

TECHNETIUM IN CHEMISTRY AND NUCLEAR MEDICINE: Proceedings of the Second International Symposium on Technetium in Chemistry and Nuclear Medicine, Padova, Italy 1985.

Marino Nicolini, Giuliano Bandoli and Uldenco Mazzi, Eds. Cortina International Verona, Italy, New York, Raven Press, 1986, 362 pp

In 1982, a group of inorganic chemists, nuclear medicine scientists, and physicians interested in technetium (Tc) radio-nuclides and their application in nuclear medicine organized a symposium to honor Professor Emilio Segre who discovered technetium in 1937 (along with Carlo Perrier). A second symposium was organized in September 1985 and Professor Segre was honored again with the award of the great golden seal of Padua University. The papers presented in this symposium resulted in the publication of the current title. This type of symposium has gained recent importance because it provided an opportunity to the so called "pure chemists" to present their data on technetium related chemistry and interact with the "applied" scientists and Nuclear Medicine physicians (scientists?). They learn from each other the importance and the application of technetium chemistry in developing new radiopharmaceuticals for use in nuclear medicine diagnosis and research.

Even though every chapter in this book is an "extended" abstract of papers, 2-3 pages long, there are several "summary" presentations longer in size and better in subject depth. It is for the latter reason I would buy this book. There is an interesting historical overview on the discovery of technetium in the opening chapter, written by Professor Segre. Schwochau discusses the basic aspects of elemental technetium and its isotopes. This is worth reading for any student of technetium. There is a series of papers on technetium complexes with a variety of chelate groups, such as N_2O_2 , N_2N_2 , N_2S_2 systems. Also, there are several chapters on analytical evaluation of Tc-complexes using spectroscopy (NMR, EPR), electrochemistry, x-ray crystallography, etc. These chapters should be of value to the "chemists" in nuclear medicine. In other words, if anyone wants to know what is going on in technetium chemistry research related to radiopharmaceutical applications, they must read this collection of papers.

Almost all new ^{99m}Tc radiopharmaceuticals including those in clinical trials outside the USA are well described in short papers. For the radiopharmaceutical scientist, this book contains a "wealth" of information. Yes, I mean it! Considering only a relatively small number of people attend these meetings, books of this type are very valuable.

The last one-third of the book contains papers on application of technetium radiopharmaceuticals in Nuclear Medicine. An excellent chapter on SPECT by Budinger is a welcome introduction to this section. In the future SPECT instrumentation will be required for most new ^{99m}Tc radiopharmaceuticals. Other contributions in this section include chapters on such standard topics as bone imaging, hepatobiliary studies, lymphoscintigraphy, angioscintigraphic perfusion analysis, etc. Also, there is a short paper on "cost/benefit ratio for two procedures with ^{99m}Tc radiopharmaceutically" which

may be useful for "public relation" purposes in a medical center. Overall, this clinical section reads well and does contain latest preliminary clinical results using some of the newer radiopharmaceuticals.

I find this book very interesting and believe it will be useful for all the "chemists", physicians, scientists in the field of nuclear medicine and to anyone interested in Tc chemistry and its applications in nuclear medicine. This book should be made available in all nuclear medicine departments (libraries) at the least as a reference volume so that one can find what is "new" in ^{99m}Tc radiopharmaceuticals. I hope organizers of these symposia continue this important tradition of holding these meetings and continue to publish these proceedings in a book form.

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BONE SCANNING IN CLINICAL PRACTICE.

I. Fogelman, ed. New York, Springer-Verlag, 1987, 260 pp., \$165.50

Bone scanning remains the most common imaging procedure in most nuclear medicine departments. Technetium-99m (^{99m}Tc) methylene diphosphonate, the most widely used imaging agent, was introduced over 10 years ago, and several books on bone scanning have appeared. What does this new text have to offer?

The book is a multiauthor text from the United Kingdom and North America. Its 17 chapters cover ^{99m}Tc bone scanning agents and mechanisms of uptake, normal adult and pediatric bone scans, and bone scans in general classes of disease (neoplasms, metabolic bone disease, inflammation and infection, trauma, avascular necrosis) and in a wide range of specific diseases. Quantitative diphosphonate uptake and bone mineral measurement are also discussed. Each chapter can be read as an independent unit. References are extensive; most chapters include references through 1984, and there are a few from 1985.

The book as a whole is well-written, and some chapters are very good indeed. Most of the authors draw on extensive clinical experience, and it shows in their authoritative presentations. There is minor overlap between some chapters, but the amount is not objectionable.

The publisher states that the book is an "atlas-like source of reference". In large measure it lives up to this promise. The section on normal pediatric anatomy is excellent. Most classes of disease are well-illustrated, and many specific diseases have illustrations that the scan interpreter will find very useful. The atlas is not encyclopedic, however. The reader is informed that "septic arthritis has a characteristic appearance" (p. 113), but although the appearance is described it is not illustrated. Coverage of specific diseases is on the whole very good, but those seeking illustrations of rarer conditions such as thyroid acropachy will have to look elsewhere.

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