

Book Reviews

The Kidney: Physiology and Pathophysiology, 2nd Edition. Edited by D. W. Seldin and G. Giebisch. Raven Press, New York. xxxi + 3816 pp. 22 × 28.5 cm. 1992. 0-88167-773-6. \$425.00.

This three-volume, second edition of *The Kidney: Physiology and Pathophysiology* is a massive updating of the first edition published in 1985. The first edition contained 92 chapters and was over 2100 pages in length whereas this edition contains 109 chapters containing over 3800 pages. The chapters range in length from 15 to 78 pages. Nearly 200 contributors authored the chapters.

This impressive text contains four sections: General Principles of Electrolyte Compartments, Organization of the Kidney, Water and Electrolyte Exchanges, and Extrinsic and Intrinsic Renal Failure. Additionally, the final four chapters of the text are entitled Renal Pharmacology and include chapters on cellular mechanisms of drug nephrotoxicity, renal elimination of drugs, diuretic physiology, and disposition and dose requirements of drugs in renal insufficiency.

A preface to the first chapter of the text is on the history of renal physiology from ancient times to 1950. This addition to the first volume is not only enjoyable to read but gives the reader a firm foundation as to how renal physiology has evolved over time. Whereas the first edition concentrated on renal physiology at the level of epithelial and organ function, an effort is made in this text to concentrate on the molecular biology of renal transport whenever possible. The molecular biological characterization of a number of regulatory molecules, e.g. atrial natriuretic factor and endothelin, are discussed as well as the known molecular biology of a number of cellular effectors/receptors, such as ion channels and G proteins. Much of the format of the text involves chapters on the normal physiology of a renal regulatory mechanism following by a chapter on the pathophysiology that occurs when the regulatory mechanism goes awry. An adept description of all facets of renal failure (acute and chronic) as well as descriptions of renal physiology in conditions such as aging and pregnancy are also included.

This text is well-written with current references often cited. Additionally, the effective and liberal use of graphs and tables make this extremely comprehensive reference

book relatively easy to read, especially when one considers the complexity of the subject matter. The multiauthored chapters do not take away from the continuity of the text that the authors also achieved in their first edition. *The Kidney: Physiology and Pathophysiology* is as complete a description of renal physiology and pathophysiology that is available. It will certainly meet the needs of any physician/scientist who needs a comprehensive reference book on this subject.

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The Chemistry of Heterocyclic Compounds. Synthesis of Fused Heterocycles. Volume 47. Part 2. By Gwynn P. Ellis. Wiley, New York. 1992. xi + 661-1430 pp. 15.5 × 23 cm. ISBN 0-471-93070-9. \$360.00.

This book is a selection of methods by which a new heterocyclic ring may be built on to a carbocyclic or heterocyclic ring. The layout is similar to that of Part 1. (See Shepard, K. L. *J. Med. Chem.* 1989, 32, 275 for a review of part 1.)

The book provides a convenient way of locating papers on methods of synthesis of the system and of the IUPAC-approved way of drawing and naming each system. Conditions, yields, and other worthwhile information are presented. The chapter classification is based on the functional groups undergoing reactions on the precursor ring.

The pages (661-1430) and the references (2028-40006) are continued from part 1. The two parts combined provide a very useful first place to check for synthetic routes in this area. Although the cost is high, the book belongs in libraries of institutions where work of this type is taking place.

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