

BOOK REVIEWS

RADIONUCLIDE METABOLISM AND TOXICITY. P. Galle, R. Masse, Eds. Paris, Masson, 1982, 321 pp, \$36.00

Proceedings of symposia rarely have lasting value, even to specialists. At best they are "snapshots" of the current status of the field and, consequently, go out of date rapidly. Usually the papers constitute either compendia of data the authors had been unable to publish elsewhere or they are hastily written reviews of previously reported material. Thus, these overpriced tomes languish unused on library shelves for decades until, unlamented, they are discarded. Presumably sales to gullible librarians enrich the publishers and encourage the process.

Happily, *Radionuclide Metabolism and Toxicity* does not fit this dismal mold. It is, in nearly every respect, an admirable effort to assemble the contributions of a group of specialists and create a synthesis of knowledge in a well-defined area. This volume deserves a place on the shelf of any scientist interested in the biological fate of radioisotopes. Since it covers the proceedings of a 1982 symposium of specialists from France, Great Britain, and Germany (organized by the French Biophysical and Nuclear Medicine Society and the IRU—Environment of the University of Paris), the book is current. It is clear that the editors intend that this volume be a standard reference work, because seemingly minor details are included for the benefit of the reader. For example, conversion factors between old radiation units, such as rad, curie and rem, to the new MKS units, Grey, Becquerel, and Sievert, have been included for those of us still having difficulty with modern units. Similarly, the decay schemes of isotopes are displayed as they are discussed.

The individual papers are very informative. Following two introductory papers on human exposure to radionuclides, there are 16 separate papers on individual radioactive elements or groups of elements. Chapters on iodine, cesium, strontium, noble gases, ruthenium, rare earths, tritium, carbon, plutonium, americium, curium, einsteinium, neptunium, californium, uranium, radon (and daughters), and thorium are included. Extensive lists of references follow each paper. The book concludes with more general chapters that cover the risks of radionuclides to human populations. Because these chapters reveal the French leaning toward nuclear power, they may distress readers on this side of the Atlantic who are concerned about nuclear safety.

Each author has made an effort to present the material in a clear, concise, and comprehensive manner. Many papers are written with the obvious goal to be interesting as well as informative. For example, Thomasset, in a short article on strontium delves into the history of the element, noting that it was discovered around 1787 in a Scottish lead mine in the village of Strontain, the source of its name. These touches abound and make reading a pleasure.

The major deficiency of the book is its lack of an index; however, the organization is sufficiently good to permit one to find nearly any topic of interest by simply consulting the table of contents. A minor deficiency is the occasional cumbersome translation from French to English.

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A CLINICAL AND MATHEMATICAL INTRODUCTION TO COMPUTER PROCESSING OF SCINTIGRAPHIC IMAGES. M. L. Goris, P. A. Briandet. New York, Raven Press, 1983, 296 pp

The authors state their intent is to "define an epistemology that allows one person or team to integrate the disciplines relevant to clinical application." They distinguish the organization of this text as "top-down," where clinical applications are presented first, then the mathematical basis for the computer methods, and last the computer technology itself. Such an arrangement is distinctive from other introductory texts on computer methods in nuclear medicine that are organized in a "bottom-up" fashion, where computer technology is explained, mathematical methods derived, and clinical applications demonstrated. I do not believe this text can be characterized as introductory, since it begins with examples of complex functional imagery, followed only much later with the methodology used to derive them. In general, the organization is better described as "middle-middle," with very little introductory or new material. An experienced nuclear medicine computer user can benefit from the first section, "Clinical Applications of Quantitative Scintigraphic Analysis," especially to reveal the perspective of another experienced computer user in addressing scintigraphic approaches to the diagnosis of heart disease, renal, and pulmonary disorders.

The second section, "Mathematical Derivations," was disappointing and cannot be recommended. Many familiar concepts, including digital filtering, convolution, and background correction, are not presented clearly. Integral formulations are widely used, despite the fact that nuclear medicine is a truly discrete imaging modality.

The third section, "Processing Methods of Scintigraphic Images," will interest those responsible for the implementation of functional imaging software. If the reader has sufficient clinical, computer, and mathematical background, these pages are likely to be the most valuable in the volume. The methods of harmonic analysis and several unique approaches to dynamic image analysis and edge detection are informative.

The final section, "The System," is relatively brief and superficial. The material presented here should already be familiar to the reader if he is to comprehend the preceding three sections.

The text is indexed and has 172 references, many of which are recent, collected in a single section. This book will have the most appeal to those with a specific background and interest in dynamic functional analysis, especially if one is to appreciate it from the perspective of an experienced nuclear medicine computer user. It is definitely not a reference text.

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ATLAS OF SECTIONAL HUMAN ANATOMY. J. G. Koritké, H. Sick. Baltimore/Munich, Urban and Schwarzenberg, 1983, Vol. 1, 165 pp; Vol. 2, 183 pp, \$165.00 (\$89.50 each volume)

With the advent of transmission computerized tomography, ultrasonography, and emission computerized tomography, an