

Procedures uniquely discussed in the third edition include aspects of Western blotting, capillary electrophoresis and mass spectrometry as they pertain to protein purification. Discussions of the availability and use of various adsorbents in protein chromatography have been revised and expanded, including hydrophobic adsorbents and reverse-phase chromatography, the synthesis and use of affinity adsorbents, and the theory and practice of immobilized metal chromatography. The discussion of procedures for measurement of protein concentration has been usefully revised, the bicinchoninic acid procedure has been added, and the entire topic has been placed in more prominent location in the text.

Those investigators having access to an earlier edition of this book may find that the magnitude and import of the changes do not justify purchase of the latest edition. However, those investigators in need of a text on protein purification will find this edition to be a very accessible and useful contemporary discussion of the topic. The book continues to be a valued resource for the novice, due in large part to a clear presentation of the chemical basis for each separation procedure, a helpful detailed guide to implementation of each procedure, and a set of sensible guidelines for the selection and ordering of separation procedures and for the assessment of results.

Earle Stellwagen

Biomembrane Protocols. II. Architecture and Function, Methods in Molecular Biology, vol. 27; edited by John M. Graham and Joan A. Higgins, Humana Press, Totowa, New Jersey, 1994; xiii + 362 pages, \$59.50. ISBN 0-89603-250-7.

Volume 27 of this series is the companion to volume 19: Biomembrane protocols, I. (Isolation and analysis) which was published in 1993. The focus of the recent volume is on methods which provide information on both molecular topology and dynamic aspects of membrane structure and function. However, as pointed out by the editors, an enormous range of topics and a great diversity of techniques are used in the study of biological membranes. Despite the presence of 24 chapters, some methodology has thus escaped treatment. Since this book would be most useful for scientists who plan to use one of the techniques presented, the key topics and techniques covered are listed below. These comprise: crystallization of membrane proteins; solid-phase lactoperoxidase iodination; biochemical methods to determine cell surface topology and polarity (use of [³H]borohydride, Triton X-114 and sulfo-*N*-hydroxysuccinimidobiotin); antipeptide antibodies; production of monoclonal antibodies; purification and reconstitution of a membrane protein (Ca²⁺/Mg²⁺-ATPase); fluorescence spectroscopy to study molecular interactions; determination of transverse topology of membrane lipids; analysis of cyclic nucleotides; phospholipid movement by fluorescent and spin-labeled probes; measurement of membrane fluidity and membrane fusion; analysis of G-proteins; protein kinases and phosphorylation; extraction and analysis of

phosphoinositides and phosphoinositols; measurement of intracellular Ca by microspectrofluorimetry; membrane permeabilization; measurement of ion fluxes and pH gradients; ligand binding and processing; binding of ligands to cell-surface receptors.

The introduction to each chapter usually includes a short discussion of the advantages as well as the pitfalls and drawbacks of the technique considered. The next sections are arranged as Materials, Methods, and finally Notes. The latter section is particularly appropriate since you there find almost everything that you have always wanted to know from a practical point of view, but which is absent in the original publications (good reference lists are of course also enclosed). With such a book in hand, researchers should succeed in duplicating in their own lab the techniques described, provided they test it on the same kind of biological materials. But alas, if difficulties do occur – and to continue on a famous note, I believe that one should not be afraid to ask private lessons from the authors of the various chapters: mastering the technique, they may solve your problems or help you to find the right material for the practice of these methods. In conclusion, this book may give new ideas for experiments and I do recommend it to those who plan to start on one of these techniques and want to improve their results.

Marc le Maire

The Parathyroids. Basic and Clinical Concepts; edited by J.P. Bilezikian, R. Marcus and M.A. Levine, Raven Press; New York, 1994; x + 889 pages. \$208.00. ISBN 0-7817-0017-5.

Basic and clinical research on the parathyroid glands has explosively progressed during the last decades. In an attempt to compile the present day knowledge on the parathyroids in one book exclusively devoted to these glands, the book "The Parathyroids; Basic and Clinical Concepts" has been written. The book contains 51 chapters which are written by 90 well-known experts. The chapters are generally extraordinarily up-to-date and contain all relevant present day knowledge within this field. The book represents an enormous challenge, since knowledge is growing rapidly, and usual publication times often make material of this kind outdated. However, as a whole, the book has become a success and the editors and authors should be congratulated on their work.

The book is appropriately dedicated to Dr. Gerald D. Aurbach (1929–91), who is one of the giants in the history of the parathyroid gland research, since he contributed significantly to the development of both basic and clinical parathyroid research. Most chapters in the book have been written by colleagues and friends of Dr. Aurbach, and, indeed, the significance of Dr. Aurbach in the development of several research lines is reflected in several of the chapters.

The first section of the book deals with anatomy and physiology of the parathyroid glands, calcium homeostasis, regulation of parathyroid hormone (PTH) secretion by dietary calcium and vitamin D, effects of PTH on bone tissue, autocrine/paracrine actions in the parathyroid glands, and the chromogranins. The complicated issues of the inverse sigmoidal calcium/PTH relation with the four parameter model and the hysteresis, the signal transduction in the parathyroid cells, and the G-protein dependent calcium receptor, are excellently reviewed by Dr. Brown with up-to-date references from the last years. Also the chapter on autocrine and paracrine regulation of the parathyroid glands, with

special regard to growth factors and endothelin, by Dr. Sakaguchi, and that on the chemistry and biology of chromogranin-derived peptides by Dr. Cohn and collaborators, are well written up-to-date reviews on hot issues. These chapters show, for example, that regulation by extracellular calcium on the expression of fibroblastic growth factor (FGF) and its receptors might represent a new regulatory concept for parathyroid growth, and that there is a potential regulatory role in parathyroid glands by the chromogranin-derived peptides β -granin, pancreastatin and parastatin.

The next section of the book deals with the biosynthesis and metabolism of PTH, PTH related protein (PTHrP) and PTH/PTHrP receptors, PTH assays and G-proteins. A chapter by Dr. Kronenberg and collaborators covers the regulation of PTH biosynthesis and expression of the PTH gene, located on chromosome 11, and the regulation of PTH degradation to various fragments, and a chapter by Drs. Chouh and Rosenblatt covers the characterisation of the PTH/PTHrP receptor and the structure/activity relationship for PTH and PTHrP. Other informative chapters describe the G-proteins and the signal transduction pathways mediating the actions of PTH/PTHrP, mainly involving cyclic AMP and phosphoinositide hydrolysis.

The third section of the book is devoted to PTHrP and other PTH-independent causes to hypercalcemia. PTHrP is fully reviewed by Drs. Broadus and Stewart with regard to structure, synthesis, expression, which occurs in a variety of different tissues, and possible physiological actions. Furthermore, measurements of PTHrP are reviewed in this section as are other causes to hypercalcemia, such as transforming growth factor- α (TGF- α), interleukin (IL)-6, tumour necrotic factor (TNF)- α , arachidonic acid metabolites and vitamin D. Also, management of acute hypercalcemia is reviewed.

Biomembrane Protocols / . Isolation and Analysis Methods in Molecular Biology John M. Walker, SERIES EDITOR 19. Bio Biomembrane Protocols: I. Isolation and Analysis. GSM Architecture, Protocols and Services Third Edition GSM Architecture, Protocols and Services Third Edition J. E Biomembrane Protocols: I. Isolation and Analysis (Methods in Molecular Biology). CHAPTER 1 The Identification of Subcellular Fractions from Mammalian Cells John M. Graham 1. Introduction 1.1. Background Biomembrane Electrochemistry. Biomembrane Transport. Biomembrane Transport This Page Intentionally Left Blank Biomembrane Transport Lon J. Van Winkle Midwestern Univer Function and Meaning in Classic Maya Architecture. From: Methods in Molecular Biology, Vol. 115: Immunocytochemical Methods and Protocols Edited by: L. C. Javois © Humana Press Inc., Totowa, NJ. 3. 4 Mao, Javois, and Kent. the preparations are not permanent. Methods 1, 3-23. 26. Grube, D. (1980) Immunoreactivities of gastrin (G) cells. II. Nonspecific binding of immunoglobulins to G-cells by ionic interactions. Histochemistry 66, 149-167. 27. DeMey, J. and Moeremans, M. (1986) Raising and testing polyclonal antibodies for immunocytochemistry, in Immunocytochemistry: Modern Methods and Applications (Polak, J. M. and VanNoorden, S., eds.), Wright, Bristol, England, pp. 3-12. Architecture and Function (Humana Press, 1993)(ISBN 0896032507)(C)(T)(352s).djvu Size: 2.56 MB Uploaded: 12/21/2019. Status: AVAILABLE. Information: Volume info: Series: Methods in molecular biology 027 Periodical: Author: John M. Graham, Joan A. Higgins Year: 1993 Edition: Publisher: Humana Press City: Pages: 352 PagesInFile: 352 Language: English Topic: Biology > Molecular Library: kolxoz-dop Library issue Architecture and Function. (Methods in Molecular Biology #27). by. John M. Graham Architecture and Function is concerned exclusively with the architecture and activities of membranes, whereas the companion volume, Biomembrane Protocols: I. Isolation and Analysis, deals with their isolation and compositional analysis. The aim of each chapter is to provide detailed technical and methodological information that will allow the reader to perform the technique successfully, without the need to consult other texts. Detailed reviews of membrane structure and function are not included, except where they are relevant to the choice or efficacy of a particular procedure. Start your review of Biomembrane Protocols: II. Architecture and Function. Write a review. Buy a cheap copy of Biomembrane Protocols: II. Architecture book by John M. Graham. There have been many important advances in our understanding of biological membrane structure and function over the last decade. Much of this progress has been Free shipping over \$10. Book Overview. There have been many important advances in our understanding of biological membrane structure and function over the last decade. Much of this progress has been driven by the development of new techniques for studying membrane components and their interactions. Traditionally, the investigation of membranes has largely occurred within the domains of biochemistry, physical chemistry, and cell biology; but many of the most significant advances have Read Full Overview.