 25, 245

How does the end begin? Formation and maintenance of telomeres in ciliates and yeast
Zakian V A, Runge K & Wang S S (1990) Trends Genet. 6, 12