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Cell Organelles - Reinhold G. Herrmann 2012-12-06
The compartmentation of genetic information is a fundamental feature of the eukaryotic cell. The metabolic capacity of a eukaryotic (plant) cell and the steps leading to it are overwhelmingly an endeavour of a joint genetic cooperation between nucleus/cytosol, plastids, and mitochondria. Alter ation of the genetic material in anyone of

these compartments or exchange of organelles between species can seriously affect harmoniously balanced growth of an organism. Although the biological significance of this genetic design has been vividly evident since the discovery of non-Mendelian inheritance by Baur and Correns at the beginning of this century, and became indisputable in principle after Renner's work on interspecific

nuclear/plastid hybrids (summarized in his classical article in 1934), studies on the genetics of organelles have long suffered from the lack of respectability. Non-Mendelian inheritance was considered a research sideline~if not a freak~by most geneticists, which becomes evident when one consults common textbooks. For instance, these have usually impeccable accounts of photosynthetic and respiratory energy conversion in chloroplasts and mitochondria, of metabolism and global circulation of the biological key elements C, N, and S, as well as of the organization, maintenance, and function of nuclear genetic information. In contrast, the heredity and molecular biology of organelles are generally treated as an adjunct, and neither goes as far as to describe the impact of the integrated genetic system.

Feline Dermatology - Chiara Noli 2020-06-15

This richly-illustrated handbook covers all aspects of modern feline dermatology,

from the approach to different signs and symptoms to the description of the etiology, pathogenesis, clinical manifestation, diagnosis and current treatment of each feline dermatological disease. Thus this manual serves as essential practical guide to the busy practitioner to quickly and surely tackle cats with dermatological conditions, and offers a current and complete reference tool for the feline veterinarian and the veterinary dermatologist.

Essentials of Exercise Physiology - William D. McArdle 2006

Fully revised and updated, this Third Edition provides excellent coverage of the fundamentals of exercise physiology, integrating scientific and clinical information on nutrition, energy transfer, and exercise training. The book is lavishly illustrated with full-color graphics and photos and includes real-life cases, laboratory-type activities, and practical problem-solving questions. This edition has an

Integrated Workbook in the margins that reinforces concepts, presents activities to test knowledge, and aids students in taking notes. An accompanying CD-ROM contains multiple-choice and true/false questions to help students prepare for exams. LiveAdvise online faculty support and student tutoring services are available free with the text.

Recognition, Evaluation, and Control of Indoor Mold - Bradley Prezant 2008

The Biopsychosocial Model of Health and Disease - Derek Bolton 2019-03-28

This open access book is a systematic update of the philosophical and scientific foundations of the biopsychosocial model of health, disease and healthcare. First proposed by George Engel 40 years ago, the Biopsychosocial Model is much cited in healthcare settings worldwide, but has been increasingly criticised for being vague, lacking in content, and in need of reworking in the

light of recent developments. The book confronts the rapid changes to psychological science, neuroscience, healthcare, and philosophy that have occurred since the model was first proposed and addresses key issues such as the model's scientific basis, clinical utility, and philosophical coherence. The authors conceptualise biology and the psychosocial as in the same ontological space, interlinked by systems of communication-based regulatory control which constitute a new kind of causation. These are distinguished from physical and chemical laws, most clearly because they can break down, thus providing the basis for difference between health and disease. This work offers an urgent update to the model's scientific and philosophical foundations, providing a new and coherent account of causal interactions between the biological, the psychological and social. *Physical Assessment of the Newborn* - Ellen P. Tappero,

DNP, RN, NNP-BC 2014-09-01
Physical Assessment of the Newborn, 5th Edition, is a comprehensive text with a wealth of detailed information on the assessment of the newborn. This valuable and essential resource illustrates the principles and skills needed to gather assessment data systematically and accurately, and also provides a knowledge base for interpretation of this data. Coverage addresses: gestational assessment, neurologic assessment, neonatal history, assessment of the dysmorphic infant, and systemic evaluation of individual body systems, as well as key information on behavioral and pain assessment, including the use of specific tools with various groups ranging from term to extremely preterm infants. Numerous tables, figures, illustrations, and photos, many of them in full color, are a major strength that enhances the book's usefulness as a clinical resource. The text is an excellent teaching tool and resource for anyone who

performs newborn examinations including nurses, neonatal and pediatric nurse practitioners, nurse-midwives, physicians and therapists. It can also serve as a core text for any program preparing individuals for advanced practice roles in neonatal care. KEY FEATURES: An authoritative and renowned text that comprehensively addresses all key aspects of newborn assessment Provides a well-ordered evaluation of individual body systems. Assists the practitioner in identifying infant state, behavioral clues, and signs of pain, facilitating individualized care. Comprehensively addresses the tremendous range of variation among newborns of different gestational ages. The content is amplified by numerous photos and illustrations, many in full color Includes Power Point slides and an Image Bank [AP Biology Prep Plus 2020 & 2021](#) - Kaplan Test Prep 2020-03-03 Kaplan's AP Biology Prep Plus 2020 & 2021 is revised to align

with the 2020 exam changes. This edition features pre-chapter assessments to help you review efficiently, lots of practice questions in the book and even more online, 3 full-length practice tests, complete explanations for every question, and a concise review of the most-tested content to quickly build your skills and confidence. With bite-sized, test-like practice sets, expert strategies, and customizable study plans, our guide fits your schedule whether you need targeted prep or comprehensive review. We're so confident that AP Biology Prep Plus offers the guidance you need that we guarantee it: after studying with our online resources and book, you'll score higher on the AP exam—or you'll get your money back. The College Board has announced that there are May 2021 test dates available are May 3-7 and May 10-14, 2021. To access your online resources, go to kaptest.com/moreonline and follow the directions. You'll need your book handy to

complete the process. Personalized Prep. Realistic Practice. 3 full-length practice exams with comprehensive explanations and an online test-scoring tool to convert your raw score into a 1–5 scaled score Pre- and post-quizzes in each chapter so you can monitor your progress and study exactly what you need Customizable study plans tailored to your individual goals and prep time Online quizzes for additional practice · Focused content review of the essential concepts to help you make the most of your study time Test-taking strategies designed specifically for AP Biology Expert Guidance We know the test—our AP experts make sure our practice questions and study materials are true to the exam. We know students—every explanation is written to help you learn, and our tips on the exam structure and question formats will help you avoid surprises on Test Day. We invented test prep—Kaplan (kaptest.com) has been helping students for 80 years, and 9 out of 10

Kaplan students get into one or more of their top-choice colleges.

The Lipid Handbook, Second Edition - Frank D. Gunstone
1994-07-21

A great deal of research has been carried out on this important class of compounds in the last ten years. To ensure that scientists are kept up to date, the editors of the First Edition of *The Lipid Handbook* have completely reviewed and extensively revised their highly successful original work. *The Lipid Handbook: Second Edition* is an indispensable resource for anyone working with oils, fats, and related substances.

American Psychiatric Association Practice Guidelines - American Psychiatric Association 1996
The aim of the American Psychiatric Association Practice Guideline series is to improve patient care. Guidelines provide a comprehensive synthesis of all available information relevant to the clinical topic. Practice guidelines can be vehicles for

educating psychiatrists, other medical and mental health professionals, and the general public about appropriate and inappropriate treatments. The series also will identify those areas in which critical information is lacking and in which research could be expected to improve clinical decisions. The Practice Guidelines are also designed to help those charged with overseeing the utilization and reimbursement of psychiatric services to develop more scientifically based and clinically sensitive criteria.

BIO2010 - National Research Council 2003-02-13

Biological sciences have been revolutionized, not only in the way research is conducted with the introduction of techniques such as recombinant DNA and digital technology but also in how research findings are communicated among professionals and to the public. Yet, the undergraduate programs that train biology researchers remain much the same as they were before these

fundamental changes came on the scene. This new volume provides a blueprint for bringing undergraduate biology education up to the speed of today's research fast track. It includes recommendations for teaching the next generation of life science investigators, through: Building a strong interdisciplinary curriculum that includes physical science, information technology, and mathematics. Eliminating the administrative and financial barriers to cross-departmental collaboration. Evaluating the impact of medical college admissions testing on undergraduate biology education. Creating early opportunities for independent research. Designing meaningful laboratory experiences into the curriculum. The committee presents a dozen brief case studies of exemplary programs at leading institutions and lists many resources for biology educators. This volume will be important to biology faculty, administrators, practitioners,

professional societies, research and education funders, and the biotechnology industry.

Cell Structure & Function -

Guy Orchard 2014-05

Describes the structural and functional features of the various types of cell from which the human body is formed, focusing on normal cellular structure and function and giving students and trainees a firm grounding in the appearance and behavior of healthy cells and tissues on which can be built a robust understanding of cellular pathology.

America's Lab Report -

National Research Council
2006-01-20

Laboratory experiences as a part of most U.S. high school science curricula have been taken for granted for decades, but they have rarely been carefully examined. What do they contribute to science learning? What can they contribute to science learning? What is the current status of labs in our nation's high schools as a context for learning science? This book

looks at a range of questions about how laboratory experiences fit into U.S. high schools: What is effective laboratory teaching? What does research tell us about learning in high school science labs? How should student learning in laboratory experiences be assessed? Do all students have access to laboratory experiences? What changes need to be made to improve laboratory experiences for high school students? How can school organization contribute to effective laboratory teaching? With increased attention to the U.S. education system and student outcomes, no part of the high school curriculum should escape scrutiny. This timely book investigates factors that influence a high school laboratory experience, looking closely at what currently takes place and what the goals of those experiences are and should be. Science educators, school administrators, policy makers, and parents will all benefit from a better understanding of the need for

laboratory experiences to be an integral part of the science curriculum-and how that can be accomplished.

Cellular Organelles - Edward Bittar 1995-12-08

The purpose of this volume is to provide a synopsis of present knowledge of the structure, organisation, and function of cellular organelles with an emphasis on the examination of important but unsolved problems, and the directions in which molecular and cell biology are moving. Though designed primarily to meet the needs of the first-year medical student, particularly in schools where the traditional curriculum has been partly or wholly replaced by a multi-disciplinary core curriculum, the mass of information made available here should prove useful to students of biochemistry, physiology, biology, bioengineering, dentistry, and nursing. It is not yet possible to give a complete account of the relations between the organelles of two compartments and of the mechanisms by which some

degree of order is maintained in the cell as a whole. However, a new breed of scientists, known as molecular cell biologists, have already contributed in some measure to our understanding of several biological phenomena notably interorganelle communication. Take, for example, intracellular membrane transport: it can now be expressed in terms of the sorting, targeting, and transport of protein from the endoplasmic reticulum to another compartment. This volume contains the first ten chapters on the subject of organelles. The remaining four are in Volume 3, to which sections on organelle disorders and the extracellular matrix have been added.

The Cambridge Handbook of Infant Development - Jeffrey J. Lockman 2020-07-31

This multidisciplinary volume features many of the world's leading experts of infant development, who synthesize their research on infant learning and behaviour, while integrating perspectives across neuroscience, socio-cultural

context, and policy. It offers an unparalleled overview of infant development across foundational areas such as prenatal development, brain development, epigenetics, physical growth, nutrition, cognition, language, attachment, and risk. The chapters present theoretical and empirical depth and rigor across specific domains of development, while highlighting reciprocal connections among brain, behavior, and social-cultural context. The handbook simultaneously educates, enriches, and encourages. It educates through detailed reviews of innovative methods and empirical foundations and enriches by considering the contexts of brain, culture, and policy. This cutting-edge volume establishes an agenda for future research and policy, and highlights research findings and application for advanced students, researchers, practitioners, and policy-makers with interests in understanding and promoting infant development.

Application of Liquid Chromatography in Food

Analysis - Oscar Núñez

2020-10-19

Food products are very complex mixtures consisting of naturally occurring compounds and other substances, generally originating from technological processes, agrochemical treatments, or packaging materials. However, food is no longer just a biological necessity for survival. Society demands healthy and safe food, but it is also increasingly interested in other quality attributes more related to the origin of the food, the agricultural production processes used, the presence or not of functional compounds, etc. Improved methods for the determination of authenticity, standardization, and efficacy of nutritional properties in natural food products are required to guarantee their quality and for the growth and regulation of the market. Nowadays, liquid chromatography with ultraviolet detection, or

coupled to mass spectrometry and high-resolution mass spectrometry, are among the most powerful techniques to address food safety issues and to guarantee food authenticity in order to prevent fraud. The aim of this book is to gather review articles and original research papers focused on the development of analytical techniques based on liquid chromatography for the analysis of food. This book is comprised of six valuable scientific contributions, including five original research manuscripts and one review article, dealing with the employment of liquid chromatography techniques for the characterization and analysis of feed and food, including fruits, extra virgin olive oils, confectionery oils, sparkling wines and soybeans. [Biology for AP® Courses](#) - Julianne Zedalis 2017-10-16 Biology for AP® courses covers the scope and sequence requirements of a typical two-semester Advanced Placement® biology course. The text provides

comprehensive coverage of foundational research and core biology concepts through an evolutionary lens. Biology for AP® Courses was designed to meet and exceed the requirements of the College Board's AP® Biology framework while allowing significant flexibility for instructors. Each section of the book includes an introduction based on the AP® curriculum and includes rich features that engage students in scientific practice and AP® test preparation; it also highlights careers and research opportunities in biological sciences.

Improving Diagnosis in Health Care - National Academies of Sciences, Engineering, and Medicine
2016-01-29

Getting the right diagnosis is a key aspect of health care - it provides an explanation of a patient's health problem and informs subsequent health care decisions. The diagnostic process is a complex, collaborative activity that involves clinical reasoning and

information gathering to determine a patient's health problem. According to *Improving Diagnosis in Health Care*, diagnostic errors-inaccurate or delayed diagnoses-persist throughout all settings of care and continue to harm an unacceptable number of patients. It is likely that most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences. Diagnostic errors may cause harm to patients by preventing or delaying appropriate treatment, providing unnecessary or harmful treatment, or resulting in psychological or financial repercussions. The committee concluded that improving the diagnostic process is not only possible, but also represents a moral, professional, and public health imperative. *Improving Diagnosis in Health Care*, a continuation of the landmark Institute of Medicine reports *To Err Is Human* (2000) and *Crossing the Quality Chasm* (2001), finds that diagnosis-

and, in particular, the occurrence of diagnostic errors has been largely unappreciated in efforts to improve the quality and safety of health care. Without a dedicated focus on improving diagnosis, diagnostic errors will likely worsen as the delivery of health care and the diagnostic process continue to increase in complexity. Just as the diagnostic process is a collaborative activity, improving diagnosis will require collaboration and a widespread commitment to change among health care professionals, health care organizations, patients and their families, researchers, and policy makers. The recommendations of *Improving Diagnosis in Health Care* contribute to the growing momentum for change in this crucial area of health care quality and safety.

DNA Science - David A. Micklos 2003

This is the second edition of a highly successful textbook (over 50,000 copies sold) in which a highly illustrated,

narrative text is combined with easy-to-use thoroughly reliable laboratory protocols. It contains a fully up-to-date collection of 12 rigorously tested and reliable lab experiments in molecular biology, developed at the internationally renowned Dolan DNA Learning Center of Cold Spring Harbor Laboratory, which culminate in the construction and cloning of a recombinant DNA molecule. Proven through more than 10 years of teaching at research and nonresearch colleges and universities, junior colleges, community colleges, and advanced biology programs in high school, this book has been successfully integrated into introductory biology, general biology, genetics, microbiology, cell biology, molecular genetics, and molecular biology courses. The first eight chapters have been completely revised, extensively rewritten, and updated. The new coverage extends to the completion of the draft sequence of the human genome and the enormous impact these

and other sequence data are having on medicine, research, and our view of human evolution. All sections on the concepts and techniques of molecular biology have been updated to reflect the current state of laboratory research. The laboratory experiments cover basic techniques of gene isolation and analysis, honed by over 10 years of classroom use to be thoroughly reliable, even in the hands of teachers and students with no prior experience. Extensive prelab notes at the beginning of each experiment explain how to schedule and prepare, while flow charts and icons make the protocols easy to follow. As in the first edition of this book, the laboratory course is completely supported by quality-assured products from the Carolina Biological Supply Company, from bulk reagents, to useable reagent systems, to single-use kits, thus satisfying a broad range of teaching applications.

Classical and Quantum Dynamics in Condensed Phase Simulations - Bruce J Berne

1998-06-17

The school held at Villa Marigola, Lerici, Italy, in July 1997 was very much an educational experiment aimed not just at teaching a new generation of students the latest developments in computer simulation methods and theory, but also at bringing together researchers from the condensed matter computer simulation community, the biophysical chemistry community and the quantum dynamics community to confront the shared problem: the development of methods to treat the dynamics of quantum condensed phase systems. This volume collects the lectures delivered there. Due to the focus of the school, the contributions divide along natural lines into two broad groups: (1) the most sophisticated forms of the art of computer simulation, including biased phase space sampling schemes, methods which address the multiplicity of time scales in condensed phase problems, and static equilibrium methods for

treating quantum systems; (2) the contributions on quantum dynamics, including methods for mixing quantum and classical dynamics in condensed phase simulations and methods capable of treating all degrees of freedom quantum-mechanically. Contents: Barrier Crossing: Classical Theory of Rare but Important Events (D Chandler) Monte Carlo Simulations (D Frenkel) Molecular Dynamics Methods for the Enhanced Sampling of Phase Space (B J Berne) Constrained and Nonequilibrium Molecular Dynamics (G Ciccotti & M Ferrario) From Eyring to Kramers: Computation of Diffusive Barrier Crossing Rates (M J Ruiz-Montero) Monte Carlo Methods for Sampling of Rare Event States (W Janke) Proton Transfer in Ice (D Marx) Nudged Elastic Band Method for Finding Minimum Energy Paths of Transitions (H Jónsson et al.) RAW Quantum Transition State Theory (G Mills et al.) Dynamics of Peptide

Folding (R Elber et al.) Theoretical Studies of Activated Processes in Biological Ion Channels (B Roux & S Crouzy) The Semiclassical Initial Value Representation for Including Quantum Effects in Molecular Dynamics Simulations (W H Miller) Tunneling in the Condensed Phase: Barrier Crossing and Dynamical Control (N Makri) Feynman Path Centroid Methods for Condensed Phase Quantum Dynamics (G A Voth) Quantum Molecular Dynamics Using Wigner Representation (V S Filinov et al.) Nonadiabatic Molecular Dynamics Methods for Diffusion (D Laria et al.) and other papers Readership: Computational and statistical physicists. Keywords: Quantum; Molecular Dynamics; Dynamics Reviews: "... this volume is a useful introduction to currently popular, and widely-used techniques in chemical and statistical physics. The authors are well-respected researchers in the field and the level is appropriate to graduate

students and researchers.”

Journal of Statistical Physics

Necessity, Use, and Care of Laboratory Dogs at the U.S.

Department of Veterans

Affairs - National Academies of Sciences, Engineering, and Medicine 2020-10-28

For many years, laboratory dogs have served as important animal models for biomedical research that has advanced human health. Conducted at the request of the U.S.

Department of Veterans Affairs (VA), this report assesses whether laboratory dogs are or will continue to be necessary for biomedical research related to the VA's mission. The report concludes that using laboratory dogs in research at the VA is scientifically necessary for only a few areas of current biomedical research. The report recommends that the VA adopt an expanded set of criteria for determining when it is scientifically necessary to use laboratory dogs in VA biomedical research; that the VA promote the development and use of alternatives to laboratory dogs; and highlights

opportunities for the VA to enhance the welfare of laboratory dogs that are being used in biomedical research areas for which they have been deemed necessary.

Integrating Food into Urban Planning

- Yves Cabannes
2018-11-22

The integration of food into urban planning is a crucial and emerging topic. Urban planners, alongside the local and regional authorities that have traditionally been less engaged in food-related issues, are now asked to take a central and active part in understanding how food is produced, processed, packaged, transported, marketed, consumed, disposed of and recycled in our cities. While there is a growing body of literature on the topic, the issue of planning cities in such a way they will increase food security and nutrition, not only for the affluent sections of society but primarily for the poor, is much less discussed, and much less informed by practices. This volume, a collaboration between the

Bartlett Development Planning Unit at UCL and the Food Agricultural Organisation, aims to fill this gap by putting more than 20 city-based experiences in perspective, including studies from Toronto, New York City, Portland and Providence in North America; Milan in Europe and Cape Town in Africa; Belo Horizonte and Lima in South America; and, in Asia, Bangkok and Tokyo. By studying and comparing cities of different sizes, from both the Global North and South, in developed and developing regions, the contributors collectively argue for the importance and circulation of global knowledge rooted in local food planning practices, programmes and policies.

Phospholipids - Israel Hanin
2013-11-11

Proceedings of the Fifth International Colloquium on Lecithin, held in Cannes, France, April 10-12, 1989

Cannabis in Medicine -

Kenneth Finn 2020-07-09

Legalization of marijuana is becoming increasingly

prominent in the United States and around the world. While there is some discussion of the relationship between marijuana and overall health, a comprehensive resource that outlines the medical literature for several organ systems, as well as non-medical societal effects, has yet to be seen. While all physicians strive to practice evidence-based medicine, many clinicians aren't aware of the facts surrounding cannabis and are guided by public opinion. This first of its kind book is a comprehensive compilation of multiple facets of cannabis recommendation, use and effects from a variety of different perspectives. Comprised of chapters dedicated to separate fields of medicine, this evidence-based guide outlines the current data, or lack thereof, as well as the need for further study. The book begins with a general overview of the neurobiology and pharmacology of THC and hemp. It then delves into various medical concerns that plague specific disciplines of

medicine such as psychiatry, cardiology, gastrointestinal and neurology, among others. The end of the book focuses on non-medical concerns such as public health and safety, driving impairment and legal implications. Comprised of case studies and meta-analyses, *Cannabis in Medicine: An Evidence-Based Approach* provides clinicians with a concise, evidence-based guide to various health concerns related to the use of marijuana. By addressing non-medical concerns, this book is also a useful resource for professionals working in the public health and legal fields.

Sensors in Water Pollutants Monitoring: Role of Material

- D. Pooja 2019-10-24

This book discusses the sensitivity, selectivity, and response times of different sensor materials and their potential application in the design of portable sensor systems for monitoring water pollutants and remediation systems. Beginning with an overview on water pollutants and analytical methods for

their detection, the book then moves on to describing the advances in sensor materials research, and the scope for their use in different types of sensors. The book lays emphasis on techniques such as colorimetric, fluorescence, electrochemical, and biological sensing of conventional and emerging pollutants. This book will serve as a handy guide for students, researchers, and professional engineers working in the field of sensor systems for monitoring water pollutants to address various challenges. *2020 Handbook of Emergency Cardiovascular Care for Healthcare Providers (International English)* - American Heart Association 2020-11-04 20-2872

Textbook of Pediatric Gastroenterology, Hepatology and Nutrition - Stefano Guandalini 2015-09-30

This textbook provides a comprehensive and state-of-the-art overview of the major issues specific to the field of pediatric gastroenterology, hepatology, and nutrition. The

first part of the book, Gastroenterology and Nutrition, presents in a systematic way the overall scope of issues encountered by children (newborn to teenagers) suffering from disorders of the gastrointestinal tract, pancreas and/or presenting nutritional issues. These chapters are structured in logical sections to facilitate consultation and include major topics ranging from congenital disorders to gastrointestinal problems of the newborn, infectious diseases of the gastrointestinal tract, and approach to nutritional problems in the various pediatric ages. The second part of the book, Hepatology, is articulated in a series of chapters which present a comprehensive review of congenital and acquired disorders of the biliary tract and liver. This section also includes a critical analysis of available diagnostic and therapeutic procedures and future perspectives. Written by experts in the field, Textbook of Pediatric

Gastroenterology, Hepatology and Nutrition: A Comprehensive Guide to Practice constitutes a much needed, innovative resource combining updated, reliable and comprehensive information with agile consultation for a streamlined approach to the care of children with such disorders.

Numerical Computations with GPUs - Volodymyr Kindratenko
2014-07-03

This book brings together research on numerical methods adapted for Graphics Processing Units (GPUs). It explains recent efforts to adapt classic numerical methods, including solution of linear equations and FFT, for massively parallel GPU architectures. This volume consolidates recent research and adaptations, covering widely used methods that are at the core of many scientific and engineering computations. Each chapter is written by authors working on a specific group of methods; these leading experts provide mathematical background,

parallel algorithms and implementation details leading to reusable, adaptable and scalable code fragments. This book also serves as a GPU implementation manual for many numerical algorithms, sharing tips on GPUs that can increase application efficiency. The valuable insights into parallelization strategies for GPUs are supplemented by ready-to-use code fragments. Numerical Computations with GPUs targets professionals and researchers working in high performance computing and GPU programming. Advanced-level students focused on computer science and mathematics will also find this book useful as secondary text book or reference.

Plant Cell Organelles - J

Pridham 2012-12-02

Plant Cell Organelles contains the proceedings of the Phytochemical Group Symposium held in London on April 10-12, 1967. Contributors explore most of the ideas concerning the structure, biochemistry, and function of the nuclei, chloroplasts,

mitochondria, vacuoles, and other organelles of plant cells. This book is organized into 13 chapters and begins with an overview of the enzymology of plant cell organelles and the localization of enzymes using cytochemical techniques. The text then discusses the structure of the nuclear envelope, chromosomes, and nucleolus, along with chromosome sequestration and replication. The next chapters focus on the structure and function of the mitochondria of higher plant cells, biogenesis in yeast, carbon pathways, and energy transfer function. The book also considers the chloroplast, the endoplasmic reticulum, the Golgi bodies, and the microtubules. The final chapters discuss protein synthesis in cell organelles; polysomes in plant tissues; and lysosomes and spherosomes in plant cells. This book is a valuable source of information for postgraduate workers, although much of the material could be used in undergraduate courses.

Microbial Biotechnology -

Jayanta Kumar Patra
2018-02-07

This edited book, is a collection of 20 articles describing the recent advancements in the application of microbial technology for sustainable development of agriculture and environment. This book covers many aspects like agricultural nanotechnology, promising applications of biofuels production by algae, advancements and application of microbial keratinase, biocontrol agents, plant growth promoting rhizobacteria, bacterial siderophore, use of microbes in detoxifying organophosphate pesticides, bio-surfactants, biofilms, bioremediation degradation of phenol and phenolic compounds and bioprospecting of endophytes. This book intends to bring the latest research advancements and technologies in the area of microbial technology in one platform, providing the readers an up-to-date view on the area. This book would serve as an excellent reference book for researchers and students in the

agricultural, environmental and microbiology fields.

Digital Science - Tatiana Antipova 2022-01-17

This book gathers selected papers that were submitted to the 2021 International Conference on Digital Science (DSIC 2021) that aims to make available the discussion and the publication of papers on all aspects of single and multidisciplinary research on conference topics. DSIC 2021 was held on October 15-17, 2021. An important characteristic feature of conference is the short publication time and worldwide distribution. Written by respected researchers, the book covers a range of innovative topics related to: digital economics; digital education; digital engineering; digital environmental sciences; digital finance, business and banking; digital health care, hospitals and rehabilitation; digital media; digital medicine, pharma and public health; digital public administration; digital technology and applied sciences. This book may be

used for private and professional non-commercial research and classroom use (e.g., sharing the contribution by mail or in hard copy form with research colleagues for their professional non-commercial research and classroom use); for use in presentations or handouts for any level students, researchers, etc.; for the further development of authors' scientific career (e.g., by citing, and attaching contributions to job or grant application).

Clinical Ethics in Pediatrics

- Douglas S. Diekema

2011-09-08

This volume provides a practical overview of the ethical issues arising in pediatric practice. The case-based approach grounds the bioethical concepts in real-life situations, covering a broad range of important and controversial topics, including informed consent, confidentiality, truthfulness and fidelity, ethical issues relating to perinatology and neonatology, end-of-life issues, new technologies, and

problems of justice and public health in pediatrics. A dedicated section also addresses the topics of professionalism, including boundary issues, conflicts of interests and relationships with industry, ethical issues arising during training, and dealing with the impaired or unethical colleague. Each chapter contains a summary of the key issues covered and recommendations for approaching similar situations in other contexts. Clinical Ethics in Pediatrics: A Case-Based Textbook is an essential resource for all physicians who care for children, as well as medical educators, residents and scholars in clinical bioethics.

Interdisciplinary

Approaches to Food

Digestion - Ourania Gouseti

2019-02-13

For the first time, this singular and comprehensive text presents a focus on quantitative studies aiming to describe food digestion and the tools that are available for quantification. A case study

relevant to real-world applications places this theoretical knowledge in context and demonstrates the different ways digestion studies can be used to develop food products. Interdisciplinary Approaches to Food Digestion undertakes a multidisciplinary approach to food digestion studies, placing them in context and presenting relevant phenomena plus the challenges and limitations of different approaches. This book presents a unique, useful reference work to scientists, students, and researchers in the area of food science, engineering, and nutrition. Over the last two decades there has been an increasing demand for foods that deliver specific nutritional values. In addition, the dramatic increase of food related diseases such as obesity requires the development of novel food products that control satiety and glycemic response. Overall, digestion studies are gaining increasing attention in recent years, especially as the link between diet and

health/well-being becomes more evident. However, digestion is a complex process involving a wide range of disciplines such as medicine, nutrition, chemistry, materials science, and engineering. While a significant body of work exists within each discipline, there is a lack of a multidisciplinary approach on the topic which will provide a holistic view of the process. With Interdisciplinary Approaches to Food Digestion, researchers are finally presented with this much needed approach.

Gastrointestinal Physiology -
Menizibeya Osain Welcome
2018-06-20

This book offers one of the most comprehensive reviews in the field of gastrointestinal (GI) physiology, guiding readers on a journey through the complete digestive tract, while also highlighting related organs and glandular systems. It is not solely limited to organ system physiology, and related disciplines like anatomy and histology, but also examines the molecular and cellular

processes that keep the digestive system running. As such, the book provides extensive information on the molecular, cellular, tissue, organ, and system levels of functions in the GI system. Chapters on the roles of the gut as an endocrine, exocrine and neural organ, as well as its microbiome functions, broaden readers' understanding of the multi-organ networks in the human body. To help illustrate the interconnections between the physiological concepts, principles and clinical presentations, it outlines clinical examples such as pathologies that link basic science with clinical practice in special "clinical correlates" sections. Covering both traditional and contemporary topics, it is a valuable resource for biomedical students, as well as healthcare and scientific professionals.

Recent Advances in Density Functional Methods - Delano P Chong 1997-05-14

Of all the different areas in computational chemistry, density functional theory (DFT)

enjoys the most rapid development. Even at the level of the local density approximation (LDA), which is computationally less demanding, DFT can usually provide better answers than Hartree-Fock formalism for large systems such as clusters and solids. For atoms and molecules, the results from DFT often rival those obtained by ab initio quantum chemistry, partly because larger basis sets can be used. Such encouraging results have in turn stimulated workers to further investigate the formal theory as well as the computational methodology of DFT. This Part II expands on the methodology and applications of DFT. Some of the chapters report on the latest developments (since the publication of Part I in 1995), while others extend the applications to wider range of molecules and their environments. Together, this and other recent review volumes on DFT show that DFT provides an efficient and accurate alternative to traditional quantum chemical

methods. Such demonstration should hopefully stimulate fruitful developments in formal theory, better exchange-correlation functionals, and linear scaling methodology. Contents: On the Calculation of Energies and Optimised Geometries from Exchange-Correlation Potentials (D J Tozer & N C Handy) A Grid-Free Implementation of Density Functional Theory (J E Almlöf & Y C Zheng) Continuum Dielectric Models for the Solvent and Density Functional Theory: The State-of-the-Art (G D Luca et al.) On the Calculation of Multiplets (C A Daul et al.) Structural and Dynamical Features of Hydrogen Bonds from Conventional and Hybrid Density Functional Methods (C Adamo & V Barone) Chemistry by Density Functional Theory (C W Bauschlicher, Jr. et al.) The Self-Interaction Corrected Local Density Approximation Method (M A Whitehead) Index Readership: Researchers and graduate students in computational chemistry and computational

physics. keywords:

Experimental Methods in Wastewater Treatment -

Mark C. M. van Loosdrecht
2016-05-15

Over the past twenty years, the knowledge and understanding of wastewater treatment has advanced extensively and moved away from empirically based approaches to a fundamentally-based first principles approach embracing chemistry, microbiology, and physical and bioprocess engineering, often involving experimental laboratory work and techniques. Many of these experimental methods and techniques have matured to the degree that they have been accepted as reliable tools in wastewater treatment research and practice. For sector professionals, especially a new generation of young scientists and engineers entering the wastewater treatment profession, the quantity, complexity and diversity of these new developments can be overwhelming, particularly in developing countries where access to advanced level

laboratory courses in wastewater treatment is not readily available. In addition, information on innovative experimental methods is scattered across scientific literature and only partially available in the form of textbooks or guidelines. This book seeks to address these deficiencies. It assembles and integrates the innovative experimental methods developed by research groups and practitioners around the world. Experimental Methods in Wastewater Treatment forms part of the internet-based curriculum in wastewater treatment at UNESCO-IHE and, as such, may also be used together with video records of experimental methods performed and narrated by the authors including guidelines on what to do and what not to do. The book is written for undergraduate and postgraduate students, researchers, laboratory staff, plant operators, consultants, and other sector professionals.

The Newborn Lung - Eduardo

Bancalari 2018-06-19

Dr. Richard Polin's

Neonatology Questions and Controversies series highlights the most challenging aspects of neonatal care, offering trustworthy guidance on up-to-date diagnostic and treatment options in the field. In each volume, renowned experts address the clinical problems of greatest concern to today's practitioners, helping you handle difficult practice issues and provide optimal, evidence-based care to every patient. Stay fully up to date in this fast-changing field with *The Newborn Lung*, 3rd Edition. The most current clinical information throughout, including key management strategies that may reduce some of the chronic sequelae of neonatal respiratory failure. New content on the role of microbiome in lung injury and lung development. Current coverage of non-invasive respiratory support, perinatal events and their influence on lung development and injury, cell-based lung therapy, automation of respiratory

support, and oxygenation targeting in preterm infants. Consistent chapter organization to help you find information quickly and easily. The most authoritative advice available from world-class neonatologists who share their knowledge of new trends and developments in neonatal care. Purchase each volume individually, or get the entire 7-volume set! Gastroenterology and Nutrition Hematology, Immunology and Genetics Hemodynamics and Cardiology Infectious Disease and Pharmacology New Volume! Nephrology and Fluid/Electrolyte Physiology Neurology The Newborn Lung Interdisciplinary Nutritional Management and Care for Older Adults - Ólöf G. Geirsdóttir 2021

This open access book aims to primarily support nurses as leaders and champions of multimodal, Interdisciplinary nutrition care for older adults. A structured approach to fundamentals of nutrition care across Interdisciplinary settings is combined with

additional short chapters about special topics in geriatric nutrition. The book is designed to provide highly accessible information on evidence-based management and care for older adults, with a focus on practical guidance and advice across acute, rehabilitation, and primary and secondary malnutrition prevention settings. The cost of malnutrition in England alone has been estimated to be 119.6 billion per year, or more than 15% of the total public expenditure on health and social care. ^65 years). The importance and benefit of specialised nutrition care, delivered by experts in field, is well established for those with complex nutrition care needs. However, despite the substantial adverse impact of malnutrition on patient and healthcare outcomes, specialised management of this condition is often under-resourced, overlooked and under-prioritised by both older adults and their treating teams. As an alternative, timely, efficient, and effective

supportive nutrition care opportunities may be appropriately implemented by nurses and non-specialist Interdisciplinary healthcare team members, working together with nutrition specialists and the older adults they care for. Practical, low-risk opportunities should be considered across nutrition screening, assessment, intervention, and monitoring domains for many patients with, or at risk of malnutrition. Whilst a variety of team members may contribute to supportive nutrition care, the nursing profession provide a clear focal point. Nurses across diverse settings provide the backbone for Interdisciplinary teamwork and essential patient care. The nursing profession should consequently be considered best placed to administer Interdisciplinary, multimodal nutrition care, wherever specialist nutrition care referrals are unlikely to add value or are simply not available. As such, the book is a valuable resource for all healthcare providers dedicated

to working with older patients to improve nutrition care.

Mycotoxin Reduction in Grain Chains - John F. Leslie
2014-04-29

Cereal grain safety from farm to table Mycotoxin Reduction in Grain Chains examines the ways in which food producers, inspectors, and processors can keep our food supply safe.

Providing guidance on identification, eradication, and prevention at each stop on the "grain chain, this book is an invaluable resource for anyone who works with cereal grains. Discussions include breeding and crop management, chemical control, contamination prediction, and more for maize, wheat, sorghum, rice, and other major grains. Relevant and practical in the field, the lab, and on the production floor, this book features critical guidance for every point from farm to table.

Taking an Exposure History
- Arthur L. Frank 2001

Pharmacotherapy of Depression - Domenic A. Ciraulo
2010-12-28

Comprehensive and state of the art, the second edition of Pharmacotherapy of Depression offers major revisions of every chapter and the addition of new chapters by expert contributors. The first chapter reviews the neurobiology of depression, which lays the groundwork for understanding the mechanisms of action of antidepressants. In the next chapter, a review of the general principles guiding the diagnosis and medication treatment of unipolar depression is provided. The clinical pharmacology of antidepressants is reviewed in some detail, supplemented by tables that provide information on dosing, indications, and metabolism. Augmentation strategies are reviewed, including the use of non-traditional agents. The chapters that follow next address the use of antidepressants in special populations, such as the elderly and depressed individuals with psychosis, bipolar disorder, substance abuse, and post traumatic stress disorder. The

complex issues involving the diagnosis and treatment of depression during pregnancy is thoroughly reviewed in Chapter 8 and provides a synthesis of the scientific literature in the area, one that is noted for contradictory and controversial findings, as well as guidelines for prescribing. The next chapter then provides an overview of the treatment of depression in the pediatric population, highlighting clinical concerns such as suicide risk. The book concludes with two chapters at the interface of medicine and psychiatry in the treatment of mood disorders: managing depression in primary care settings and depression associated with medical illnesses. The outstanding clinician-scientists who have contributed to this volume are all leaders in their fields and represent a broad spectrum of renowned institutions. A timely contribution to the literature, *The Pharmacotherapy of Depression, Second Edition*, offers busy clinicians from many disciplines a strong

scientific foundation that seamlessly transitions into practical recommendations for clinical practice. The result is

another gold-standard guide to the safe and effective use of the latest antidepressant medications.