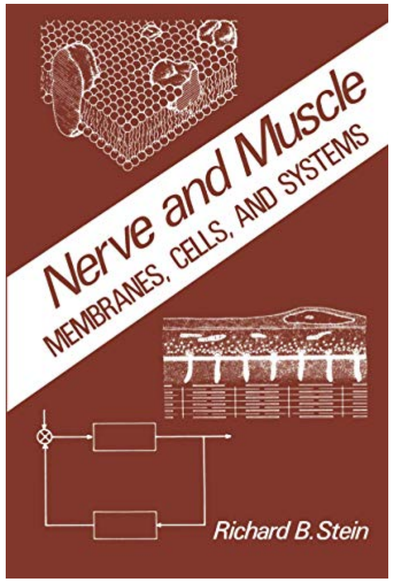

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Cellular Physiology of Nerve and Muscle-Gary G. Matthews 2009-04-01 Cellular Physiology of Nerve and Muscle, Fourth Edition offers a state of the art introduction to the basic physical, electrical and chemical principles central to the function of nerve and muscle cells. The text begins with an overview of the origin of electrical membrane potential, then clearly illustrates the cellular physiology of nerve cells and muscle cells. Throughout, this new edition simplifies difficult concepts with accessible models and straightforward descriptions of experimental results. An all-new introduction to electrical signaling in the nervous system. Expanded coverage of synaptic transmission and synaptic plasticity. A quantitative overview of the electrical properties of cells. New detailed illustrations.

Nerve and Muscle-R. Stein 2012-03-19 There has been a convergence in recent years of people from the physical and biological sciences and from various engineering disciplines who are interested in analyzing the electrical activity of nerve and muscle quantita tively. Various courses have been established at the graduate level or final-year undergraduate level in many universities to teach this subject matter, yet no satisfactory short text has existed. The present book is an attempt to fill this gap, and arises from my experience in teaching this material over the past fifteen years to students on both sides of the Atlantic. Although covering a wide range of biophysi cal topics from the level of single molecules to that of complex systems, I have attempted to keep the text relatively short by considering only examples of the most general interest. Problems are included whenever possible at the end of each chapter so the reader may test his understand ing of the material presented and consider other examples which have not been included in the text.

Nerve-Muscle Cell Trophic Communication-Hugo L. Fernandez 2020-04-03 First Published in 1988, this book offers a full, comprehensive guide to the relationship between nerve endings and muscles and the ways in which they communicate. Carefully compiled and filled with a vast repertoire of notes, diagrams, and references this book serves as a useful reference for students of medicine, and other practitioners in their respective fields.

Molecular Biology of the Cell-Bruce Alberts 2004

Research Grants Index-National Institutes of Health (U.S.). Division of Research Grants 1962

Research Awards Index-

Anatomy and Physiology-J. Gordon Betts 2013-04-25

Women’s Health and Menopause-Roger Lobo 2002-10-31 The 4th International Symposium on Women's Health and Menopause, organized by the Giovanni Lorenzini Medical Foundation (Milan, Italy and Houston, Texas) focused on the new strategies to improve the quality of life of post-menopausal women. This volume illustrates the findings of this conference and includes information on the age-related degenerative processes occurring after menopause including cardiovascular disease, cancer, fractures and dementia.

Membrane Physiology and Cell Excitation-Bruce. Hendry 2013-03-09 This book is intended for undergraduates studying the biological and medical sciences. The field of excitable cell physiology is one which is found quite baffling by a significant minority of these students. My aim here is to provide a brief introductory account, based on a conceptual approach, rather than on a mathematical or historical description. Once the student has grasped certain basic ideas concerning excitable cell function, the individual examples which follow fit into a well-defined pattern. No attempt has been made to give credit in appropriate measure to the many scientists who have contributed to this field. The further reading cited has been chosen with the reader alone in mind. I would like to thank Tim Cripps for help and advice, also Charlie Tomson and Michael Hart for their careful reading of the manuscript. Finally I am indebted ·to Jenny Kenyon for her excellent typing of the work. Part One THE CONCEPT OF EXCITABILITY INTRODUCTION 1 1.1 The Excitable Tissues living organisms are able to respond to changes in their environment.

Nerve and Muscle-Richard Darwin Keynes 2001-03-15 Essential textbook for all undergraduate students of neurobiology, physiology, cell biology and preclinical medicine.

Cellular and Molecular Neurophysiology-Constance Hammond 2014-12-30 Cellular and Molecular Neurophysiology, Fourth Edition, is the only up-to-date textbook on the market that focuses on the molecular and cellular physiology of neurons and synapses. Hypothesis-driven rather than a dry presentation of the facts, the book promotes a real understanding of the function of nerve cells that is useful for practicing neurophysiologists and students in a graduate-level course on the topic alike. This new edition explains the molecular properties and functions of excitable cells in detail and teaches students how to construct and conduct intelligent research experiments. The content is firmly based on numerous experiments performed by top experts in the field This book will be a useful resource for neurophysiologists, neurobiologists, neurologists, and students taking graduate-level courses on neurophysiology. 70% new or updated material in full color throughout, with more than 350 carefully selected and constructed illustrations Fifteen appendices describing neurobiological techniques are interspersed in the text

Cell Physiology Source Book-Nicholas Sperelakis 2012-12-02 This authoritative book gathers together a broad range of ideas and topics that define the field. It provides clear, concise, and comprehensive coverage of all aspects of cellular physiology from fundamental concepts to more advanced topics. The Third Edition contains substantial new material. Most chapters have been thoroughly reworked. The book includes chapters on important topics such as sensory transduction, the physiology of protozoa and bacteria, the regulation of cell division, and programmed cell death. Completely revised and updated - includes 8 new chapters on such topics as membrane structure, intracellular chloride regulation, transport, sensory receptors, pressure, and olfactory/taste receptors Includes broad coverage of both animal and plant cells Appendixes review basics of the propagation of action potentials, electricity, and cable properties Authored by leading experts in the field Clear, concise, comprehensive coverage of all aspects of cellular physiology from fundamental concepts to more advanced topics

Biomedical Index to PHS-supported Research- 1994

Federation Proceedings- 1977

The Sarcolemma-International Study Group for Research in Cardiac Metabolism 1976

A Study of Nerve Physiology-Rafael Lorente de Nó 1947

Textbook of Veterinary Physiology-James G. Cunningham 1997-01-01 This textbook encompasses all aspects of systemic physiology, as well as physiological principles and concepts. Written in a concise format, the book includes clinical correlations to demonstrate the practical application of concepts. This edition features a chapter on male reproductive physiology, as well as expanded coverage of blood in the cardiovascular section. There is also new coverage of avian physiology in the Renal and Gastrointestinal sections. Chapter outlines, practice questions, and brief bibliographies for each chapter are intended to be helpful to students.

Annual Review of Physiology-James Murray Luck 1970

The New Encyclopaedia Britannica- 1980

Channels, Carriers, and Pumps-Wilfred D. Stein 2014-12-09 An introduction to the principles of membrane transport: How molecules and ions move across the cell membrane by simple diffusion and by making use of specialized membrane components (channels, carriers, and pumps). The text emphasizes the quantitative aspects of such movement and its interpretation in terms of transport kinetics. Molecular studies of channels, carriers, and pumps are described in detail as well as structural principles and the fundamental similarities between the various transporters and their evolutionary interrelationships. The regulation of transporters and their role in health and disease are also considered. Provides an introduction to the properties of transport proteins: channels, carriers, and pumps Presents up-to-date information on the structure of transport proteins and on their function and regulation Includes introductions to transport kinetics and to the cloning of genes that code transport proteins Furnishes a link between the experimental basis of the subject and theoretical model building

Physiology for Nursing Practice-Susan M. Hinchliff 2005 The third edition of this highly respected text has been designed to meet the physiological component throughout degree and diploma courses for nurses. Written and edited by respected nurse educators, it has been fully updated with extensive references to nursing literature throughout. In keeping with the first edition's focus on homeostasis, the new edition includes increased emphasis on disturbances to equilibrium and on aspects of growth, development and ageing. The clinical dimension has been retained and both clinical implications and nursing aspects have been increased and enhanced. The new text design and extensive use of full colour illustrations throughout will ensure that nursing students and their teachers will find that this is the only physiology text they need. Clear Learning Objectives Key Concepts emphasised for ease of reference Review Questions Clinical implications and nursing care highlighted throughout Annotated suggestions for Further Reading All chapters updated Focus on the significance of homeostasis New comprehensive chapter on human genetics and its relevance to practice Extensive references to nursing literature and research

Bulletin of the Johns Hopkins Hospital-Johns Hopkins Hospital 1956 Bound with v. 52-55, 1933-34, is the hospital's supplement: Bulletin of the Institute of the History of Medicine, Johns Hopkins University, v. 1-2.

Therapeutic Modalities in Rehabilitation-William E. Prentice 2005-05-18 The most comprehensive book on therapeutic modalities A Doody's Core Title! Provides a theoretically based but practically oriented guide to the use of therapeutic modalities. Perfect for the required course in the Physical Therapy curriculum or as a clinical reference, the text features extensive use of case studies, laboratory activities, and a renown illustration program.

Therapeutic Modalities in Sports Medicine-William E. Prentice 1994 A text for use in advanced courses in sports medicine, providing a theoretically based but practically oriented guide to the use of therapeutic modalities in the treatment of sports-related injury. Annotation copyrighted by Book News, Inc., Portland, OR

Regulation of Vascular Smooth Muscle Function-Raouf A. Khalil 2010 In book the role of Ca2+ and other signaling pathways of Vascular smooth muscle (VSM) contraction will be discussed. VSM contraction plays an important role in the regulation of vascular resistance and blood pressure, and its dysregulation may lead to vascular diseases such as hypertension and coronary artery disease. Under physiological conditions, agonist activation of VSM results in an initial phasic contraction followed by a tonic contraction. The initial agonist-induced contraction is generally believed to be due to Ca2+ release from the intracellular stores. Although VSM is unique in that it can sustain contraction with minimal energy expense, the mechanisms involved in the maintained VSM contraction are not clearly understood.

Human Physiology-Arthur J. Vander 1975 For introductory courses in human physiology.

Division of Labor in Cells-Geoffrey H. Bourne 2014-06-28 Division of Labor in Cells, Second Edition focuses on cytological techniques used in studies related to the complexities of cell structure and function. The publication first elaborates on the structure of cell membrane and cytoplasm, including the endoplasmic reticulum, nature of microsomes, differential centrifugation, and permeability of cell membranes. The book then takes a look at the mitochondria and Golgi apparatus. Topics

include metabolic substances found in the mitochondria, plant cells, protein and fat metabolism, lysosomes, metabolism of carbohydrates, plastids and chloroplasts, and chemical nature of the mitochondria. The manuscript elaborates on gland cells, muscle fibers, and nerve fibers and the nucleus and nucleic acids. Discussions focus on the striated muscle fiber, nucleocytoplasmic relationships, nucleic acids of the nucleus, DNA, RNA, and genes, chromosomes, and spindle fibers. The publication is a vital reference for researchers interested in cell structure and function.

Peripheral Nerve Regeneration-Ana Colette Maurício 2017-05-31 Peripheral nerve injuries are a high-incidence clinical problem that greatly affects patients' quality of life. Despite continuous refinement of microsurgery techniques, peripheral nerve repair still stands as one of the most challenging tasks in neurosurgery, as functional neuromuscular recovery is rarely satisfactory in these patients. Therefore, the improvement of surgical techniques and the clinical application of innovative therapies have been intensively studied worldwide. Direct nerve repair with epineural end-to-end sutures is still the gold standard treatment for severe neurotmesis injuries but only in cases where well-vascularized tension-free coaptation can be achieved. When peripheral nerve injury originates a significant gap between the nerve stumps, nerve grafts are required, with several associated disadvantages. Therefore, the development of scaffolds by tissue engineering can provide efficient treatment alternatives to stimulate optimum clinical outcome. Nerve conduit tailoring involves reaching ideal wall pores, using electrospinning techniques in their fabrication, surface coating with extracellular matrix materials, and adding of growth factors or cell-based therapies, among other possibilities. Also, intraluminal cues are employed such as the filling with hydrogels, inner surface modification, topographical design, and the introduction of neurotrophic factors, antibiotics, anti-inflammatories and other pharmacological agents. A comprehensive state of the art of surgical techniques, tissue-engineered nerve graft scaffolds, and their application in nerve regeneration, the advances in peripheral nerve repair and future perspectives will be discussed, including surgeons' and researchers' own large experience in this field of knowledge.

Nerve and Muscle Excitation-Douglas Junge 1981 Reference-text emphasizes the relationships of basic theoretical models to the observed properties of various types of excitable membranes. This expanded edition adds new chapters on single-channel currents, theories of single-channel behavior, and the structural basis of channel function. Annotation copyrighted by Book News, Inc., Portland, OR

Physiology of Excitable Membranes-J. Salánki 1981

Textbook of medical physiology-Arthur C. Guyton 1986

The Assembly of the Nervous System-Society for Developmental Biology. Symposium 1989

Perinatal Pharmacology-Jacob V. Aranda 1987

Therapeutic Modalities for Physical Therapists-Prentice 2001-05-03 This book provides theoretically based but practically oriented guide to the use of therapeutic modalities for students in physical therapy programs. It is intended for use in courses where various clinically oriented techniques and methods are presented. The second edition addresses a wide range of modalities, from electrical to thermal to manual to light (laser) therapy. Each chapter discusses the physiological basis for use, clinical applications, specific techniques of application through the use of related laboratory activities, and relevant individual case studies. The book is rounded out with pedagogical aids, including objectives, glossary of key terms, references, and appendices containing trigger points in the body and a list of manufactures of modality equipment.

Concepts of Biology-Samantha Fowler 2018-01-07 Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand.We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Society for Neuroscience Abstracts-Society for Neuroscience. Annual Meeting 1987

Scanning Electron Microscopy in Cell Biology and Medicine-Keiichi Tanaka 1981

Proceedings of the National Academy of Sciences of the United States of America- 1987

Muscle Cell and Tissue-Kunihiro Sakuma 2015-09-02 In order to complete tissue regeneration, various cells such as neuronal, skeletal, smooth, endothelial, and immune (e.g., macrophage) interact smoothly with each other. This book, Muscle Cells and Tissues, offers a wide range of topics such as stem cells, cell culture, biomaterials, epigenetics, therapeutics, and the creation of tissues and organs. Novel applications for cell and tissue engineering including cell therapy, tissue models, and disease pathology modeling are discussed. The book also deals with the functional role of autophagy in modulating muscle homeostasis and molecular mechanism regulating skeletal muscle mass. The chapters can be interesting for graduate students, postdocs, teachers, physicians, and for executives in biotech and pharmaceutical companies, as well as researchers in the fields of molecular biology and regenerative medicine.

Canadian Journal of Physiology and Pharmacology- 2004