

NMT Bookshelf

RADIOPHARMACEUTICALS

Gopal Subramanian, Buck A. Rhodes, James F. Cooper, and Vincent J. Sodd, eds., New York, Society of Nuclear Medicine, 1975. 555 pp. \$30.00

Because of the expanded pace of radiopharmaceutical investigation that has taken place since 1940, it is increasingly difficult for the student, investigator, and clinician to keep up to date in a way that would permit him to function most effectively. There has also been the notable lack of a textbook of radiopharmacy to provide basic principles and techniques for a diversified specialty. This is to be expected, since the number of textbooks usually varies inversely with the volume of original research. This book represents an attempt to incorporate some of the qualities of a text into the proceedings of an international symposium that was held in Atlanta, GA, in Feb. 1974. Its acceptance in the nuclear medicine community will be a measure of how well it has succeeded.

The book was published in order to fill a communication void that is constantly appearing with new radiopharmaceuticals as knowledge about established agents becomes available. As it should, the book defines some problems in radiopharmaceutical research that await being solved. This is evident in G. D. Robinson's fine chapter on prospects for ^{18}F compounds, in Yano's informative treatment of radionuclide generators, and most especially in Lin's excellent and timely discussion of protein labeling with $^{99\text{m}}\text{Tc}$.

The book has admirably accomplished the important goals of providing international participation and inclusion of recent developments in some fields of tracer research. Though the presentation dealing with the phosphonate moiety, by Castronovo and coworkers, however promising, does not provide a clear avenue for future research, the paper by Knight and coworkers presents very interesting data on ^{77}Br . Especially noteworthy in Knight's presentation are their introductory remarks about the advantages in stability and ease of labeling offered by bromination when compared with iodination. It would, however, have been of benefit to supplement the chapter on labeling blood cells with $^{99\text{m}}\text{Tc}$ with a presentation dealing more extensively in labeling nucleated cells, a particularly exciting area of investigation both at the time the symposium was convened and now.

The most obvious prerequisites for excellence in a book such as this include typographic accuracy and absence of redundancy. The former is served well and the latter adequately so. Both the introduction and the beginning of Chap. 49 contain similar historical information about radiopharmaceuticals.

Less obvious, though no less important, guideposts of overall quality have been characterized by Robert Eisenburg of UCLA as including whether the book is a significant review, a useful text, and an original contribution to research. Few books achieve high marks in all three categories. *Radiopharmaceuticals* generally offers an excellent review and contains a number of chapters presenting original research, notably Saha and Farrer's comparative study of tumor uptake in Chap. 44. There is unfortunately a minimum amount of information dealing with certain aspects of radiopharmaceuticals, specifically the potential economic and legal impact of regional radiopharmacies and, more recently, the impact of CAT scanning. Earl Meyer's treatment of regulatory problems in Chap. 28 refers to the regional radiopharmacy concept, though only briefly. There is thus still a space on the shelf for a textbook of radiopharmacy.

Given the shortcomings discussed, this highly fluent, readable, and very informative presentation of the subject of radiopharmaceuticals will be a useful addition to the libraries both of those interested in expanding their knowledge of this important subject and those desiring a springboard for further research.

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TEXTBOOK OF NUCLEAR MEDICINE TECHNOLOGY

2nd edition, Paul J. Early, Muhammed Abdel Razzak, and D. Bruce Sodee, C.V. Mosby Co., St. Louis, 1975, 496 pp., 412 illustrations, \$18.95

Most of us are quite familiar with the first edition of this exceptionally well written textbook. The second edition has been updated and enlarged to comply with the growth of nuclear medicine technology since the publication of the first edition. A slight change from the previous format has been accomplished to improve the quality of the book. Contributors, known for their expertise, have authored five new topics. These include "Computer Fundamentals" by William Pavlicek, "Modulation Transfer Function" by Martin L. Nusynowitz and Robert J. Lull, "Technetium 99m Biorouting" by William Miller, "Radioimmunoassay" by Rama Nara and William Miller, and "Radionuclide Therapy" by James H. Larose.

The type is slightly larger and somewhat easier to read. The illustrator, Susan Nicolet, has done an exceptionally fine job.

With the exception of the new chapters previously discussed and a chapter on dosimetry added by the

authors, there are no changes in part I, "Nuclear Science." The format, illustrations, and progression through this complex scientific information are the same. I am favorably impressed with the new section on dosimetry. Any technologist will find this data very useful and quite easy to comprehend.

Newer nuclear medicine equipment and accessories are included. With more institutions using multiformat programmers, there is a need to make people aware of their use and function. New generations of photo-imaging cathode ray tubes are given a fair treatment.

Part II, "Clinical Nuclear Medicine" begins with a short chapter on surface anatomy. This is followed by the new chapter on ^{99m}Tc biorouting, Chap. 15. "Once administered, the radioactive substance is distributed within the body according to its physical-chemical properties. This distribution can be simply defined as the **BIOROUTING** of the administered substance." The author discusses radiopharmaceuticals; pertechnetate in the stomach, salivary glands, thyroid, small and large bowel, choroid plexus, brain, and sweat glands; and technetium labeled to sulphur colloid, macroaggregated albumin, DTPA, and phosphates and diphosphonates.

It would be impossible to discuss radioimmunoassay in any detail in some 23 pages, and I doubt this was the authors' intent. Without getting into detailed step-by-step procedures for each radiobioassay procedure, they were able to discuss the principles of this rapidly growing science.

Upon the completion of radioimmunoassay, the reader will find chapters on scanning or imaging various organs or systems. The illustrations for anatomical purposes are quite good. However, some of the nuclear medicine images are poor examples for our purpose. Some tend to be too dark and thus yield poor definition of abnormalities.

All things considered, this text is quite good. I know it is widely used by student and staff technologists. The second edition is a vast improvement over the former edition.

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