erythropoietic effects, which supports the idea that testosterone effects the bone
marrow through the kidney. By contrast there was no correlation between the bone
marrow effect and the effect on rat seminal vesicles.

Leaving the subject of androgens, another contribution described experiments
involving electrical stimulation of the hypothalamus in rats. These experiments
were designed to elicit increased erythropoiesis, and low-level, short-term stimula-
tion did. However, higher level, longer-term stimulation produced reticuloendo-
thelial hyperplasia, increased red cell sequestration, and hemolytic anemia, a phe-
nomenon which seems not to have been previously described. A study of the
anemia of acute leukemias showed that patients with acute lymphoblastic leukemia
excreted abundant erythropoietin in response to anemia whereas patients with acute
myeloblastic leukemia excreted only low levels of erythropoietin levels in the pres-
ence of severe anemia. Parallel observations of a “leukopoietic factor” have been
made in these types of leukemia.

This volume will, of course, be useful to investigators primarily interested in
erthropoietin and erythropoiesis, and the tidbits offered above should suggest that
others will also be interested in many of the observations recorded. It seems regret-
table that the volume could not have been published less expensively (in paper)
and sooner after the conference.

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ENDOCRINES AND OSMOREGULATION: A COMPARATIVE ACCOUNT OF THE
REGULATION OF WATER AND SALT IN VERTEBRATES. By P. J. Bentley. Springer,
Berlin, 1971. xvi, 300 pp. $16.80.

This is the first volume of a new zoophysiology and ecology series and a book
that should be of special interest and value to endocrinologists and comparative
physiologists. The mechanisms responsible for maintenance of water and electrolyte
homeostasis in vertebrates covering such a wide range of ecological areas is a fasci-
nating one. It is to the credit of the author, who has made many important con-
tributions in the field of pituitary and adrenal endocrinology, not to have limited
himself solely to discussing the role of the endocrine system in vertebrate osmoreg-
ulation from a comparative point of view but to also provide the reader with a thor-
ough review of those biological structures which control salt and water exchange
with the environment. Thus, the first chapter includes a section dealing with the
functional organization of such nonendocrine structures as cell membranes, capil-
laries, skin, gills, gut, bladder, salt glands, and kidney. In addition, the first chapter
also provides a useful account of the basic principles and driving forces underlying
osmotic exchanges with the environment and describes instructively, the different
mechanisms underlying fluid and salt translocation.

The second chapter provides a broad survey of comparative aspects of vertebrate
endocrine systems with emphasis on their role in the control of fluid and salt move-
ment. An introductory section of this chapter deals with criteria of endocrine function and methods and difficulties encountered in studying endocrine problems. This is a useful part of the book and should be of value to the student.

Whereas the first two chapters deal at a general level with the topics of osmoregulation and endocrine control, the following chapters cover the function of these two organ systems in the individual vertebrate classes. These chapters provide an excellent, broad, and up-to-date coverage of the comparative aspects of fluid and electrolyte exchange. They are particularly useful in that they not only emphasize the role of endocrine glands in relation to the animal's adjustment to its environment but also cover very adequately what is known about the transport mechanism of fluid and electrolytes at the cellular level of various organ systems.

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Regulation of the Antibody Response. Second Edition. Edited by Bernhard Cinader. Thomas, Springfield, IL, 1971. xii, 400 pp. $19.50.

Regulation of the Antibody Response, edited by Bernhard Cinader, was first published in 1968, the year it became widely recognized that two morphologically indistinguishable lymphocytes, the T cell and the B cell, cooperated in antibody production. This discovery forced cellular immunologists to reevaluate both their data and concepts, and more recent work has emphasized the importance of cooperative events in antibody regulation. Thus, it would seem pointless at this time to publish a volume in cellular immunology that did not consider these new developments. The new issue of Regulation of the Antibody Response, however, has paid but minor lip service to these new developments. Only one of the 17 chapters has been updated. Although an exciting compendium of the top work in the field at the time of its original publication, this volume will not prove useful to students today.

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Fluorescence Spectroscopy: An Introduction for Biology and Medicine. By A. J. Pesce, C-G Rosén, and T. L. Pasby. Marcel Dekker, New York, 1971. 247 pp. $16.50.

This book provides an excellent introduction to fluorescence spectroscopy, a technique increasingly used to study the molecular basis of enzyme and membrane