

NMT Bookshelf

RADIOIMMUNOASSAY AND RELATED TECHNIQUES

Jan I. Thorell and Steven M. Larson, C.V. Mosby, St. Louis, 1978, 298 pp, \$19.50.

Finally, those of us in the field of RIA have *the* book we have been waiting for—a single text that gives us theory, methodology, and clinical applications and that costs less than twenty dollars!

This text is both a general survey of the field and a fairly detailed reference for actual performance of important assays. The first seven chapters provide a theoretical basis for RIA methodology, including discussions of radioligand and receptors, separation techniques, assay performance, data presentation and quality control, and equipment evaluation. There are in-depth discussions of iodination techniques, different types of competitive and noncompetitive systems, mathematical basis for the dose-response relationship, and pipets and counters. This section has its own extensive bibliography.

The second section discusses clinical applications and includes most of the more common assays. There are chapters on thyroid hormones, ACTH and cortisol, sex steroids and prolactin, insulin, gastrin and most other important assays. Detailed methodologies are provided for many assays, and each chapter has separate, very inclusive references.

There are also extensive appendices, which include topics on the order of “what you always wanted to know, but were afraid to ask.” These are step-by-step instructions for radioiodination by several methods, testing antibody titer and antibody sensitivity, evaluating a second antibody, and much, much more.

A list of abbreviations used in the text, a glossary of terms used in radioligand assay, and a very complete index are included. It is a book no one working in the field of RIA should be without.

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RADIOLOGY FOR MEDICAL STUDENTS, Third Edition

David Sutton, Churchill Livingstone, New York, 1977, 153 pp, \$9.95

Although this softbound book was written as an introduction to radiology for medical students, it will be of value to x-ray technology students as well. It deals with routine procedures, special studies, ultrasound, and nuclear medicine imaging methods. The last two subjects

are discussed very briefly in a chapter entitled “Pararadiological Imaging Methods.”

The text is well written, easy to follow, and enhanced by many specific illustrations and anatomy diagrams. The content is current, although little space has been dedicated to computerized axial tomography.

Radiology and nuclear medicine technologists will find this book a concise reference for general radiologic procedures and it would be a useful addition to the department library.

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BASICS OF RADIOPHARMACY

Buck A. Rhodes and B.Y. Croft, C.V. Mosby, St. Louis, 1978, 195 pp, \$14.95.

The authors of this text appear to have asked themselves, “What are the basic subjects that an individual who is involved in the daily preparation of radiopharmaceuticals must know?” Since they have many years of radiopharmaceutical experience in research and teaching as a base, the result is this text, a handbook for radiopharmacy practitioners. The elements of pharmacy, radiochemistry, health physics, analytical chemistry, pharmacology, economics, and civil regulations needed to function efficiently in this multidisciplinary field are the subjects covered.

The text assumes that the reader has the background in the basic physical and biological sciences that a well-balanced science curriculum offers. The needed subjects are then discussed in a manner suitable for adding to that background the appropriate information required for radiopharmacy in nuclear medicine.

The chapters follow the logical sequence of an initial overview of the field, followed by discussions of tracer methodology and mechanisms of localization, characteristics of radiopharmaceuticals, therapeutic applications, absorbed radiation dose calculations, methods of radionuclide availability and production, radiopharmaceutical preparations, quality control, and practical radiopharmacy details.

For nuclear medicine technologists this text should be very useful. It provides both general knowledge in this area and guides for daily radiopharmaceutical preparations. Less applicable to technologist's needs are the chapters describing the “Calculation of Absorbed

Radiation Dose” and the chapter on “Design Criteria for Radiopharmaceuticals,” which is more closely related to research and development of new radiopharmaceuticals. The portion of the appendix that describes generator kinetics is also unlikely to be part of the daily tasks of the nuclear medicine technologist.

Especially useful, however, are the chapters on mechanisms of localization, daily preparations, and the numerous practical suggestions for ease in preparations and for radiation safety. There is also a very useful nomogram for calculating pediatric doses.

There are numerous clearly designed diagrams, tables, graphs, and photographs to facilitate reading and comprehension of the text. There is also an adequate glossary and references for additional reading for those wishing more extensive treatment than that afforded by the text. At the end of the text, the authors have provided a set of practical problems (no answers) with which the readers can test their comprehension of the mathematics and theories described. In general, by not being exhaustive in their treatment of the subject matter, the authors have written a text which is not only adequate for radiopharmacists and nuclear medicine technologists, but one which can be used in a classroom situation for further discussion and elaboration.

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MEDICAL PHYSICS

John R. Cameron and James G. Skofronick, John Wiley and Sons, New York, 1978, 615 pp, \$21.95.

This text is geared to the curious individual with some background in elementary physics. In the process of demonstrating the role of physics in medicine and body behavior, the authors use clever and pertinent examples and analogies. Some of the topics discussed are the strength of human bone, the speed of blood flow, pressure effects while diving, how defibrillators and pacemakers work, how to test your hearing, lasers in medicine, and optical illusions.

Four chapters are devoted to radiology, nuclear medicine, radiation therapy, and radiation protection. The 50-page chapter on nuclear medicine, written with the assistance of Jerome Wagner, is an understandable, concise overview. Of course, one could find fault with omissions and some simplistic description, but it is necessary to remember that the purpose is to provide general information to a somewhat casual reader.

The illustrations are good, the subject matter is interesting, and although some of the jokes are really awful, this is a worthwhile addition to the library of someone who enjoys knowing a little bit about a lot of things.

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