

## NMT Bookshelf

### **PARATHORMONE AND CALCITONIN RADIOIMMUNO- ASSAY IN VARIOUS MEDICAL AND OSTEOARTICULAR DISORDERS**

P. Franchimont and G. Heynen, Philadelphia, J. B. Lippincott, 1976, 134 pp. \$15.00

This thesis is divided into three sections. The first section deals with the establishment of radioimmunoassays for calcitonin and parathormone, the second with physiological mechanisms regulating the secretion of parathormone and calcitonin in man, and the third with the levels of parathormone and calcitonin in various medical and osteoarticular disorders.

The first section is a detailed account of the authors' research in establishing each component needed for the radioimmunoassay of both calcitonin and parathormone. The items covered include preparation of respective labeled antigen, separation modalities, establishment of antibody specificity, quality control criteria, circulating forms of these hormones, and basal levels. This section occupies the larger of the three sections and is designed primarily for the radioimmunoassay practitioner interested in establishing assays for calcitonin and parathormone.

The second section documents the author's research concerning the effect of calcium and phosphate on parathormone and calcitonin secretion and the relationship between the calcitonin and other hormones such as growth hormone, gastrin, and glucagon. The authors confirm the known inverse relationship between serum calcium levels and secretion of parathormone and the direct relationship between serum calcium and calcitonin levels. The authors also introduce data suggesting that inorganic phosphate may play a predominant role in the regulation of the secretion of calcitonin.

The third section, like the other two, documents the authors' research concerning the value of radioimmunoassay for parathormone and calcitonin in primary hyperparathyroidism, hypoparathyroidism, Paget's disease, osteoporosis, osteopetrosis, and various other medical disorders such as medullary

carcinoma of the thyroid, polyadenomatosis, pernicious anemia, acromegaly, chronic renal failure, and various neoplasias. Although brief, each of the above is divided into the following subsections: materials and methods, results, and discussion.

This monograph is designed primarily for researchers interested in setting up a radioimmunoassay procedure for parathormone and calcitonin. All sections are well documented with references. However, clinicians would find the last three pages, entitled "general conclusions," a concise summary of the state of the art concerning the secretion and regulation of parathormone and calcitonin. The authors are to be congratulated for their extensive work in developing a radioimmunoassay for both parathormone and calcitonin and their contribution to the physiology and pathophysiology of these two hormones as evidenced by this thesis.

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### **ADMINISTRATION OF A RADIOLOGY DEPARTMENT**

Murray L. Ganower, Springfield, IL, Charles C. Thomas, 1976, 72 pp. \$7.50

The author has made an attempt to introduce management principles by describing his specific procedures implemented in performing certain administrative tasks in running a radiology department. The book is divided into nine chapters (59 pp.) covering the following tasks: patient control, messengers, the radiological examination, the file room, film interpretation, and report transcription.

Each chapter briefly describes the methodology which the author has implemented, or suggests, to insure the performance of each task. For example, in chapter two, describing patient control, the author states that the flow of patients to the department, their length of stay, and when they return to their rooms should be controlled by a central point. No references are offered in any of the chapters.

The text is neither on administration or management. The usefulness of this text is questionable. The material presented would be most suitable as an article in a professional journal.

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#### **RADIATION SPECTRA OF RADIONUCLIDES**

T. B. Metcalfe, Park Ridge, NJ, Noyes Data Corp. 1976, 394 pp.  
\$36.00

This reference book tabulates physical data necessary for identification of the radionuclides present in an unknown gamma spectrum. The data are arranged in a table by increasing gamma energy. For each observed energy, all known radionuclides emitting photons of that energy are listed. The table is divided into consecutively numbered subtables, each subtable being associated with a particular radionuclide. The subtable lists physical data for the radionuclide, including complete gamma and beta spectra,

percent emissions when known, and half-life. As higher-energy gamma of a radionuclide appear in the table, repetition of the listing of the physical data is avoided by referencing the page number of the earliest subtable appearing for that radionuclide. This allows easy, complete identification of the unknown spectrum by energy and half-life.

In printing this book, the column headings for parent and daughter of the radionuclide listed were reversed. This does not detract from the usefulness of the table, however, if the user is aware of the error.

As a reference, this book will prove most useful to nuclear medicine personnel involved in spectra identification. Together with the standard radionuclide references, such as *Table of Isotopes* and *Nuclear Data Sheets*, *Radiation Spectra of Radionuclides* provides information necessary for physical analysis of the many radionuclides encountered in nuclear medicine.

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