Principles of Bone Biology

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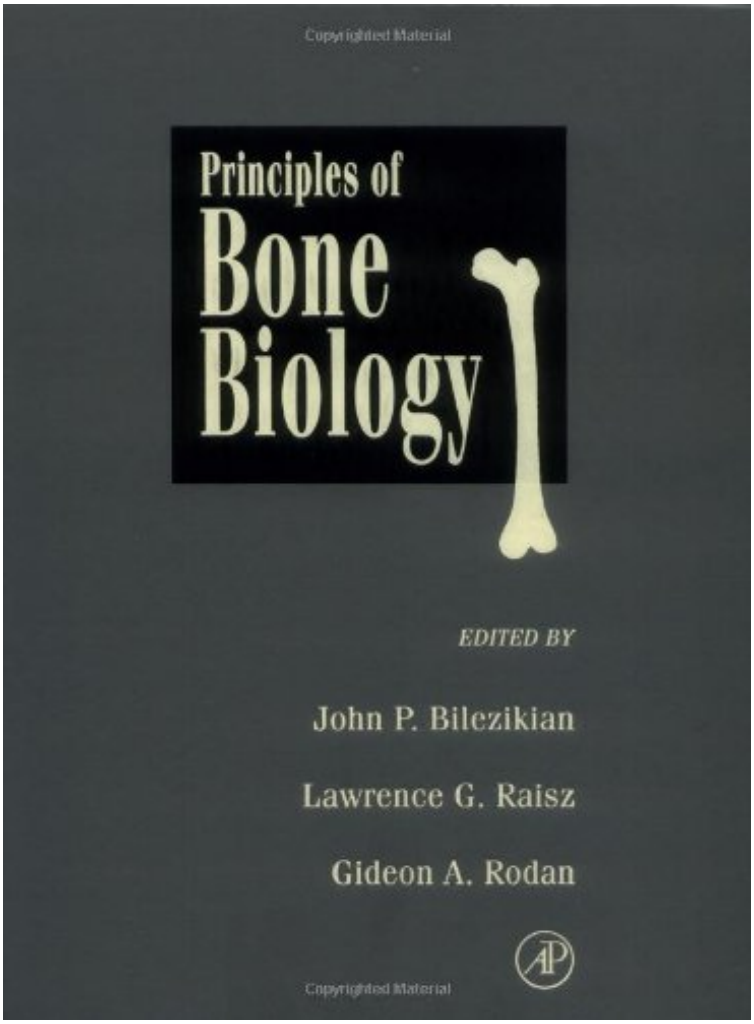

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From Academic Press : Principles of Bone Biology before purchasing it in order to gage whether or not it would be worth my time, and all praised Principles of Bone Biology:

3 of 4 people found the following review helpful. Bone BiologyBy A CustomerThis book is an encyclopedic and thorough survery of normal bone, bone biology, formation, and remodeling. Clincial aspects of bone are also covered in great detail. For a volume this size with multiple authors, the book maintains a uniformly high standard. The illustrations are excellent and color plates are used where necessary. While one plate in Chapter 17 was to go in Chapter 18, it is a minor point. The chapters on the hormonal control of bone remodelling and the discussion of the process of remodelling were particularly interesting and well done. For graduate students or physicians interested in bone biology, the volume is a must!

This comprehensive, authoritative, and timely work deals with all aspects of bone biology, including developmental and functional issues, pharmacology, and pathobiology. In addition, there is a workshop section which deals with actual methods and techniques relevant to investigators in this field. Principles of Bone Biology provides the reader with the most recent information, views, and references, focused on individual topics, contributed by the foremost authorities in the field. Key Features* Written, produced, and published in less than one year* Provides succinct coverage of the subjects* Easy-to-read* Highly informative to both the newcomer and the initiated to the field* Spans the spectrum from molecular biology to in vivo pharmacology

From The New England Journal of MedicineOver the past two decades the field of bone biology has expanded rapidly and exponentially. This remarkable growth is due to a large extent to the development of tools that allow an understanding of the fundamental molecular and cellular mechanisms controlling bone metabolism in physiologic and pathophysiologic conditions. A spinoff of this research endeavor was the development of new diagnostic and therapeutic tools and their application to clinical investigations of various bone diseases. Moreover, skeletal disorders received progressively more attention with the appreciation of their prevalence in the population. One of these disorders, osteoporosis, was little known 20 years ago, but today is considered a major public health problem requiring preventive programs and the support of fundamental and clinical research. The book consists of nearly 100 chapters in four sections. The first and most extensive part deals with basic principles of bone biology. It encompasses a series of chapters on the generation and function of bone-forming and bone-resorbing cells, their interaction with the bone marrow environment, and the endocrine and local factors controlling bone activity. The structure, synthesis, and regulation of the bone-matrix components, the various adhesion molecules in bone cells, and the components that determine the mechanical behavior of bone are also reviewed. Several of the chapters describe functional studies that use powerful genetic means to assess in vivo the role of supposedly important controlling or structural molecules of bony tissue. The next section logically follows, since it presents 17 chapters describing how the basic knowledge discussed in the first part can be used to explain the pathogenesis of metabolic bone and calcium phosphate disorders. These chapters discuss the molecular features that underlie diseases such as osteoporosis, hyperparathyroidism, hypercalcemia in malignant conditions and skeletal metastasis, and Paget's disease, as well as rarer conditions. The third section consists of a series of overviews of the mechanisms by which therapeutic agents exert beneficial effects on bone metabolism. Some of these agents, such as bisphosphonates, calcitonin, estrogens, and fluoride, are in current clinical use. Others are still under development. The fourth section presents the state of the art of various methods and tools used in both basic and clinical bone research. This section rounds off advantageously the previous ones. It will allow readers with various backgrounds to gain rapid insight into the way one can clone or knock out genes, obtain basic information on the usefulness and limitations of different cell-culture or tissue-culture systems, or use methods available for the diagnosis and therapeutic monitoring of bone diseases. Most chapters are necessarily brief, but on the whole they adequately present the essentials while stimulating the reader to learn more about a specific area. Many diagrams illustrate important concepts. Several chapters contain black-and-white or colored micrographs of very good quality. The sources of the information in the tables are often cited. The references at the end of each of the 97 chapters are usually abundant, although a selected list of a few key references would have been useful. A comprehensive index of 44 pages facilitates the search for a particular subject. As structured, this multiauthored book ran the risk of substantial overlap, particularly within related chapters appearing in the first three sections. However, the overlap is rather modest. Indeed, the related chapters complement one another, as for instance, the three chapters on the recently discovered calcium-sensing receptors. Nevertheless, more frequent inclusion of cross-references to other chapters of the book would have helped a reader looking for more information. Some chapters have no conclusions. Others conclude with a summary of the main knowledge. A few end the way the readers will probably appreciate most -- by adding to the summary a vision of the future. This book will be useful to newcomers in the field or bone specialists who want basic information on unfamiliar subjects. Students, teachers, and practitioners will benefit from reading it, and investigators will use it as a reference work; it will certainly be consulted frequently. ed by Jean-Philippe Bonjour, M.D. "This book will be useful to newcomers in the field or bone specialists who want basic information on unfamiliar subjects. Students, teachers, and practitioners will benefit from reading it, and investigators will use it as a reference work; it will certainly be consulted frequently."Jean-Philippe Bonjour, M.D., in the NEW ENGLAND JOURNAL OF MEDICINEAbout the AuthorDr. Bilezikian, Professor of Medicine and Pharmacology at the College of Physicians and Surgeons, Columbia University is the Chief of the Division of Endocrinology and Director of the Metabolic Bone Diseases Program at Columbia-Presbyterian Medical Center. He also serves as Associate Chair, Department of Medicine. Dr. Bilezikian received his undergraduate training at Harvard College and his medical training at the College of Physicians and Surgeons. He completed four years of house staff training (internship and residency) including the Chief Medical Residency of the Medical Service at Columbia Presbyterian Medical Center. Dr. Bilezikian received his training in Metabolic Bone Diseases and in Endocrinology at the NIH where he served as a Clinical Associate in the Mineral Metabolism Branch under the

tutelage of Dr. Gerald Aurbach. Dr. Bilezikian belongs to a number of professional societies, including the American Society for Bone and Mineral Research, of which he served as President in 1996. He is a member of the Endocrine Society, the American Federation for Clinical Research, the American Society for Clinical Investigation, the Association of American Physicians, the American Association of Clinical Endocrinologists, the American Society for Pharmacology and Experimental Therapeutics, and the International Society of Clinical Densitometry, of which he is President. He is Editor-in-Chief of the Journal of Clinical Endocrinology and Metabolism. His books include Editor-in-Chief of The Parathyroids (1994), and co-editor of Principles of Bone Biology (1996), The Aging Skeleton (1999), and Dynamics of Bone and Cartilage Metabolism (1999). He has been on numerous panels, including serving as Chair of the NIH Consensus Development Panel on Optimal Calcium Intake, and the Food and Nutrition Board of the National Academy of Sciences. He is a major national and international spokesperson for the field of metabolic bone diseases. Dr. Bilezikian's major research inteDr. Raisz is Professor of Medicine and Program Director of the General Clinical Research Center at the University of Connecticut Health Center. He has been carrying out laboratory and clinical studies in the field of osteoporosis and bone metabolism for over 40 years. He has mentored a large number of investigators in these areas both here at the University of Connecticut and previously at the University of Rochester School of Medicine. His current studies include an analysis of the effects of estrogen and androgen on the expression of cytokines and growth factors in bone, which is being carried out in both humans and animal models, studies of the role of prostaglandins in bone metabolism using transgenic mice, studies on the effects of progestins on bone turnover in postmenopausal women and tissue culture and animal studies on new antiresorptive and anabolic agents carried out in collaboration with the pharmaceutical industry.Dr. Rodan graduated from the Hebrew University Medical School (Jerusalem) in 1965, had two years residency in oncology and obtained a Ph.D. in chemistry in 1970 from the Weizmann Institute of Science, Israel. In 1970, he joined the University of Connecticut, where he became chairman of the Department of Oral Biology in 1978. In 1985, he was recruited by Merck to head the Department of Bone Biology and Osteoporosis Research and, since 1986, holds a joint appointment at the University of Pennsylvania as Adjunct Professor of Pathology. The scientific contributions of Dr. Rodan and his colleagues include: establishment and characterization of osteoblastic cell lines in culture, which helped define the osteoblastic phenotype, the sequential expression of phenotypic genes, the interaction between osteoblasts and osteoclasts, and the development of a sensitive parathyroid hormone bioassay, which eventually led to the purification of parathyroid hormone-related peptide; other contributions include bone cell responses to mechanical stimuli and the role of prostaglandin E in that process. At Merck, Dr. Rodan initiated the effort which led to the development of the osteoporosis drug Fosamax and contributed to the understanding of the mode of action of bisphosphonates. Dr. Rodan has served on NIH study sections, council and other advisory panels; he has been an Associate Editor of the Journal of Bone and Mineral Research, is currently Associate Editor of Bone, and member of several editorial boards. Dr. Rodan has been council member, program chairman and president of ASBMR; member of the Board of Directors of the National Osteoporosis Foundation and is currently president elect of the International Bone and Mineral Society. Dr. Rodan is the recipient of the Kennedy prize from the Weizmann Institute of science, the Neuman prize from the ASBMR, the Pioneer Award of the National Osteoporosis Foundation and the Goldhaber award of Harvard School of Dental Medicine.