Recent References on Wound Healing Studies
Using ALZET® Osmotic Pumps

Q10288: A. Nolze, et al. Calcineurin (PPP3CB) regulates angiotensin II-dependent vascular remodelling by potentiating EGFR signalling in mice. Acta Physiologica 2021;233(3):e13715

**Agents:** Angiotensin II  **Vehicle:** Not Stated  **Route:** SC  **Species:** Mice  **Pump:** Not Stated  **Duration:** 28 days;

**ALZET Comments:** Dose: (500 ng/kg/min); Controls received mp w/ vehicle; animal info: Wildtype (WT) and PPP3CB KO mice, 5-month-old male mice; Blood pressure measured via: tail-cuff; Angiotensin II aka (Ang II); Cardiovascular

Q10317: H. Huang, et al. Liraglutide via Activation of AMP-Activated Protein Kinase-Hypoxia Inducible Factor-1alpha-Heme Oxygenase-1 Signaling Promotes Wound Healing by Preventing Endothelial Dysfunction in Diabetic Mice. Frontiers in Physiology 2021;12(660263

**Agents:** Liraglutide; Compound C; 2-methoxyestradiol  **Vehicle:** Saline;  **Route:** SC  **Species:** Mice  **Pump:** 1002  **Duration:** 4 weeks;

**ALZET Comments:** Dose: Lira (200 μg/kg/day); Cpd C (1.5 mg/kg/day); 2-ME (40 mg/kg/day); Controls received mp w/ vehicle; animal info: 8-week-old mice Diabetic db/db mice; Liraglutide aka (Lira); Liraglutide is a GLP-1 Receptor Agonist; Cpd C aka (Compound C); 2-ME aka 2-methyoxyestradiol is an inhibitor of Hif-1a; dependence;

Q9913: D. Yan, et al. Bazedoxifene Attenuates Abdominal Aortic Aneurysm Formation via Downregulation of Interleukin-6/Glycoprotein 130/Signal Transducer and Activator of Transcription 3 Signaling Pathway in Apolipoprotein E-Knockout Mice. Frontiers in Pharmacology 2020;11(392

**Agents:** Angiotensin II; Bazedoxifene  **Vehicle:** Saline; PBS;  **Route:** SC  **Species:** Mice  **Pump:** 2004  **Duration:** 28 days;

**ALZET Comments:** Dose (1000 ng/kg/min); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (8-week-old male apolipoprotein-E-deficient mice); Angiotensin II aka AngII, Bazedoxifene aka GAZ; cardiovascular;

Q9978: A. Szeto, et al. Oxytocin reduces adipose tissue inflammation in obese mice. Lipids in Health and Disease 2020;19(1):188

**Agents:** Oxytocin  **Vehicle:** Sodium Citrate;  **Route:** SC  **Species:** Mice  **Pump:** 1004  **Duration:** 8 weeks;

**ALZET Comments:** Dose (4.22 μg/day); Controls received mp w/ vehicle; animal info (Male, C57BLKS/J); pumps replaced every 6 weeks; immunology;

Q8655: Y. Matsuda, et al. NFE2L2 activator RS9 protects against corneal epithelial cell damage in dry eye models. PLoS One 2020;15(4):e0229421

**Agents:** Scopolamine  **Vehicle:** Not Stated;  **Route:** SC  **Species:** Rat  **Pump:** Not stated  **Duration:** 3 days;

**ALZET Comments:** Dose (12.5 mg/day); animal info (Sprague-Dawley rats); dependence;

Q8627: J. Leslie, et al. FPR-1 is an important regulator of neutrophil recruitment and a tissue-specific driver of pulmonary fibrosis. JCI Insight 2020:2020(5):4;

**Agents:** Antibody, Ly6G; Antibody, IgG2a  **Vehicle:** Not stated;  **Route:** SC  **Species:** Mice  **Pump:** 2004; 1007D  **Duration:** 21 days; 1 day;

**ALZET Comments:** Dose (28.5 μg/ mouse/d; 57 μg/mouse/d); animal info (C57BL/6 and fpr1–/– mice (male, 8–10 weeks old)); Ly6G Antibody aka 2A3; IgG2a Antibody aka 1A8; immunology;

Q9078: D. Sun, et al. cJun/Ap1 is upregulated in an Ang IIinduced abdominal aortic aneurysm formation model and mediates Chop expression in mouse aortic smooth muscle cells. Molecular Medicine Reports 2019;19(5):3459-3468

**Agents:** Angiotensin II  **Vehicle:** Saline;  **Route:** SC  **Species:** Mice  **Pump:** 2004  **Duration:** 4 weeks;

**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (C57BL/6, Male, 20 g, 10 weeks old); cardiovascular;
Q8366: H. M. Perry, et al. Perivascular CD73(+) cells attenuate inflammation and interstitial fibrosis in the kidney microenvironment. Am J Physiol Renal Physiol 2019;317(3):F658-F669
Agents: CD73 Vehicle: Saline; Route: SC; Species: Mice; Pump: Not stated; Duration: #REF!
ALZET Comments: Dose (250 mg/kg); Controls received mp w/ vehicle; animal info (Male, 8-12 weeks old, 18-25 g); CD73 aka 5' nucleotidase; ischemia (Ischemia-reperfusion injury);

Q8263: X. Liu, et al. Sensory nerve-derived neuropeptides accelerate the development and fibrogenesis of endometriosis. Hum Reprod 2019;34(3):452-468
Agents: Aprepitant Vehicle: Saline; Route: SC; Species: Mice; Pump: 1004; Duration: 4 weeks;
ALZET Comments: Dose (1 mg/kg/day); Controls received mp w/ vehicle; animal info (Female, 7 weeks old, Balb/C);

Q8259: M. L. Lindsey, et al. Exogenous CXCL4 infusion inhibits macrophage phagocytosis by limiting CD36 signalling to enhance post-myocardial infarction cardiac dilation and mortality. Cardiovasc Res 2019;115(2):395-408
Agents: CXCL4 Vehicle: Saline; Route: SC; Species: Mice; Pump: Not stated; Duration: 24 hours;
ALZET Comments: Dose (2.5, 5, 25, or 50 ug/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6J, 3-6 months old);

Q8258: Y. T. Lin, et al. Cordycepin Suppresses Endothelial Cell Proliferation, Migration, Angiogenesis, and Tumor Growth by Regulating Focal Adhesion Kinase and p53. Cancers (Basel) 2019;11(2):
Agents: Cordycepin Vehicle: DMSO; Route: SC; Species: Mice; Pump: Not stated; Duration: 7 days;
ALZET Comments: Dose (2.4 mg/kg/day); Controls received mp w/ vehicle; animal info (BALB/c, ); dependence;

Q7343: X. Huang, et al. Resveratrol Promotes Diabetic Wound Healing via SIRT1-FOXO1-c-Myc Signaling Pathway-Mediated Angiogenesis. Front Pharmacol 2019;10(421
Agents: EX-527; 10068-F4 Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 2006; Duration: 5 weeks;
ALZET Comments: Dose ( EX-527 5 mg/kg/day, 10068-F4 30mg/kg/day ); Controls received mp w/ vehicle; animal info (BKS.Cg-Dock7mC=CLeprdb=J mice, 8 weeks old); enzyme inhibitor (EX-527 is an SIRT1 inhibitor, 10058-F$ is a c-Myc inhibitor); diabetes;

Q8188: E. P. Daskalopoulos, et al. The Beneficial Effects of UM206 on Wound Healing After Myocardial Infarction in Mice Are Lost in Follow-Up Experiments. Front Cardiovasc Med 2019;6(118
Agents: Peptide Fragment of Wnt5a Vehicle: Saline; Route: SC; Species: Mice; Pump: 2001; 2002; Duration: 7 days; 14 days;
ALZET Comments: Dose (0.2 ug/kg/day; 2ug/kg/day; 20 ug/kg/day); animal info (Adult Lewis rats 270–335 g); six amino acid chloromethyl-ketone aka SIXAC; enzyme inhibitor (SIXAC inhibit thrombin); ALZET brain infusion kit used; Brain coordinates (1mm lateral × 3mm posterior to the Bregma, 5.5mm deep); MRI;
Q7251: J. H. Park, et al. TAK-733 inhibits inflammatory neointimal formation by suppressing proliferation, migration, and inflammation in vitro and in vivo. Experimental & Molecular Medicine 2018;50(4):37
Agents: Angiotensin II Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2004; Duration: 2 Weeks;
ALZET Comments: Dose (500 ng/kg/min); Controls received mp w/ saline; animal info (Male Sprague-Dawley rats weighing 250-300 g); cardiovascular;

Q8105: E. J. Macarak, et al. Trametinib prevents mesothelial-mesenchymal transition and ameliorates abdominal adhesion formation. J Surg Res 2018;227(198-210
Agents: Trametinib Vehicle: DMSO; Route: SC; Species: Mice; Pump: 1002; Duration: 8 days;
ALZET Comments: Dose (0.1, 1, or 3 mg/kg); Controls received mp w/ vehicle; animal info (C57BL/6, 18-25 g, 8-10 weeks old);

Q7223: J. Lu, et al. CIC-2 knockdown prevents cerebrovascular remodeling via inhibition of the Wnt/beta-catenin signaling pathway. Cellular & Molecular Biology Letters 2018;23(29
Agents: Angiotensin II Vehicle: Saline; Route: SC; Species: Mice; Pump: 1002; Duration: Not Stated;
ALZET Comments: Dose (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info (Male, 12 weeks old, 20-25 g, C57BL/6); gene therapy;

Q7769: F. Kurosaki, et al. AAV6-Mediated IL-10 Expression in the Lung Ameliorates Bleomycin-Induced Pulmonary Fibrosis in Mice. Human Gene Therapy 2018;29(11):1242-1251
Agents: bleomycin Vehicle: Saline, sterile; Route: SC; Species: Mice; Pump: 2001; Duration: 7 days;
ALZET Comments: Dose (1 μL/h of 125 mg/kg bleomycin); Controls received no vector and mp w/ vehicle; animal info (10-12 weeks, male, C57BL6/J, 25-30g); immunology;

Q7078: N. Kumar, et al. Thymosin beta4 Deficiency Exacerbates Renal and Cardiac Injury in Angiotensin-II-Induced Hypertension. Hypertension 2018;71(6):1133-1142
Agents: Angiotensin II Vehicle: Saline; Acetic acid; Route: SC; Species: Mice; Pump: Not Stated; Duration: 6 weeks;
ALZET Comments: Dose (980 ng/kg/min); animal info (10-12 week old C57BL/6 and TBeta4 KO mice); cardiovascular;

Q7768: S. Kim, et al. Acupuncture Resolves Persistent Pain and Neuroinflammation in a Mouse Model of Chronic Overlapping Pain Conditions. J Pain 2018;19(12):1384 e1-1384 e14
Agents: Dinitrocatechol, 3,5- Vehicle: saline, DMSO and ethanol buffered; Route: SC; Species: Mice (adult); Pump: 1002; Duration: 13 days;
ALZET Comments: Dose (15 mg/kg/d); 5:2:3 ratio of DMSO, ethanol and saline used; Controls received mp w/ vehicle; animal info (12-16 weeks, male and female, C57BL6/J, 25-30g); behavioral testing (von Frey test); comparison of accupuncture vs mp; 3,5-Dinitrocatechol AKA OR486 is a COMT inhibitor; enzyme inhibitor (catechol-O-methyltransferase);

Q6934: F. Forini, et al. Integrative analysis of differentially expressed genes and miRNAs predicts complex T3-mediated protective circuits in a rat model of cardiac ischemia reperfusion. Sci Rep 2018;8(1):13870
Agents: THyroid hormone Vehicle: Saline; Route: SC; Species: Rat; Pump: 2ML4; Duration: Not Stated;
ALZET Comments: Dose (3 μg/kg/day); Controls received mp w/ vehicle; cardiovascular;

Q7124: M. Cusimano, et al. Selective killing of spinal cord neural stem cells impairs locomotor recovery in a mouse model of spinal cord injury. J Neuroinflammation 2018;15(1):S8
Agents: Ganciclovir Vehicle: Water; Route: SC; Species: Mice; Pump: 2002; Duration: 28 days;
ALZET Comments: Dose (100 mg/kg/day); animal info (NestinTK); pumps replaced every 2 weeks; neurodegenerative (Spinal Chord);

Q8179: S. Cechova, et al. MYH9 E1841K Mutation Augments Proteinuria and Podocyte Injury and Migration. J Am Soc Nephrol 2018;29(1):155-167
Agents: Angiotensin II Vehicle: Not stated; Route: SC; Species: Mice; Pump: 2004; Duration: 4 weeks;
ALZET Comments: Dose (Ang II 1000 ng/kg per minute); animal info (E1841K mutation); diabetes;
Q5725: S. Zhao, et al. Tetramethylpyrazine attenuates carbon tetrachloride-caused liver injury and fibrogenesis and reduces hepatic angiogenesis in rats. Biomedicine & Pharmacotherapy 2017;86(5):521-530

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Rat; **Pump:** 2004, 2ML4; **Duration:** 5 weeks;

**ALZET Comments:** Controls received mp w/ saline; animal info (male, Sprague Dawley, 180-220g); cardiovascular; peptides; Dose (25 ug/kg/hr);

Q5739: J. Raber, et al. Mitigating effect of EUK-207 on radiation-induced cognitive impairments. Behavioural Brain Research 2017;320(4):457-463

**Agents:** EUK-207 **Vehicle:** Water; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** Not Stated;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (2 months old); behavioral testing (Morris Water Maze, Fear Conditioning); EUK-207 is a catalytic ROS scavenger; Therapeutic indication (Hippocampus, hippocampal injury, cognitive impairment); Dose (0.2 mg/kg/day);

Q5111: W. Zhang, et al. Targeting of Survivin Pathways by YM155 Inhibits Cell Death and Invasion in Oral Squamous Cell Carcinoma Cells. Cellular Physiology and Biochemistry 2016;38(6):2426-37

**Agents:** YM155 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 7 days;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (female, nude, 5 weeks old); cancer (Oral squamous cell carcinoma SCC9); Dose (5 mg/kg/day); xenograph model;

Q4902: C. Weber, et al. Macrophage Infiltration and Alternative Activation during Wound Healing Promote MEK1-Induced Skin Carcinogenesis. Cancer Research 2016;76(4):805-817

**Agents:** arginine, N(omega)-hydroxy-nor-l **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 33 days;

**ALZET Comments:** animal info (InvEE); functionality of mp verified by plasma levels; stress/adverse reaction: (see pg. 811); stability verified by (10 days see pg 811); immunology; “Continuous dosing at a rate of 0.25 mL per hour ensured constant compound levels. Successful ARG1 inhibition was confirmed in blood plasma and wounded skin samples taken 5 days after implantation” pg 811; nor-NOHA aka N(omega)-hydroxy-nor-l-arginine;

Q6648: M. Rauner, et al. Increased EPO Levels Are Associated With Bone Loss in Mice Lacking PHD2 in EPO-Producing Cells. J Bone Miner Res 2016;31(10):1877-1887

**Agents:** Erythropoietin, recomb. human **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice (knockout); Mice (transgenic); **Pump:** Not Stated; **Duration:** 30 days;

**ALZET Comments:** Dose (3 U EPO/day or 10 U EPO/day ); Controls received mp w/ vehicle or control antibody; animal info (8-12 week old WT and Osx:cre-PHD2f/f and Vav:cre-PHD2f/f mice);

Q5171: S. Okizaki, et al. Vascular Endothelial Growth Factor Receptor Type 1 Signaling Prevents Delayed Wound Healing in Diabetes by Attenuating the Production of IL-1beta by Recruited Macrophages. American Journal of Pathology 2016;186(6):1481-98

**Agents:** Placenta growth factor, recombinant human **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** Controls received mp w/ vehicle or control antibody; animal info (male, C57BL6, 8 weeks old, STZ); immunology; diabetes; Dose (PIGF 10 ug/mouse; anti-IL-1B 1 ug/day);

Q6632: G. Nicolini, et al. Early and Short-term Triiodothyronine Supplementation Prevents Adverse Postischemic Cardiac Remodeling: Role of Transforming Growth Factor-beta1 and Antifibrotic miRNA Signaling. Mol Med 2016;21(1):900-911

**Agents:** Triiodothyronine **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 48 hours;

**ALZET Comments:** Dose (6 mg/kg/day); Controls received mp w/ vehicle; animal info (adult male Wistar rats weighing 385 ± 9 g); Triiodothyronine aka T3; cardiovascular;
Q5578: S. E. Thatcher, et al. Exogenous 17-beta estradiol administration blunts progression of established angiotensin II-induced abdominal aortic aneurysms in female ovariectomized mice. Biology of Sex Differences 2015;6(12)

Agents: Angiotensin II Vehicle: Not Stated; Route: Not Stated; Species: Mice; Pump: 1004; Duration: 3 months;

ALZET Comments: Controls received mp w/ vehicle; animal info (Female low-density lipoprotein-receptor-deficient (Ldlr−/−) mice on a C57BL/6 background; 2–3 months of age); functionality of mp verified by ; long-term study; pumps replaced every 4 weeks; Dose (1000 ng/kg/min);

Q4028: S. Okizaki, et al. Suppressed recruitment of alternatively activated macrophages reduces TGF-beta1 and impairs wound healing in streptozotocin-induced diabetic mice. Biomedicine & Pharmacotherapy 2015;70(317-325)

Agents: Transforming growth factor-B1 Vehicle: PBS; Route: SC; Species: Mice; Pump: 1007D; Duration: 7 days;

ALZET Comments: Controls received mp w/ vehicle; animal info (male, C57Bl6, 8 weeks old, diabetes induced STZ); immunology; diabetes;

Q5167: G. Nicolini, et al. Early and short-term triiodothyronine supplementation prevents adverse post-ischemic cardiac remodeling: role of transforming growth factor-beta1 and anti-fibrotic miRNA signaling. Mol Med 2015;

Agents: Triiodothyronine Vehicle: Saline; Route: SC; Species: Rat; Pump: 2002; Duration: 3 days;

ALZET Comments: Controls received mp w/ vehicle; animal info (male, Wistar, adult, 385+/−9 g); functionality of mp verified by serum levels; cardiovascular; pumps removed after 3 days; Dose (6 ug/kg/day);

Q3977: Y. C. Lim, et al. Proinsulin C-Peptide Prevents Impaired Wound Healing by Activating Angiogenesis in Diabetes. Journal of Investigative Dermatology 2015;135(269-278)

Agents: C-peptide Vehicle: PBS; Route: SC; Species: Mice; Pump: 2004; Duration: 2 weeks;

ALZET Comments: Controls received sham surgery; animal info (male, C57BL6J, 6 weeks old, streptozotocin induced diabetes); cardiovascular; peptides; diabetes;

Q3960: J. Y. Lee, et al. Simultaneous Inferior Alveolar Nerve Regeneration and Osseointegration With a Nerve Growth Factor-Supplying Implant: A Preliminary Study. Journal of Oral and Maxillofacial Surgery 2015;73(410-423)

Agents: Nerve growth factor, human B- Vehicle: PBS; Route: CSF/CNS (inferior alveolar nerve); Species: Dog (beagle); Pump: 2ML2; Duration: 6 weeks;

ALZET Comments: Controls received mp w/ vehicle; animal info (male, beagle, 18 weeks old, 10-12 kg); good methods (picture of implant pg 413); Multiple pumps per animal (2; one pump delivered NGF other delivered PBS); used rat jugular catheter, 15 cm long; pump body placed into retromandibular area; long-term study;

Q4329: J. C. Bihl, et al. Angiotensin-(1-7) counteracts the effects of Ang II on vascular smooth muscle cells, vascular remodeling and hemorrhagic stroke: Role of the NFKappaB inflammatory pathway. VASCULAR PHARMACOLOGY 2015;73(115-123)

Agents: Angiotensin II; angiotensin (1-7); A-779 Vehicle: Not Stated; Route: IP; Species: Mice; Pump: 1004; Duration: 4 weeks;

ALZET Comments: Controls received mp w/ vehicle; animal info (C57BL6, 8-10 weeks old, 25-32g); ischemia (cerebral); behavioral testing (gait, circling/climbing behavior, body and front limb symmetry, compulsory circling); cardiovascular; peptides; bp measured using radiotelemetry (DSI); pumps primed for 48h at 37C sterile isotonic saline; used IP catheter; "Ang II and Ang-(1–7) infusions led to a significant increase in plasma Ang II and Ang-(1–7) levels,which indicate the success of minipump infusions"

Q4295: A. Aguado, et al. HuR mediates the synergistic effects of angiotensin II and IL-1 on vascular COX-2 expression and cell migration. British Journal of Pharmacology 2015;172(3028-3042)

Agents: Angiotensin II Vehicle: Saline; Route: SC; Species: Mice; Pump: Not Stated; Duration: 2 weeks;

ALZET Comments: Controls received mp w/ vehicle; animal info (male, C57BL6J); cardiovascular; peptides;

Q4213: A. Yoshii, et al. Role of Uterine Contraction in Regeneration of the Murine Postpartum Endometrium. Biology of Reproduction 2014;91(U48-U57)

Agents: Ritodrine hydrochloride Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: Not Stated;

ALZET Comments: Controls received mp w/ saline; animal info (female, ICR, 8-10 weeks old, pregnant, GD18-19, ovariectomy); cardiovascular; immunology; ritodrine is a B-2 adrenergic receptor agonist;
Q4766: Mohan R Dasu, et al. Crosstalk Between Adrenergic and Toll-Like Receptors in Human Mesenchymal Stem Cells and Keratinocytes: A Recipe for Impaired Wound Healing. STEM CELLS TRANSLATIONAL MEDICINE 2014;3):745-759
Agents: epinephrine, macrophage-activating lipopeptide-2; ICI-118,551 Vehicle: Not Stated; Route: SC; Species: mice; Pump: 1002; Duration: 7 days; 11 days;
ALZET Comments: animal info (Jax Mice, male, 8-10 weeks of age); peptides; macrophage-activating lipopeptide-2 aka MALP-2; Dose (7mg/kg body weight/day EPI; .7 mg/kg body weight/day ICI);

Q3234: M. H. Kim, et al. Catecholamine Stress Alters Neutrophil Trafficking and Impairs Wound Healing by beta(2)-Adrenergic Receptor-Mediated Upregulation of IL-6. Journal of Investigative Dermatology 2014;134(3):809-817
Agents: Epinephrine; antagonist, beta adrenergic receptor Vehicle: Saline; Route: SC; Species: Mice (transgenic); Pump: 1002; Duration: 8 days;
ALZET Comments: Controls received sham surgery; animal info (female, EGFP-lys); functionality of mp verified by plasma levels; dose-response (pg. 810); immunology;

Q4784: David W. Baker, et al. Alternative strategies to manipulate fibrocyte involvement in the fibrotic tissue response: Pharmacokinetic inhibition and the feasibility of directed-adipogenic differentiation. Acta Biomaterialia 2014;10;

Q4819: M. R. DASU, et al. Crosstalk Between Adrenergic and Toll-Like Receptors in Human Mesenchymal Stem Cells and Keratinocytes: A Recipe for Impaired Wound Healing. STEM CELLS TRANSLATIONAL MEDICINE 2014;3):745-759
Agents: Epinephrine; macrophage-activating lipopeptide-2; ICI-118,551 Vehicle: Not Stated; Route: SC; Species: mice; Pump: 1002; Duration: 7 days; 11 days;
ALZET Comments: animal info (Jax Mice, male, 8-10 weeks of age); peptides; macrophage-activating lipopeptide-2 aka MALP-2; Dose (7mg/kg body weight/day EPI; .7 mg/kg body weight/day ICI);

Q3931: B. Johannesson, et al. Insulin-like growth factor-1 induces regulatory T cell-mediated suppression of allergic contact dermatitis in mice. Disease Models & Mechanisms 2014;7(977-985
Agents: Insulin-like growth factor-1, recombinant human Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 2004; Duration: Not Stated;
ALZET Comments: Controls received sham surgery; animal info (female, C57BL6J, 8-10 weeks old); cardiovascular; peptides; bp measured using tail-cuff;

Q4322: N. A. Bracey, et al. Mitochondrial NLRP3 Protein Induces Reactive Oxygen Species to Promote Smad Protein Signaling and Fibrosis Independent from the Inflammasome. Journal of Biological Chemistry 2014;289(19571-19584
Agents: Angiotensin II, recombinant human Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: 28 days;
ALZET Comments: Controls received sham surgery; animal info (male, C57BL6 or Nlrp3 +/+, 10-12 weeks old); cardiovascular; peptides; bp measured using tail-cuff;

Q3040: Y. Q. Zuo, et al. Thymosin beta4 and its degradation product, Ac-SDKP, are novel reparative factors in renal fibrosis. Kidney International 2013;84(6):1166-1175
Agents: Ac-SDKP Vehicle: Not Stated; Route: Not Stated; Species: Mice; Pump: 1007D; Duration: Not Stated;
ALZET Comments: Animal info (wt, PAI-1 -/-, 8-10 wks old, 25-30 g)

Q3271: T. Zhuang, et al. Involvement of nitric oxide synthase in matrix metalloproteinase-9- and/or urokinase plasminogen activator receptor-mediated glioma cell migration. BMC Cancer 2013;13(1):U1-U11
Agents: Plasmid, MMP-9; plasmid, uPAR; plasmid, MMP-9-uPAR Vehicle: Medium, serum free; Route: CSF/CNS; Species: Mice (nude); Pump: Not Stated; Duration: 5 weeks;
ALZET Comments: Animal info (nude); cancer (glioma);
Q3594: D. Panigrahy, et al. Epoxyeicosanoids promote organ and tissue regeneration. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 2013;110(33):13528-13533
Agents: Epoxyeicosatrienoic acid, 14,15-; epoxyeicosatrienoic acid, 11,12 - Vehicle: Not Stated; Route: IP; Species: Mice; Pump: Not Stated; Duration: 4 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (male, Tie2-CYP2C8-Tr, Tie2-CYP2J2-Tr, sEH-null, 6 months old); replacement therapy (partial hepatectomy); tissue and organ regeneration

Q4985: L. L. Nikitenko, et al. Adrenomedullin haploinsufficiency predisposes to secondary lymphedema. J Invest Dermatol 2013;133(7):1768-76
Agents: Adrenomedullin (AM) Vehicle: Not Stated; Route: IP; Species: mice; Pump: 1002; Duration: Not Stated;
ALZET Comments: peptides; animal info: Adm-knockin stop mutation, heterozygotes; functionality of mp verified by edema score; Paper mentions osmotic minipumps being effective in the range 10^-8 to 10^-6 mol/l (pg. 1770). Adrenomedullin is a 52-amino-acid vasoactive peptide. mp were used to infuse AM to induce edema; dose: 300 ng/kg/hr

Q4926: A. C. Engevik, et al. The acid-secreting parietal cell as an endocrine source of Sonic Hedgehog during gastric repair. Endocrinology 2013;154(12):4627-39
Agents: recombinant mouse Shh (Sonic Hedgehog) Vehicle: PBS; Route: IP; Species: mice; Pump: 1007D; Duration: Not Stated;
ALZET Comments: male and female mice, PC-shhKo, C57BL/6, Parabiosis mice; mp were used to infuse Shh (Sonic Hedgehog). Shh is a fundamental protein mediating gastric ulcer healing. Paper is the first to examine effect of parietal cell sonic hedgehog on gastric healing; Shh 200 ng

Q2477: S. R. Doctrow, et al. A Synthetic Superoxide Dismutase/Catalase Mimetic EUK-207 Mitigates Radiation Dermatitis and Promotes Wound Healing in Irradiated Rat Skin. Journal of Investigative Dermatology 2013;133(4):1088-1096
Agents: EUK-27, custom Vehicle: Water, ultrapure; Route: SC; Species: Rat; Pump: Not Stated; Duration: 90 days;
ALZET Comments: Control animals received mp w/ vehicle; animal info (syngenic, male, WAG/RijCmcr, 8 wks old); long-term study

Q4771: R. F. Amy C. Engevik, Li Yang, and Yana Zavros. The Acid-Secreting Parietal Cell as an Endocrine Source of Sonic Hedgehog During Gastric Repair. Endocrinology 2013;154(12):4627-4639
Agents: recombinant mouse Shh (Sonic Hedgehog) Vehicle: PBS; Route: IP; Species: Mice; Pump: 1007D; Duration: Not Stated;
ALZET Comments: male and female mice, PC-shhKo, C57BL/6, Parabiosis mice; dose: Shh 200 ng ; mp were used to infuse Shh (Sonic Hedgehog). Shh is a fundamental protein mediating gastric ulcer healing. Paper is the first to examine effect of parietal cell sonic hedgehog on gastric healing;

Q2363: R. F. Oppeltz, et al. Gamma delta (gammadelta) T-cells are critical in the up-regulation of inducible nitric oxide synthase at the burn wound site. Cytokine 2012;60(2):528-534
Agents: L-Nil Vehicle: PBS; Route: SC; Species: Mice; Pump: 2001; Duration: Not Stated;
ALZET Comments: Animal info (C57BL/6, gamma TCR +/-, male, 8-10 wks old); enzyme inhibitor (nitric oxide synthase, iNOS)

Q2040: T. X. Li, et al. Preproendothelin-1 expression is negatively regulated by IFNgamma during hepatic stellate cell activation. American Journal of Physiology Gastrointestinal and Liver Physiology 2012;302(9):G948-G957
Agents: Interferon, gamma Vehicle: PBS; BSA; Route: Not Stated; Species: Mice; Pump: 1002; Duration: 2 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (Sprague Dawley)

Q0886: N. Yoshioka, et al. Small Molecule Inhibitor of Type I Transforming Growth Factor-beta Receptor Kinase Ameliorates the Inhibitory Milieu in Injured Brain and Promotes Regeneration of Nigrostriatal Dopaminergic Axons. Journal of Neuroscience Research 2011;89(3):381-393
Agents: LY-364947 Vehicle: DMSO; Route: Not Stated; Species: Mice; Pump: 2002; Duration: 2 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (2 mo old, ICR, male); enzyme inhibitor (TGF-b receptor kinase); 5% DMSO used
Q1523: T. C. Wei, et al. Expression of Crip2, a LIM-domain-only protein, in the mouse cardiovascular system under physiological and pathological conditions. GENE EXPRESSION PATTERNS 2011;11(7):384-394

*Agents*: Isoproterenol  *Vehicle*: PBS;  *Route*: SC;  *Species*: Mice;  *Pump*: 1007D;  *Duration*: 7 days;

*ALZET Comments*: Animal info (8-10 wks old, C57BL/6, male)

Q1697: L. Van Landeghem, et al. Enteric glia promote intestinal mucosal healing via activation of focal adhesion kinase and release of proEGF. American Journal of Physiology Gastrointestinal and Liver Physiology 2011;300(6):G976-G987

*Agents*: Ganciclovir  *Vehicle*: Not Stated;  *Route*: SC;  *Species*: Mice;  *Pump*: Not Stated;  *Duration*: 7 days;

*ALZET Comments*: Animal info (GFAP-HSVtk Tg, 22 wks old)

Q1477: H. Laeremans, et al. Blocking of Frizzled Signaling With a Homologous Peptide Fragment of Wnt3a/Wnt5a Reduces Infarct Expansion and Prevents the Development of Heart Failure After Myocardial Infarction. Circulation 2011;124(15):1626-U107

*Agents*: UM206; UM206 analog  *Vehicle*: Not Stated;  *Route*: SC;  *Species*: Mice;  *Pump*: 2002; 2006;  *Duration*: 2, 5 weeks;

*ALZET Comments*: Controls received mp w/ saline; functionality of mp verified by plasma UM206 levels; animal info (male, Swiss, 10-12 wks old)

Q2240: T. Kadar, et al. Delayed Loss of Corneal Epithelial Stem Cells in a Chemical Injury Model Associated with Limbal Stem Cell Deficiency in Rabbits. Current Eye Research 2011;36(12):1098-1107

*Agents*: Uridine, bromodeoxy  *Vehicle*: DMSO; water;  *Route*: SC;  *Species*: Rabbit;  *Pump*: Not Stated;  *Duration*: Not Stated;

*ALZET Comments*: Animal info (New Zealand, White, female, 2-3 kg); labeling of slow cycling cells

Q1500: P. Jain, et al. An NGF mimic, MIM-D3, stimulates conjunctival cell glycoconjugate secretion and demonstrates therapeutic efficacy in a rat model of dry eye. Experimental Eye Research 2011;93(4):503-512

*Agents*: Scopolamine hydrobromide  *Vehicle*: Saline;  *Route*: SC;  *Species*: Rat;  *Pump*: 2ML4;  *Duration*: 14, 28 days;

*ALZET Comments*: Controls did not receive any scopolamine; animal info (male, Sprague Dawley, 6-8 wks old)

Q0981: J. E. Bond, et al. Wound Contraction Is Attenuated by Fasudil Inhibition of Rho-Associated Kinase. Plastic and Reconstructive Surgery 2011;128(5):438E-450E

*Agents*: Fasudil  *Vehicle*: Saline;  *Route*: SC;  *Species*: Rat;  *Pump*: 2ML4;  *Duration*: Not Stated;

*ALZET Comments*: Controls received mp w/ vehicle; animal info (male, Sprague Dawley, 200-225 g)

Q0676: M. S. Aagren, et al. Nonselective matrix metalloproteinase but not tumor necrosis factor-alpha inhibition effectively preserves the early critical colon anastomotic integrity. International Journal of Colorectal Disease 2011;26(3):329-337

*Agents*: GM6001; AG3340  *Vehicle*: DMSO;  *Route*: SC;  *Species*: Rat;  *Pump*: 2ML1;  *Duration*: Not Stated;

*ALZET Comments*: Controls received mp w/ vehicle; animal info (male Sprague-Dawley, 205-360 g); enzyme inhibitor (matrix metalloproteinase, MMP); 50% DMSO used

Q0478: S. Yamano, et al. Effects of nicotine on gene expression and osseointegration in rats. Clinical Oral Implants Research 2010;21(12):1353-1359

*Agents*: Nicotine  *Vehicle*: Saline;  *Route*: SC;  *Species*: Rat;  *Pump*: 2004;  *Duration*: 8 weeks;

*ALZET Comments*: Controls received mp w/ vehicle; animal info (male Sprague Dawley, 4-6 wks old); pumps replaced after 4 weeks; long-term study

Q0089: K. K. Veeravalli, et al. MMP-9, uPAR and Cathepsin B Silencing Downregulate Integrins in Human Glioma Xenograft Cells In Vitro and In Vivo in Nude Mice. PLoS One 2010;5(7):U28-U42

*Agents*: Plasmid, MMP-9; uPAR; Cathepsin B  *Vehicle*: Not Stated;  *Route*: CSF/CNS;  *Species*: Mice;  *Pump*: Not Stated;  *Duration*: Not Stated;

*ALZET Comments*: Pump infused at a rate of 0.2 u/hr

Q1029: V. de Waard, et al. Systemic MCP1/CCR2 blockade and leukocyte specific MCP1/CCR2 inhibition affect aortic aneurysm formation differently. Atherosclerosis 2010;211(1):84-89

*Agents*: Angiotensin II  *Vehicle*: Not Stated;  *Route*: SC;  *Species*: Mice;  *Pump*: Not Stated;  *Duration*: 4-5 weeks;

*ALZET Comments*: Animal info (ApoE -/-); peptides
Q0389: S. W. M. van den Borne, et al. Mouse strain determines the outcome of wound healing after myocardial infarction. Cardiovascular Research 2009;84(2):273-282
   **Agents:** Metaprolol; hydralazine  **Vehicle:** Not Stated  **Route:** SC  **Species:** Mice  **Pump:** 1007D  **Duration:** 7 days  
   **ALZET Comments:** Controls were sham operated; animal info (male, 10-12 wks old, 12956/SvEv); myocardial infarction by coronary artery ligation

P9453: A. A. Thomay, et al. Disruption of Interleukin-1 Signaling Improves the Quality of Wound Healing. American Journal of Pathology 2009;174(6):2129-2136
   **Agents:** Interleukin-1 receptor antagonist, recomb. human; Interleukin-6 recomb. mouse  **Vehicle:** Sodium citrate; Sodium chloride; EDTA; Tween 80; PBS  **Route:** SC; Wound site  **Species:** Mice  **Pump:** 1003D; 2002  **Duration:** 3, 14 days  
   **ALZET Comments:** Controls received mp w/ vehicle; animal info (male, B6D2F1, 8-12 wks, 27-30 g., IL-1R KO); mp was fitted with a polypropylene mesh collar containing a PVA sponge; agent also known as Anakinra; deep tissue wounds; 0.1% Tween 80 used; 0.5 mM EDTA

P9814: G. Santulli, et al. In vivo properties of the proangiogenic peptide QK. Journal of Translational Medicine 2009;7(;):U1-U10
   **Agents:** Vascular endothelial growth factor-15; vascular endothelial growth factor-165; QK  **Vehicle:** Not Stated  **Route:** IA (femoral)  **Species:** Rat  **Pump:** 2002  **Duration:** Not Stated  
   **ALZET Comments:** Peptides; animal info (12 wks old, WKY, normosensitive); QK is a de novo engineered VEGF mimicking peptide

P8566: J. A. I. Virag, et al. Fibroblast migration after myocardial infarction is regulated by transient SPARC expression. Journal of Molecular Medicine-JMM 2006;84(3):241-252
   **Agents:** EMD121974  **Vehicle:** DMSO; PBS  **Route:** SC  **Species:** Mice  **Pump:** 1007D  **Duration:** 7 days  
   **ALZET Comments:** Controls received mp w/ vehicle; cardiovascular; ischemia (cardiac); animal info (male, female, C57BL/6, 22-25g., coronary artery ligation-induced MI); agent is a specific integrin a-v inhibitor; 50% DMSO; wound healing
P8211: S. D. Luikart, et al. Mactinin treatment promotes wound-healing-associated inflammation in urokinase knockout mice. Wound Repair and Regeneration 2006;14(2):123-128
Agents: Mactinin; Glutathione 5-transferase Vehicle: Saline; Route: SC; Species: Rat; Mice (transgenic); Pump: 1007D; Duration: 1, 7 days;
ALZET Comments: Controls received mp w/ vehicle, or GST; peptides; animal info (Tgu PA-/- or wt; Fisher, 150-200g); Polyvinyl alcohol sponges soaked in agent implanted SC, with mp catheter directed to center of sponge: "osmotic pumps were used to continually deliver the fragment and replenish the mactinin in the sponges" (p.125); wound healing

P7813: D. Heffernan, et al. Local arginine supplementation results in sustained wound nitric oxide production and reductions in vascular endothelial growth factor expression and granulation tissue formation. Journal of Surgical Research 2006;133(1):46-54
Agents: Arginine, L- Vehicle: Saline; Route: Wound site; Species: Pig; Pump: 2ML2; Duration: 14 days;
ALZET Comments: Controls received mp w/ vehicle; functionality of mp verified by residual volume; animal info (female, domestic, Landrace, 15-20kg., hernia defect); tubing was looped and contained multiple side holes to ensure uniform delivery within the aqueous wound compartment; ultrasonography

P8096: A. Gosain, et al. Exogenous pro-angiogenic stimuli cannot prevent physiologic vessel regression. Journal of Surgical Research 2006;135(2):218-225
Agents: Vascular endothelial growth factor 164, recomb.; platelet-dreived growth factor; fibroblast growth factor-2 Vehicle: Not Stated; Route: Wound site; Species: Mice; Pump: 2002; Duration: 11 days;
ALZET Comments: Controls received mp w/ PBS; functionaliy of mp verified by VEGF levels in wound sponges, residual volume; stability verified by activity of residual VEGF in endothelial cell cord formation assay (fig.4); cardiovascular; peptides; animal info (female, BALB/c, 8-9 wks old, implanted sponge wounds); "The activity of VEGF isolated from the pump was comparable to fresh recombinant VEGF 164, confriming that the recombinant growth factors present in the mini-osmotic pump retain robust biological activity." (p.221)

P6895: T. Poonawala, et al. Opioids heal ischemic wounds in the rat. Wound Repair and Regeneration 2005;13(2):165-174
Agents: Morphine Vehicle: PBS; Route: SC; Species: Rat; Pump: Not Stated; Duration: 8 days;
ALZET Comments: Controls received mp w/ vehicle; comparison of topical opioids and injections vs. mp; wound healing

P7405: S. Fruchtman, et al. Suppressor of cytokine signaling-2 modulates the fibrogenic actions of GH and IGF-I in intestinal mesenchymal cells. American Journal of Physiology Gastrointestinal and Liver Physiology 2005;288(2):G342-G350
Agents: Insulin-like growth factor I; Growth hormone Vehicle: Saline; Route: SC; Species: Mice (knockout); Pump: Not Stated; Duration: 5 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; wound healing

P6949: M. Fowler, et al. Assessment of pancreatic islet mass after islet transplantation using in vivo bioluminescence imaging. Transplantation 2005;79(7):768-776
Agents: Insulin, human Vehicle: Not Stated; Route: SC; Species: Mice (SCID); Pump: 1002; Duration: 7,10 days;
ALZET Comments: Diabetes; bioluminescence imaging (BLI); IVIS 200 system used after pumps were removed

P7131: P. Brun, et al. Neuropeptide neurotensin stimulates intestinal wound healing following chronic intestinal inflammation. American Journal of Physiology Gastrointestinal and Liver Physiology 2005;288(4):G621-G629
Agents: Neurotensin Vehicle: PBS; BSA; Route: SC; Species: Mice; Pump: 2002; Duration: 5 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; wound healing

P6855: S. Razani-Boroujerdi, et al. Chronic nicotine inhibits inflammation and promotes influenza infection. Cellular Immunology 2004;230(1):1-9
Agents: Nicotine Vehicle: Not Stated; Route: SC; Species: Rat; Mice; Pump: 2004; Duration: 23,28 days;
ALZET Comments: Controls received mp w/ saline; influenza
P5970: A. Deten, et al. Effect of propranolol on cardiac cytokine expression after myocardial infarction in rats. MOLECULAR AND CELLULAR BIOCHEMISTRY 2003;251(1-2):127-137
**Agents:** Propranolol  **Vehicle:** Not Stated;  **Route:** SC;  **Species:** Rat;  **Pump:** 2ML4;  **Duration:** 4 weeks;
**ALZET Comments:** Cardiovascular

Q7704: P. Koshy, et al. Effects of low-dose candesartan on the rate of re-endothelialisation following vascular wound healing. Journal of the Renin-Angiotensin-Aldosterone System 2001;2(1_suppl):S81-s83
**Agents:** candesartan  **Vehicle:** Not Stated;  **Route:** IP;  **Species:** Rabbit;  **Pump:** Not Stated;  **Duration:** 2 weeks;
**ALZET Comments:** Dose (50, 100, or 500 μg/kg/day); Controls received no mp prior to aortic injury; animal info (Male, New Zealand White, 3.0-3.5 kg); cardiovascular;

P4811: T. Kiyama, et al. Effect of matrix metalloproteinase inhibition on colonic anastomotic healing in rats. JOURNAL OF GASTROINTESTINAL SURGERY 2001;5(303-311
**Agents:** BE16627B  **Vehicle:** DMSO; ethylene glycol;  **Route:** SC;  **Species:** Rat;  **Pump:** 1003D;  **Duration:** 3 days;
**ALZET Comments:** Controls received mp w/ vehicle; enzyme inhibitor; vehicle mix was 50:50 ratio;

Q7463: T. R. Howdieshell, et al. Antibody neutralization of vascular endothelial growth factor inhibits wound granulation tissue formation. J Surg Res 2001;96(2):173-82
**Agents:** Antibody, anti-VEGF  **Vehicle:** Saline;  **Route:** SC;  **Species:** Pig;  **Pump:** 2ML2;  **Duration:** 14 days;
**ALZET Comments:** Dose (2-ml of 60 μg/ml anti-VEGF antibody); Controls received mp w/ vehicle or irrelevant murine IgG; animal info (female, Landrace, 15-20 kg); “To ensure uniform delivery of antibody or saline within the aqueous wound compartment, the tubing contained multiple side holes and was looped to increase surface area.” p.174

P4781: D. T. Efron, et al. A novel method of studying wound healing. Journal of Surgical Research 2001;98(16-20
**Agents:** Methylisothiourea, S-; adenovirus vector; gene, mouse iNOS cDNA sequence  **Vehicle:** Saline; Dye, methlene blue; Dye, India black ink; PBS;  **Route:** SC (wound healing site);  **Species:** Rat;  **Pump:** 2001;  **Duration:** 7 days;
**ALZET Comments:** Controls received mp w/ saline; functionality of mp verified by dye infusion; gene therapy; enzyme inhibitor; wound healing; SC-implanted pumps infused 2 hydroxyproline sponges via catheter; initial studies used 2ML1 pumps to infuse dyes in order to assess the feasibility of direct infusion with pumps; iNOS inhibitor infusion was with 2001 pumps; pumps were designed to infuse directly into SC implanted polyvinyl sponges at the wound site; Adenovirus vector was dissolved in PBS; iNOS inhibitor was delivered in saline; diagram of pump-catheter assembly and location (p. 18); “Dye infusion demonstrated both grossly and microscopically excellent delivery of the infusate to wound sponges” (p. 18);

P5800: E. Creemers, et al. Disruption of the plasminogen gene in mice abolishes wound healing after myocardial infarction. American Journal of Pathology 2000;156(6):1865-1873
**Agents:** Uridine, bromodeoxy-  **Vehicle:** Not Stated;  **Route:** Not Stated;  **Species:** Mice (knockout);  **Pump:** 2001;  **Duration:** 7 days;
**ALZET Comments:** Wound healing

P3924: S. Koshizuka, et al. The beneficial effects of recombinant human insulin-like growth factor-1 (IGF-I) on wound healing in severely wounded senescent mice. Jpn. J. Surg 1997;27(946-952
**Agents:** Insulin-like growth factor I  **Vehicle:** Saline, physiological;  **Route:** SC;  **Species:** Mice;  **Pump:** 1007D;  **Duration:** 7 days;
**ALZET Comments:** Controls received mp w/ vehicle; no stress (see pg. 948); peptides; wound healing; recomb. human IGF-I used

P3952: M. S. Bitar. Insulin-like growth factor-1 reverses diabetes-induced wound healing impairment in rats. Horm. Metab. Res 1997;29(383-386
**Agents:** Insulin-like growth factor I  **Vehicle:** PBS;  **Route:** SC;  **Species:** Rat;  **Pump:** Not Stated;  **Duration:** 14 days;
**ALZET Comments:** controls received mp w/PBS; tissue perfusion (wound chamber); peptides; recomb. human IGF-I used
P3442: M. R. Schaffer, et al. Nitric oxide regulates wound healing. J. Surg. Res 1996;63(237-240
Agents: MITU Vehicle: Not Stated; Route: IP; Species: Mice; Pump: Not Stated; Duration: 10 days;
ALZET Comments: Controls received mp w/ PBS; immunology; MITU is S-methyl isothiuronium, a competitive NO synthase inhibitor; wound healing

P4247: M. A. Hollyoak, et al. Beneficial wound healing and metabolic effects of clenbuterol in burned and nonburned rats. J. Burn Care Rehabil 1995;16(233-240
Agents: Clenbuterol Vehicle: Saline; Route: SC; Species: Rat; Pump: 2ML2; 2ML4; Duration: 2,3 weeks;
ALZET Comments: controls received mp w/saline; wound healing study

P2555: R. V. Mueller, et al. The effect of insulin-like growth factor I on wound healing variables and macrophages in rats. Arch Surg 1994;129(262-265
Agents: Insulin-like growth factor I Vehicle: PBS; Route: Not Stated; Species: Rat; Pump: 2002; Duration: 11 days;
ALZET Comments: controls received sham operation and/or mp w/ vehicle; tissue perfusion (wound healing chamber); replacement therapy (hypophysectomy); peptides; wound healing; recomb. human IGF-1 used

P2050: D. Y. Suh, et al. Insulin-like growth factor-I reverses the impairment of wound healing induced by corticosteroids in rats. Endocrinology 1992;131(5):2399-2403
Agents: Insulin-like growth factor I Vehicle: PBS; Route: Wound site; Species: Rat; Pump: Not Stated; Duration: 7,14 days;
ALZET Comments: Tissue perfusion (wound healing site); peptides; pump connected to wound healing chamber by means of a catheter; recomb. human IGF-1 used

P0846: A. Barbul, et al. Interleukin 2 enhances wound healing in rats. J. Surg. Res 1986;40(315-319
Agents: Interleukin-2 Vehicle: Not Stated; Route: IP; Species: Rat; Pump: 2ML1; Duration: 7 days;
ALZET Comments: controls received mp w/vehicle; wound healing; functionality of mp verified upon removal; peptides; recomb. human IL-2 used