systems biology is changing the way biological systems are studied by allowing us to examine the cell and organism as a whole. Systems biotechnology allows optimal design and development of upstream to downstream bioprocesses by taking a systems approach. E. coli has been a model organism for almost all biological and biotechnological studies. This book brings together for the first time the state of the art reviews by the world leading experts on systems biology and biotechnological applications of E. coli. The topics covered include genomics and functional genomics, resources for systems biology, network analysis, genome scale metabolic reconstruction, modelling and simulation, dynamic modelling and simulation, systems level analysis of evolution, plasmids and expression systems, protein synthesis, production, and export engineering the central metabolism. Synthetic biology and systems metabolic engineering of E. coli. This book provides readers with guidance on how a complex biological system can be studied using E. coli as a model organism. It also presents how to perform synthetic biology and systems metabolic engineering studies on E. coli with successful examples. The approaches of which can be extended to other organisms. This book will be a complete resource for anyone interested in systems biology and biotechnology in this issue of Hematology Oncology Clinics. Guest editors, Drs. Sophie Lanzkron and Jane Little, bring their considerable expertise to the topic of sickle cell syndromes. Top experts in the field cover key topics such as structural racism and impact on sickle cell disease, SCD pathophysiology and biomarkers of SCD, genetic modifiers of SCD, allogeneic transplant, and gene therapy. Reproductive health, chronic pain, and more contains 16 relevant practice oriented topics including innovative therapies addressing challenging complications. Novel science on mechanisms of disease preventing cognitive decline in people with SCD. Quality of life in SCD and more provides in depth clinical reviews on sickle cell syndromes. Offers actionable insights for clinical practice. Presents the latest information on this timely focused topic under the leadership of experienced editors in the field. Authors synthesize and distill the latest research and practice guidelines to create clinically significant topic based reviews. A comprehensive handbook on state of the art Das technology and applications. Distributed acoustic sensing (DAS) is a technology that records sound and vibration signals along a fiber optic cable. Its advantages of high resolution, continuous and real-time measurements mean that DAS systems have been rapidly adopted for a range of applications including hazard mitigation, energy industries, geohydrology, environmental monitoring, and civil engineering. Distributed acoustic sensing in geophysics methods and applications presents experiences from both industry and academia on using DAS in a range of geophysical applications. Volume highlights include DAS concepts, principles, and measurements, comprehensive review of the historical development of DAS and related technologies, DAS applications in hydrocarbon, geothermal, and mining industries, DAS applications in seismology, DAS applications in environmental and shallow geophysics. The American Geophysical Union promotes discovery in earth and space science for the benefit of humanity. Its publications disseminate scientific knowledge and provide resources for researchers, students, and professionals. Drs. Richard Champlin, Jerome Ritz, Willem Fibbe, Per Ljungman, and Malcolm K. Brenner join Kerry Atkinson as editors of this definitive reference on the clinical practice and underlying science of hematopoietic stem cell transplantation. This third edition text is significantly revised and updated with 124 chapters balancing scientific explanations with practical information on patient care for all aspects of autologous, syngeneic, and allogeneic transplantation. This edition includes 18 new chapters on significant topics such as plasticity of stem cells, embryonic stem cells, and nonmyeloablative conditioning regimens. Thoroughly referenced through 2003, the chapters are divided into 15 sections including biological background, and practical procedures. Clinical results, transplant related, and organ-specific complications. Laboratory aspects and developing areas with a final breaking news chapter from this rapidly evolving field.
170 internationally recognized experts contributed to this authoritative and practical text that is an essential resource for hematologists, oncologists, and transplant specialists. Pituitary apoplexy is a rare and life-threatening complication that occurs in 0.6–10.5% of all patients with pituitary adenomas. Unfortunately, pituitary apoplexy is often misdiagnosed before surgery. Furthermore, in spite of all the advances in imaging techniques and therapeutic methods, its optimal management is still controversial owing to the limited individual experience and the very variable clinical course of the condition. This book provides an in-depth review of knowledge of the management of pituitary apoplexy with an emphasis on clinical and neuroradiological findings and treatment modalities. Medical and surgical intervention in addition to detailed information on current evidence and considers future areas of investigation and innovative therapeutic philosophies.

Both the editors and the authors are leading international authorities in the field. Neurocutaneous syndromes provides the most up-to-date and comprehensive resource on the disorders that lead to the growth of tumors in various parts of the body. Those caused by the abnormal development of cells in an embryo and characterized by the presence of tumors in various parts of the body and eyes including the nervous system and by certain differences in the skin. The most common neurocutaneous syndromes include neurofibromatosis, Sturge-Weber syndrome, tuberous sclerosis, ataxia telangiectasia, and von Hippel-Lindau disease. Symptoms vary widely and while present early may not express until later in life as molecular medicine and genetic science is continuing to impact our understanding.

This book also includes the latest molecular and genetic science, providing a comprehensive coverage of neurocutaneous syndromes. It details the latest molecular and genetic science related to neurocutaneous syndromes, presents a focused reference for clinical practitioners, and the neuroscience, clinical neurology, and neurogenetics research communities. It includes updated sections on the latest molecular and genetic science. Nanomaterials in plants, algae, and microorganisms concepts and controversies. Volume 2 not only covers all the new technologies used in the synthesis of nanoparticles but also tests their response on plants, algae, and microorganisms in aquatic ecosystems. Unlike most works in the field, the book doesn’t focus exclusively on the higher organisms instead it explores the smaller life forms on which they feed. Topics include the impacts of plant development, how different nanoparticles are absorbed by biota, the impact of different metals including silver and rare earth metals on living organisms, and the effects nanoparticles have on aquatic ecosystems as a whole. As nanotechnology-based products have become a trillion dollar industry, there is a need to understand the implications to the health of our biota and ecosystems as the earth is increasingly inundated with these materials.

Covers the issues of nanoparticles on more simple organisms and their ecosystems. Draws upon global experts to help increase understanding of the interface mechanisms at the physiological, biochemical, molecular, and even genomic and proteomic level between ENPs and biological organisms. Provides a critical assessment of the progress taking place on this topic. Sheds light on future research needs and scientific challenges that still exist in nanoparticle and living organism interactions. The studies on genetic disorders have been rapidly advancing in recent years as to be able to understand the reasons why genetic disorders are caused. The first section of this volume provides readers with background and several methodologies for understanding genetic disorders. Genetic defects, diagnoses, and treatments of the respective unifactorial and multifactorial genetic disorders are reviewed in the second and third sections. Certainly, it is quite difficult or almost impossible to cure a genetic disorder fundamentally at the present time. However, our knowledge of genetic functions has rapidly accumulated since the double-stranded structure of DNA was discovered by Watson and Crick in 1956. Therefore, nowadays it is possible to understand the reasons why genetic disorders are caused. It is probable that the knowledge of genetic disorders described in this book will lead to the discovery of an epoch of new medical treatment and relieve human beings from the genetic disorders of the future. This volume provides a comprehensive and up-to-date account of the use of MRI and CT to identify and characterize developmental anomalies and acquired diseases of the female.
genital tract both benign and malignant diseases are considered in depth and detailed attention is also paid to normal anatomic findings and variants further individual chapters focus on the patient with pelvic pain and the use of mri for pelvimetry during pregnancy and the evaluation of fertility compared with the first edition chapters have been either newly written by different authors or updated to reflect intervening progress in addition imaging of the placenta is now covered throughout emphasis is placed on the most recent diagnostic and technical advances and the text is complemented by many detailed and informative illustrations all of the authors are acknowledged experts in diagnostic imaging of the female pelvis and the volume will prove an invaluable aid to everyone with an interest in this field this book provides an overview of the ecological indicators of landscape dynamics in the context of geographical landscape integration landscape dynamics depicts every change that occurs in the physical biological and cognitive assets of a landscape to understand and interpret the complex physical biological and cognitive phenomena of landscapes it is necessary to operate conceptually and practically on a broad range of spatial and temporal scales rapid land use changes have become a concern to environmentalists and planners because of their impacts on the natural ecosystem which further determines socioeconomic dynamics in this regard the book discusses case studies that share new insights into how landscape patterns and processes impact small creatures and how small creatures in turn influence landscape structure and composition in turn the relevant aspects of land use and land cover dynamics are covered and the multi faceted relationship between the substrata and ecological community is highlighted the book is unique in its focus on the application of spatial informatics such as automatic building extraction from high resolution imagery a soil resource inventory for meeting the challenges of land degradation hydrological modeling the temporal variation analysis of glacier area and the identification and mapping of glacial lakes morphometric analysis of river basins and the monitoring and modeling of urban sprawl among other features as renewable energy sources biofuels have tremendous potential to replace fossil fuels in future energy scenarios offering green alternative energy sources however though such fuels could mean a significant reduction in environmental pollution they are still far from practical implementation due to their high production costs and technical issues consequently efforts are being made around the globe to achieve the cost effective production of biofuels in this context the use of nanomaterials to improve biofuels production efficiency is a vital emerging area nanomaterials are attracting attention due to their versatile physicochemical properties and may improve the production process for various biofuels by acting as catalysts however this area is still in its infancy to improve the practical viability of the biofuels production process it is essential to focus on the specific type of nanomaterial used its synthesis and its specific effects on the process parameters this book explores the potential advantages and feasibility of various aspects of nanomaterials with regard to improving the current biofuels production process making it a valuable resource for a broad readership this book edited by leading experts in radiology nuclear medicine and radiation oncology offers a wide ranging state of the art overview of the specifics and the benefits of a multidisciplinary approach to the use of imaging in image guided radiation treatments for different tumor types the entire spectrum of the most important cancers treated by radiation are covered including cns head and neck lung breast gastrointestinal genitourinary and gynecological tumors the opening sections of the book address background issues and a range of important technical aspects detailed information is then provided on the use of different imaging techniques for t staging and target volume delineation response assessment and follow up in various parts of the body the focus of the book ensures that it will be of interest for a multidisciplinary forum of readers comprising radiation oncologists nuclear medicine physicians radiologists and other medical professionals this excellently illustrated reference work provides a comprehensive overview of the imaging and management of abdominal trauma detailed attention is paid to pathophysiology clinical symptoms and findings all relevant imaging modalities and other tests employed to evaluate abdominal injuries at the time of admission of the trauma victim types of management described
in depth include surgical conservative interventional radiological and endoscopic posttraumatic complications are discussed including those arising from treatment there are also general chapters on patient resuscitation logistics and medicolegal issues biotechnology has emerged as one of the key environmentally safe technologies for the future which enables use of biomass to develop novel smart materials and to replace oil derived products fungi are the most efficient producers of the enzymes needed for this purpose and in addition they produce a plethora of secondary metabolites among which novel antibiotics can be found industrial application and exploitation of the metabolic capacities of fungi requires highly productive and robust gene expression systems which can be achieved by selection of appropriate species and strain improvement in this book we aim to summarize homologous and heterologous gene expression systems of fungi for production of enzymes and secondary metabolites a broad overview on requirements challenges and successful applications shall serve as a basis for further development of fungi as biotechnological workhorses in research and industry the biochemistry of food is the foundation on which the research and development advances in food biotechnology are built in food biochemistry and food processing second edition the editors have brought together more than fifty acclaimed academicians and industry professionals from around the world to create this fully revised and updated edition this book is an indispensable reference and text on food biochemistry and the ever increasing developments in the biotechnology of food processing beginning with sections on the essential principles of food biochemistry enzymology and food processing the book then takes the reader on commodity by commodity discussions of biochemistry of raw materials and product processing chapters in this second edition have been revised to include safety considerations and the chemical changes induced by processing in the biomolecules of the selected foodstuffs this edition also includes a new section on health and functional foods as well as ten new chapters including those on thermally and minimally processed foods separation technology in food processing and food allergens food biochemistry and food processing second edition fully develops and explains the biochemical aspects of food processing and brings together timely and relevant topics in food science and technology in one package this book is an invaluable reference tool for professional food scientists researchers and technologists in the food industry as well as faculty and students in food science food technology and food engineering programs the editor dr benjamin k simpson department of food science and agricultural chemistry mcgill university quebec canada associate editors professor leo nollet department of applied engineering sciences hogeschool ghent belgium professor fidel toldrá instituto de agroquímica y tecnología de alimentos csic valencia spain professor soottawat benjakul department of food technology prince of songkla university songkhla thailand professor gopinadhan paliyath department of plant agriculture university of guelph ontario canada dr y h hui consultant to the food industry west sacramento california usa this sixth edition of the oxford textbook of palliative medicine takes us now into the third decade for this definitive award winning textbook it has been rigorously updated to offer a truly global perspective highlighting the best current evidence based practices and collective wisdom from more than 200 experts around the world this leading textbook covers all the new and emerging topics updated and restructured to reflect major developments in the increasingly widespread acceptance of palliative medicine as a fundamental public health need the sixth edition includes new sections devoted to family and caregiver issues cardio respiratory symptoms and disorders and genitourinary symptoms and disorders in addition the multi disciplinary nature of palliative care is emphasized throughout the textbook covering areas from ethical and communication issues the treatment of symptoms and the management of pain the oxford textbook of palliative medicine is a truly comprehensive text no hospital hospice palliative care service or medical library should be without this essential source of information this sixth edition of the oxford textbook of palliative medicine is dedicated to the memory of professor kenneth fearon husband of professor marie fallon and a surgeon who became a world leader in the research and management of anorexia and cachexia he modeled a work life balance that is so critical in our field with devotion to both his
patients and his family next generation nanochitosan applications in animal husbandry aquaculture and food conservation provides comprehensive and state of the art information on the application of nanochitosan for improving products especially for the evaluation of biological active molecules disease therapeutics transport vehicle for dna targeted drug delivery gene therapy development of smart and high performance of fish preservation of foods tissue engineering and improving the taste of aquatic and animal feeds as fish growth promoter this book will be especially useful for industrial fisheries who deal with wild capture fishing and aqua farming and scientists and engineers working on post capture processing stages details on the application of nanochitosan as an effective delivery of vaccines hormones vitamins nutrients and antioxidants biological active constituents and their wider application for the protection and management of farm animals and fishes against disease causing pathogens are provided provides applications for the protection and management of farmed animal and fish against disease causing pathogens includes relevant information on recent patents commercialized products and innovative technologies on nanochitosan with industrial perspectives presents potential solutions for the bioremediation of wastewater heavy metal polluted soils and water petroleum hydrocarbon on polluted environment pesticides polluted water and heavily contaminated soil this book provides in depth information on topics relating to anthropogenic carbon dioxide utilization processes presenting a collection of state of the art scientific reviews and research perspectives on carbon management strategies of relevance to the energy industry it features contributions by leading scientists and technocrats across 19 chapters as an indian contribution in the energy industry new processes for carbon dioxide removal and recycling are developing quickly and it is in this context that the book provides an opportunity to review the current status of and promote efforts to achieve effective carbon capture and management the contents presented here will prove useful to researchers students industry experts scientists and policymakers alike ovarian cancer is not only the commonest but also the most lethal gynaecological malignancy partly because the majority of patients present with advanced disease nevertheless the management of patients with ovarian neoplasms has changed substantially recently with improved survival due to better screening strategies major advances in chemotherapy and the constantly evolving role of surgery optimal patient care is best achieved by a multidisciplinary team with imaging playing a pivotal role the explosion of technological developments in imaging in recent years has meant that all members of the team should understand the potential applications limitations and advantages of evolving imaging techniques each volume in contemporary issues in cancer imaging a multidisciplinary approach is edited by an expert guest editor with contributions from all members of the multidisciplinary team thus bringing together expertise from many specialties to promote the understanding and application of modern imaging in overall patient management fascia in sport and movement second edition is a multi author book with contributions from 51 leading teachers and practitioners across the entire spectrum of bodywork and movement professions it provides professionals from all bodywork and movement specialisms with the most up to date information they need for success in teaching training coaching strengthening tackling injury reducing pain and improving mobility the new edition has 21 new chapters and chapters from the first edition have been updated with new research this book is an essential resource for all bodywork professionals sports coaches fitness trainers yoga teachers pilates instructors dance teachers and manual therapists it explains and demonstrates how an understanding of the structure and function of fascia can inform and improve your clinical practice the book s unique strength lies in the breadth of its coverage the expertise of its authorship and the currency of its research and practice base this work is the first book length publication on the topic of insect immunology since 1991 complementing earlier works by offering a fresh perspective on current research interactions of host immune systems with both parasites and pathogens are presented in detail as well as the genomics and proteomics approaches which have been lacking in other publications beckage provides comprehensive coverage of topics important to medical researchers including
This book presents a timely resource on the topic users will find the latest information on cancer and gene therapy diagnosis drug delivery green synthesis of nano and microparticles and much more provides knowledge of the range of organic micro and nanostructures available enabling the reader to make optimal materials selection decisions presents detailed information on current and proposed applications of the latest biomedical materials places a strong emphasis on the characterization production and use of organic nanoparticles in biomedicine such as gene therapy dna interaction and cancer management nanostructures for antimicrobial therapy discusses the pros and cons of the use of nanostructured materials in the prevention and eradication of infections highlighting the efficient microbicidal effect of nanoparticles against antibiotic resistant pathogens and biofilms conventional antibiotics are becoming ineffective towards microorganisms due to their widespread and often inappropriate use as a result the development of antibiotic resistance in microorganisms is increasingly being reported new approaches are needed to confront the rising issues related to infectious diseases the merging of biomaterials such as chitosan carrageenan gelatin poly lactic co glycolic acid with nanotechnology provides a promising platform for antimicrobial therapy as it provides a controlled way to target cells and induce the desired response without the adverse effects common to many traditional treatments nanoparticles represent one of the most promising therapeutic treatments to the problem caused by infectious micro organisms resistant to traditional therapies this volume discusses this promise in detail and also discusses what challenges the greater use of nanoparticles might pose to medical professionals the unique physiochemical properties of nanoparticles combined with their growth inhibitory capacity against microbes has led to the upsurge in the research on nanoparticles as antimicrobials the importance of bactericidal nanobiomaterials study will likely increase as development of resistant strains of bacteria against most potent antibiotics continues shows how nanoantibiotics can be used to more effectively treat disease discusses the advantages and issues of a variety of different nanoantibiotics enabling medics to select which best meets their needs provides a cogent summary of recent developments in this field allowing readers to quickly familiarize themselves with this topic area this comprehensive reference provides an overview of the general principles of cancer staging as well as specific discussions of each tumour type across the body including lymphoma and haematological malignancies for each tumour the pattern of disease involvement and disease spread are emphasized the state of the art imaging features surveyed and the latest tumour staging and methods to assess treatment response are addressed separate sections discuss metastatic disease and the effects of treatment on normal and diseased tissues the final section of the book highlights emerging functional and molecular imaging techniques to evaluate the different biological hallmarks of cancer this book is an inclusive coverage of advances in aquaculture health management it offers latest updates as well as explains the novel concepts and issues related to aquatic animal health management to support the understanding of the concepts there is extensive use of illustrations chapters emphasize on the state of art techniques and hold great promise for the sustainable development of aquaculture this book is of interest to teachers researchers aquatic biologists.
Capacity builders and policymakers also the book serves as additional reading material for undergraduate and graduate students of aquatic sciences marine sciences biotechnology ecology and environmental sciences national and international aquatic scientists policy makers will also find this to be a useful read guide to protein purification second edition provides a complete update to existing methods in the field reflecting the enormous advances made in the last two decades in particular proteomics mass spectrometry and dna technology have revolutionized the field since the first edition s publication but through all of the advancements the purification of proteins is still an indispensable first step in understanding their function this volume examines the most reliable robust methods for researchers in biochemistry molecular and cell biology genetics pharmacology and biotechnology and sets a standard for best practices in the field it relates how these traditional and new cutting edge methods connect to the explosive advancements in the field this guide to gives imminently practical advice to avoid costly mistakes in choosing a method and brings in perspective from the premier researchers while presents a comprehensive overview of the field today gathers top global authors from industry medicine and research fields across a wide variety of disciplines including biochemistry genetics oncology pharmacology dermatology and immunology assembles chapters on both common and less common relevant techniques provides robust methods as well as an analysis of the advancements in the field that for an individual investigator can be a demanding and time consuming process the definitive oxford textbook of palliative medicine now in its fifth edition has again been thoroughly updated to offer a truly global perspective in this field of extraordinary talent and thoughtfulness updated to include new sections devoted to assessment tools care of patients with cancer and the management of issues in the very young and the very old this leading textbook covers all the new and emerging topics since its original publication in 1993 in addition the multi disciplinary nature of palliative care is emphasized throughout the book covering areas from ethical and communication issues the treatment of symptoms and the management of pain this fifth edition of the oxford textbook of palliative medicine is dedicated to the memory of professor geoffrey hanks pioneer in the field of palliative medicine and co editor of the previous four editions winner in the medicine category of the british medical association book awards this is a truly comprehensive text no hospital hospice palliative care service or medical library should be without this essential source of information this book updates the latest development in production stabilization and structural analysis techniques of membrane proteins this field has made significant advances since the elucidation of the first 3 d structure of a recombinant g protein coupled receptor gpcr rhodopsin with the structure of several more gpcrs having been solved in the past five years in fact the 2012 nobel prize in chemistry was awarded for groundbreaking discoveries on the inner workings of gpcrs this book is essential reading for all researchers biochemists and crystallographers working with membrane proteins who are interested by the structural characterization of their favorite protein and who wish to follow the expression migration modifications and recycling of a membrane protein this book explores international human resource management ihrm practices in the contexts of high uncertainties it encompasses situations of financial crisis political and civil uncertainty environmental collapse and recession research on unstable and unpredictable contexts on business and ihrm remain relatively scarce and scattered across disciplines this volume brings together recent thinking from a range of different perspectives and methodologies mnes are often distinguished by the supposedly superior ability to implement highly tactical more robust talent management practices including work based ihrm led and international systems in line with the rest of their worldwide operations however they often fall short the chapters in this book explore the how why and when at a theoretical level this collection brings together developments and extensions of a range of salient theories they explore common methodological challenges and ways forward for future researchers on ihrm in high contextual uncertainty the chapters in this book were originally published as a special issue of the international journal of human resource management bioactive compounds produced by natural sources such as plants microbes endophytic fungi
etc can potentially be applied in various fields including agriculture biotechnology and biomedicine. Several bioactive compounds have proved to be invaluable in mediating plant microbe interactions and promoting plant growth and development due to their numerous health-promoting properties. These compounds have been widely used as a source of medication since ancient times; however, there is an unprecedented need to meet the growing demand for natural bioactive compounds in the flavor and fragrance, food, and pharmaceutical industries. Moreover, discovering new lead molecules from natural sources is essential to overcoming the rising number of new diseases. In this regard, natural bioactive compounds hold tremendous potential for new drug discovery. Therefore, this field of research has become a vital area for researchers interested in understanding the chemistry, biosynthetic mechanisms, and pharmacological activities of these bioactive metabolites. This book describes the basics of bioactive plant compounds, their chemical properties, and their pharmacological biotechnological properties with regard to various human diseases and applications in the drug, cosmetics, and herbal industries. It offers a valuable asset for all students, educators, researchers, and healthcare experts involved in agronomy, ecology, crop science, molecular biology, stress physiology, and natural products in the new era of functional and molecular imaging. Both currently available imaging biomarkers and biomarkers under development are expected to lead to major changes in the management of oncological patients. This two-volume book is a practical manual on the various imaging techniques capable of delivering functional information on cancer, including diffusion, MRI, perfusion, CT, and MRI dual energy CT spectroscopy. Dynamic contrast-enhanced ultrasonography, PET, and hybrid modalities. This second volume considers the applications and benefits of these techniques in a wide range of tumor types, including their role in diagnosis, prediction of treatment outcome, and early evaluation of treatment response. Each chapter addresses a specific malignancy and is written by one or more acclaimed experts. The lucid text is complemented by numerous high-quality illustrations that highlight key features and major teaching points. The synthesis of bionanomaterials for biomedical applications summarizes a range of procedures, including green synthesis of metal nanoparticles, metal oxide nanoparticles, and other types of nanoparticles, while also exploring the appropriate use of these nanoparticles in various therapeutic applications such as anticancer, antibacterial, antifungal drug delivery, and more. The book provides important information for materials scientists and pharmaceutical scientists on the synthesis of various nanoparticles using a variety of eco-friendly bionanomaterials as concerns have arisen regarding the environmental impact caused by some of nanomaterials as well as their possible toxicity to cells. This book presents information on a new generation of eco-friendly materials in addition to the green synthesis of nanoparticles that shows how environmentally friendly nanoparticles can be synthesized from different biological sources such as microbes, fungi, algae, and plants. It provides information on the synthesis and application of eco-friendly bionanomaterials, offering coverage of nanomaterials generated through green synthesis. Assessing the challenges of manufacturing eco-friendly nanomaterials on an industrial scale, this new volume presents a plethora of new research on the use of nanoconjugate nanocarriers in drug delivery technology as drug carriers. It has been observed to increase the level of sophistication through a variety of ways, helping to alleviate some of the pitfalls of conventional dosage forms such as few pitfalls such as non-specific drug delivery, dumping poor patient compliance, toxicities linked with higher doses, etc. With chapters from highly skilled, experienced, and renowned scientists and researchers, nanoconjugate nanocarriers for drug delivery are divided into four sections, providing an introduction to nanocarriers for drug delivery physical, chemical, and specific applications dealing with drug delivery in particular the materials used as well as formulation and characterization. These have been discussed in detail, and the nanocarriers covered in the book include nanoparticles, vesicular carriers, carriers having carbon as the core constituent dispersed systems, etc. The book also delves into the interaction and associations between drug delivery research and its therapeutic applications in practice, the book integrates a wide variety of case studies, research, and theories in an attempt to
reveal the diversity and capture the novel approaches of nanoconjugate nanocarriers for drug delivery employed by developers and content experts in the field this timely publication will be an essential reference and current awareness source building on the available literature in the field of pharmacy and biomedical science while also providing ideas for further research opportunities in this dynamic field this book offers authoritative contributions by world experts actively working on different aspects of phototrophic prokaryotes providing up to date information in this rapidly advancing field it covers the range of topics that are currently the focus of research with this group of organisms as essentially single celled organisms phototrophic prokaryotes process many environmental signals and use this information to optimize their metabolism growth rate dna replication and cell division phototrophic prokaryotes are collectively of great interest for a number of different fundamental and applied perspectives and have long served as models for understanding such basic fundamental biological processes as photosynthesis and respiration on an ecological environmental level they are extremely important being the most abundant photosynthetic organisms on earth and responsible for the majority of the primary productivity in the oceans they also hold great promise as biotechnological catalysts being able to couple solar energy conversion through photosynthesis and carbon fixation to the production of biofuels commodity chemicals and neutraceuticals the book is recommended to advanced students and scientists dealing with life sciences especially in genetics microbiology and molecular biology advances in clinical chemistry volume 113 the latest installment in this internationally acclaimed series contains chapters authored by world renowned clinical laboratory scientists physicians and research scientists the serial discusses the latest and most up to date technologies related to the field of clinical chemistry with sections in this release focusing on biosensors for saliva biomarkers biochemistry and pathophysiology of the transient potential receptor vanilloid 6 trpv6 calcium channel protein glycation in diabetes mellitus biomarkers of oxidative stress and reproductive complications cortisol analytical and clinical determinants and hemophilia a emicizumab monitoring and impact on coagulation testing provides the most up to date technologies in clinical chemistry and clinical laboratory science authored by world renowned clinical laboratory scientists physicians and research scientists presents the international benchmark for novel analytical approaches in the clinical laboratory the 20 chapters in this book have been selected from the contents of the abdominal imaging section in grainger allison s diagnostic radiology 6e these chapters provide a succinct up to date overview of current imaging techniques and their clinical applications in daily practice and it is hoped that with this concise format the user will quickly grasp the fundamentals they need to know throughout these chapters the relative merits of different imaging investigations are described variations are discussed and recent imaging advances are detailed the fourth edition of this internationally acclaimed seminal textbook on the subject of clinical pediatric urology is completely updated world renowned experts in the field present state of the art developments in all areas of clinical pediatric urology from diagnosis to treatment and from theory to practice clinical pediatric urology is clinical in orientation and practical in presentation covering every illness diagnostic method and appropriate treatment in pediatric urology from the embryo onwards each chapter is lavishly illustrated with full color photographs and medical artwork tables graphs and charts lend further support to the detailed and comprehensive text all in a single easily accessed volume this is a useful and informative reference for students and specialists alike this two volume set ccis 905 and ccis 906 constitutes the refereed proceedings of the second international conference on advances in computing and data sciences icacds 2018 held in dehradun india in april 2018 the 110 full papers were carefully reviewed and selected from 598 submissions the papers are centered around topics like advanced computing data sciences distributed systems organizing principles development frameworks and environments software verification and validation computational complexity and cryptography machine learning theory database theory probabilistic representations this edited volume emphasizes how microorganisms have become a reliable pillar of biotechnology the authors discuss
advances in synthetic biology and genetic engineering that have made it possible to reprogram the microbial cellular capabilities. This enables an economically viable production of high value products at an industrial level. The first part of the book provides an overview of synthetic biology and genome editing tools for engineering microbial cell factories in modern fermentation. Readers also learn how high throughput bioprocessing methods are used to recover and purify microbial products. The remaining parts of this book explore the implementation and challenges of these upstream and downstream processing techniques for manufacturing high value products. Cost effectiveness and quality control are key factors when discussing the production of low molecular weight products, biopharmaceuticals, biopolymers, and protein-based nanoparticles. This book is a valuable resource for biotechnologists both in the industry and in academia. In this volume, we have brought together a number of core protocols concentrating on protein. Carefully written and edited by experts, it is an indispensable tool for the researcher. Carefully written and edited by experts to contain step-by-step protocols, in this volume, we have brought together a number of core protocols concentrating on protein.
Systems Biology and Biotechnology of Escherichia coli 2009-03-20

systems biology is changing the way biological systems are studied by allowing us to examine the cell and organism as a whole. Systems biology allows optimal design and development of upstream to downstream bioprocesses by taking a systems approach. E. coli has been a model organism for almost all biological and biotechnological studies. This book brings together for the first time the state of the art reviews by the world-leading experts on systems biology and biotechnological applications of E. coli. The topics covered include genomics and functional genomics, resources for systems biology network analysis, genome-scale metabolic reconstruction, modelling and simulation, dynamic modelling and simulation, systems-level analysis of evolution, plasmids, and expression systems, protein synthesis, production, and export engineering. The central metabolism, synthetic biology, and systems metabolic engineering of E. coli. This book provides readers with guidance on how a complex biological system can be studied using E. coli as a model organism. It also presents how to perform synthetic biology and systems metabolic engineering studies on E. coli with successful examples. The approaches of which can be extended to other organisms. This book will be a complete resource for anyone interested in systems biology and biotechnology.


In this issue of hematology oncology clinics, guest editors Drs. Sophie Lanzkron and Jane Little bring their considerable expertise to the topic of sickle cell syndromes. Top experts in the field cover key topics such as structural racism and impact on sickle cell disease, scd pathophysiology and biomarkers of scd, genetic modifiers of scd, allogeneic transplant and gene therapy, reproductive health, chronic pain, and more. Contains 16 relevant practice-oriented topics including innovative therapies addressing challenging complications, novel science on mechanisms of disease, preventing cognitive decline in people with scd, quality of life in scd, and more. Provides in-depth clinical reviews on sickle cell syndromes, offering actionable insights for clinical practice. Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field. Authors synthesize and distill the latest research and practice guidelines to create clinically significant topic-based reviews.

Distributed Acoustic Sensing in Geophysics 2022-01-26

A comprehensive handbook on state-of-the-art das technology and applications. Distributed acoustic sensing (DAS) is a technology that records sound and vibration signals along a fiber optic cable. Its advantages of high resolution, continuous, and real-time measurements mean that DAS systems have been rapidly adopted for a range of applications including hazard mitigation, energy industries, geohydrology, environmental monitoring, and civil engineering. Distributed acoustic sensing in geophysics methods and applications presents experiences from both industry and academia on using DAS in a range of geophysical applications. Volume highlights include DAS concepts, principles, and measurements. Comprehensive review of the historical development of DAS and related technologies. DAS applications in hydrocarbon, geothermal, and mining industries. DAS applications in seismology. DAS applications in environmental and shallow geophysics. The American Geophysical Union promotes discovery in earth and space science for the benefit of humanity. Its publications disseminate scientific knowledge and provide resources for researchers, students, and professionals.
Clinical Bone Marrow and Blood Stem Cell Transplantation 2004

drs richard champlin jerome ritz willem fibbe per ljungman and malcom k brenner join kerry atkinson as editors of this
definitive reference on the clinical practice and underlying science of hematopoietic stem cell transplantation this third edition
text is significantly revised and updated with 124 chapters balancing scientific explanations with practical information on
patient care for all aspects of autologous syngeneic and allogeneic transplantation this edition includes 18 new chapters on
significant topics such as plasticity of stem cells embryonic stem cells and nonmyeloablative conditioning regimens thoroughly
referenced through 2003 the chapters are divided into 15 sections including biological background and practical procedures
clinical results transplant related and organ specific complications laboratory aspects and developing areas with a final
breaking news chapter from this rapidly evolving field over 170 internationally recognized experts contributed to this
authoritative and practical text that is an essential resource for hematologists oncologists and transplant specialists

Pituitary Apoplexy 2013-12-03

pituitary apoplexy is a rare and life threatening complication that occurs in 0 6 10 5 of all patients with pituitary adenomas
unfortunately pituitary apoplexy is often misdiagnosed before surgery furthermore in spite of all the advances in imaging
techniques and therapeutic methods its optimal management is still controversial owing to the limited individual experience
and the very variable clinical course of the condition this book provides an in depth review of knowledge of the management
of pituitary apoplexy with an emphasis on clinical and neuroradiological findings and treatment modalities medical and
surgical in addition it supplies clinicians and investigators with detailed information on current evidence and considers future
areas of investigation and innovative therapeutic philosophies both the editors and the authors are leading international
authorities in the field

Neurocutaneous Syndromes 2015-11-09

neurocutaneous syndromes provides the most updated and comprehensive resource on the disorders that lead to the growth
of tumors in various parts of the body those caused by the abnormal development of cells in an embryo and characterized by
the presence of tumors in various parts of the body and eyes including the nervous system and by certain differences in the
skin the most common neurocutaneous syndromes include neurofibromatosis sturge weber syndrome tuberous sclerosis
ataxia telangiectasia and von hippel lindau disease symptoms vary widely and while present early may not express until later
in life as molecular medicine and genetic science is continuing to impact our understanding of neurocutaneous syndromes
this book also includes the latest molecular and genetic science provides a comprehensive coverage of neurocutaneous
syndromes details the latest molecular and genetic science related to neurocutaneous syndromes presents a focused
reference for clinical practitioners and the neuroscience clinical neurology and neurogenetics research communities includes
updated sections on the latest molecular and genetic science

Nanomaterials in Plants, Algae and Microorganisms 2018-09-14

nanomaterials in plants algae and microorganisms concepts and controversies volume 2 not only covers all the new
technologies used in the synthesis of nanoparticles it also tests their response on plants algae and micro organisms in
aquatic ecosystems unlike most works in the field the book doesn't focus exclusively on the higher organisms instead it explores the smaller life forms on which they feed topics include the impacts of plant development how different nanoparticles are absorbed by biota the impact different metals including silver and rare earth metals have on living organisms and the effects nanoparticles have on aquatic ecosystems as a whole as nanotechnology based products have become a trillion dollar industry there is a need to understand the implications to the health of our biota and ecosystems as the earth is increasingly inundated with these materials covers the issues of nanoparticles on more simple organisms and their ecosystems draws upon global experts to help increase understanding of the interface mechanisms at the physiological biochemical molecular and even genomic and proteomic level between enps and biological systems provides a critical assessment of the progress taking place on this topic sheds light on future research needs and scientific challenges that still exist in nanoparticle and living organism interactions

**Advances in the Study of Genetic Disorders 2011-11-21**

the studies on genetic disorders have been rapidly advancing in recent years as to be able to understand the reasons why genetic disorders are caused the first section of this volume provides readers with background and several methodologies for understanding genetic disorders genetic defects diagnoses and treatments of the respective unifactorial and multifactorial genetic disorders are reviewed in the second and third sections certainly it is quite difficult or almost impossible to cure a genetic disorder fundamentally at the present time however our knowledge of genetic functions has rapidly accumulated since the double stranded structure of dna was discovered by watson and crick in 1956 therefore nowadays it is possible to understand the reasons why genetic disorders are caused it is probable that the knowledge of genetic disorders described in this book will lead to the discovery of an epoch of new medical treatment and relieve human beings from the genetic disorders of the future

**MRI and CT of the Female Pelvis 2018-11-19**

this volume provides a comprehensive and up to date account of the use of mri and ct to identify and characterize developmental anomalies and acquired diseases of the female genital tract both benign and malignant diseases are considered in depth and detailed attention is also paid to normal anatomic findings and variants further individual chapters focus on the patient with pelvic pain and the use of mri for pelvimetry during pregnancy and the evaluation of fertility compared with the first edition chapters have been either newly written by different authors or updated to reflect intervening progress in addition imaging of the placenta is now covered throughout emphasis is placed on the most recent diagnostic and technical advances and the text is complemented by many detailed and informative illustrations all of the authors are acknowledged experts in diagnostic imaging of the female pelvis and the volume will prove an invaluable aid to everyone with an interest in this field

**Geoecology of Landscape Dynamics 2020-03-03**

this book provides an overview of the ecological indicators of landscape dynamics in the context of geographical landscape integration landscape dynamics depicts every change that occurs in the physical biological and cognitive assets of a landscape to understand and interpret the complex physical biological and cognitive phenomena of landscapes it is necessary
to operate conceptually and practically on a broad range of spatial and temporal scales rapid land use changes have become a concern to environmentalists and planners because of their impacts on the natural ecosystem which further determines socioeconomic dynamics in this regard the book discusses case studies that share new insights into how landscape patterns and processes impact small creatures and how small creatures in turn influence landscape structure and composition in turn the relevant aspects of land use and land cover dynamics are covered and the multi faceted relationship between the substrata and ecological community is highlighted the book is unique in its focus on the application of spatial informatics such as automatic building extraction from high resolution imagery a soil resource inventory for meeting the challenges of land degradation hydrological modeling the temporal variation analysis of glacier area and the identification and mapping of glacial lakes morphometric analysis of river basins and the monitoring and modeling of urban sprawl among other features

Nanomaterials in Biofuels Research 2020-03-09

as renewable energy sources biofuels have tremendous potential to replace fossil fuels in future energy scenarios offering green alternative energy sources however though such fuels could mean a significant reduction in environmental pollution they are still far from practical implementation due to their high production costs and technical issues consequently efforts are being made around the globe to achieve the cost effective production of biofuels in this context the use of nanomaterials to improve biofuels production efficiency is a vital emerging area nanomaterials are attracting attention due to their versatile physicochemical properties and may improve the production process for various biofuels by acting as catalysts however this area is still in its infancy to improve the practical viability of the biofuels production process it is essential to focus on the specific type of nanomaterial used its synthesis and its specific effects on the process parameters this book explores the potential advantages and feasibility of various aspects of nanomaterials with regard to improving the current biofuels production process making it a valuable resource for a broad readership

Imaging and Interventional Radiology for Radiation Oncology 2020-08-10

this book edited by leading experts in radiology nuclear medicine and radiation oncology offers a wide ranging state of the art overview of the specifics and the benefits of a multidisciplinary approach to the use of imaging in image guided radiation treatments for different tumor types the entire spectrum of the most important cancers treated by radiation are covered including cns head and neck lung breast gastrointestinal genitourinary and gynecological tumors the opening sections of the book address background issues and a range of important technical aspects detailed information is then provided on the use of different imaging techniques for t staging and target volume delineation response assessment and follow up in various parts of the body the focus of the book ensures that it will be of interest for a multidisciplinary forum of readers comprising radiation oncologists nuclear medicine physicians radiologists and other medical professionals

Imaging and Intervention in Abdominal Trauma 2003-11-13

this excellently illustrated reference work provides a comprehensive overview of the imaging and management of abdominal trauma detailed attention is paid to pathophysiology clinical symptoms and findings all relevant imaging modalities and other tests employed to evaluate abdominal injuries at the time of admission of the trauma victim types of management described in depth include surgical conservative interventional radiological and endoscopic posttraumatic complications are discussed
including those arising from treatment there are also general chapters on patient resuscitation logistics and medicolegal issues

**Gene Expression Systems in Fungi: Advancements and Applications 2016-04-04**

biotechnology has emerged as one of the key environmentally safe technologies for the future which enables use of biomass to develop novel smart materials and to replace oil derived products fungi are the most efficient producers of the enzymes needed for this purpose and in addition they produce a plethora of secondary metabolites among which novel antibiotics can be found industrial application and exploitation of the metabolic capacities of fungi requires highly productive and robust gene expression systems which can be achieved by selection of appropriate species and strain improvement in this book we aim to summarize homologous and heterologous gene expression systems of fungi for production of enzymes and secondary metabolites a broad overview on requirements challenges and successful applications shall serve as a basis for further development of fungi as biotechnological workhorses in research and industry

**Food Biochemistry and Food Processing 2012-04-11**

the biochemistry of food is the foundation on which the research and development advances in food biotechnology are built in food biochemistry and food processing second edition the editors have brought together more than fifty acclaimed academicians and industry professionals from around the world to create this fully revised and updated edition this book is an indispensable reference and text on food biochemistry and the ever increasing developments in the biotechnology of food processing beginning with sections on the essential principles of food biochemistry enzymology and food processing the book then takes the reader on commodity by commodity discussions of biochemistry of raw materials and product processing chapters in this second edition have been revised to include safety considerations and the chemical changes induced by processing in the biomolecules of the selected foodstuffs this edition also includes a new section on health and functional foods as well as ten new chapters including those on thermally and minimally processed foods separation technology in food processing and food allergens food biochemistry and food processing second edition fully develops and explains the biochemical aspects of food processing and brings together timely and relevant topics in food science and technology in one package this book is an invaluable reference tool for professional food scientists researchers and technologists in the food industry as well as faculty and students in food science food technology and food engineering programs the editor dr benjamin k simpson department of food science and agricultural chemistry mcgill university quebec canada associate editors professor leo nollet department of applied engineering sciences hogeschool ghent belgium professor fidel toldrá instituto de agroquímica y tecnología de alimentos csic valencia spain professor soottawat benjakul department of food technology prince of songkla university songkhla thailand professor gopinadhan paliyath department of plant agriculture university of guelph ontario canada dr y h hui consultant to the food industry west sacramento california usa

**Oxford Textbook of Palliative Medicine 2021-09-08**

this sixth edition of the oxford textbook of palliative medicine takes us now into the third decade for this definitive award winning textbook it has been rigorously updated to offer a truly global perspective highlighting the best current evidence based practices and collective wisdom from more than 200 experts around the world this leading textbook covers all the new
and emerging topics updated and restructured to reflect major developments in the increasingly widespread acceptance of palliative medicine as a fundamental public health need the sixth edition includes new sections devoted to family and caregiver issues cardio respiratory symptoms and disorders and genitourinary symptoms and disorders in addition the multidisciplinary nature of palliative care is emphasized throughout the textbook covering areas from ethical and communication issues the treatment of symptoms and the management of pain the oxford textbook of palliative medicine is a truly comprehensive text no hospital hospice palliative care service or medical library should be without this essential source of information this sixth edition of the oxford textbook of palliative medicine is dedicated to the memory of professor kenneth fearon husband of professor marie fallon and a surgeon who became a world leader in the research and management of anorexia and cachexia he modeled a work life balance that is so critical in our field with devotion to both his patients and his family

**Next Generation Nanochitosan 2023-03-15**

Next generation nanochitosan applications in animal husbandry aquaculture and food conservation provides comprehensive and state of the art information on the application of nanochitosan for improving products especially for the evaluation of biological active molecules disease therapeutics transport vehicle for dna targeted drug delivery gene therapy development of smart and high performance of fish preservation of foods tissue engineering and improving the taste of aquatic and animal feeds as fish growth promoter this book will be especially useful for industrial fisheries who deal with wild capture fishing and aquafarming and scientists and engineers working on post capture processing stages details on the application of nanochitosan as an effective delivery of vaccines hormones vitamins nutrients and antioxidants biological active constituents and their wider application for the protection and management of farm animals and fishes against disease causing pathogens are provided provides applications for the protection and management of farmed animal and fish against disease causing pathogens includes relevant information on recent patents commercialized products and innovative technologies on nanochitosan with industrial perspectives presents potential solutions for the bioremediation of wastewater heavy metal polluted soils and water petroleum hydrocarbon on polluted environment pesticides polluted water and heavily contaminated soil

**Carbon Utilization 2017-03-28**

This book provides in depth information on topics relating to anthropogenic carbon dioxide utilization processes presenting a collection of state of the art scientific reviews and research perspectives on carbon management strategies of relevance to the energy industry it features contributions by leading scientists and technocrats across 19 chapters as an indian contribution in the energy industry new processes for carbon dioxide removal and recycling are developing quickly and it is in this context that the book provides an opportunity to review the current status of and promote efforts to achieve effective carbon capture and management the contents presented here will prove useful to researchers students industry experts scientists and policymakers alike
Cancer of the Ovary 2006-12-14

Ovarian cancer is not only the commonest but also the most lethal gynaecological malignancy partly because the majority of patients present with advanced disease nevertheless the management of patients with ovarian neoplasms has changed substantially recently with improved survival due to better screening strategies major advances in chemotherapy and the constantly evolving role of surgery optimal patient care is best achieved by a multidisciplinary team with imaging playing a pivotal role the explosion of technological developments in imaging in recent years has meant that all members of the team should understand the potential applications limitations and advantages of evolving imaging techniques each volume in contemporary issues in cancer imaging a multidisciplinary approach is edited by an expert guest editor with contributions from all members of the multidisciplinary team thus bringing together expertise from many specialties to promote the understanding and application of modern imaging in overall patient management

Fascia in Sport and Movement, Second edition 2021-03-30

Fascia in sport and movement second edition is a multi author book with contributions from 51 leading teachers and practitioners across the entire spectrum of bodywork and movement professions it provides professionals from all bodywork and movement specialisms with the most up to date information they need for success in teaching training coaching strengthening tackling injury reducing pain and improving mobility the new edition has 21 new chapters and chapters from the first edition have been updated with new research this book is an essential resource for all bodywork professionals sports coaches fitness trainers yoga teachers pilates instructors dance teachers and manual therapists it explains and demonstrates how an understanding of the structure and function of fascia can inform and improve your clinical practice the book s unique strength lies in the breadth of its coverage the expertise of its authorship and the currency of its research and practice base

Insect Immunology 2011-04-28

This work is the first book length publication on the topic of insect immunology since 1991 complementing earlier works by offering a fresh perspective on current research interactions of host immune systems with both parasites and pathogens are presented in detail as well as the genomics and proteomics approaches which have been lacking in other publications Beckage provides comprehensive coverage of topics important to medical researchers including drosophila as a model for studying cellular and humoral immune mechanisms biochemical mediators of immunity and insect blood cells and their functions encompasses the most important topics of insect immunology including mechanisms genes proteins evolution and phylogeny provides comprehensive coverage of topics important to medical researchers including drosophila as a model for studying cellular and humoral immune mechanisms biochemical mediators of immunity and insect blood cells and their functions most up to date information published with contributions from international leaders in the field

Materials for Biomedical Engineering: Organic Micro and Nanostructures 2019-06-18

Materials for biomedical engineering organic micro and nanostructures provides an updated perspective on recent research
regarding the use of organic particles in biomedical applications the different types of organic micro and nanostructures are discussed as are innovative applications and new synthesis methods as biomedical applications of organic micro and nanostructures are very diverse and their impact on modern and future therapy diagnosis and prophylaxis of diseases is huge this book presents a timely resource on the topic users will find the latest information on cancer and gene therapy diagnosis drug delivery green synthesis of nano and microparticles and much more provides knowledge of the range of organic micro and nanostructures available enabling the reader to make optimal materials selection decisions presents detailed information on current and proposed applications of the latest biomedical materials places a strong emphasis on the characterization production and use of organic nanoparticles in biomedicine such as gene therapy dna interaction and cancer management

**Nanostructures for Antimicrobial Therapy 2017-05-29**

nanostructures for antimicrobial therapy discusses the pros and cons of the use of nanostructured materials in the prevention and eradication of infections highlighting the efficient microbicidal effect of nanoparticles against antibiotic resistant pathogens and biofilms conventional antibiotics are becoming ineffective towards microorganisms due to their widespread and often inappropriate use as a result the development of antibiotic resistance in microorganisms is increasingly being reported new approaches are needed to confront the rising issues related to infectious diseases the merging of biomaterials such as chitosan carrageenan gelatin poly lactic co glycolic acid with nanotechnology provides a promising platform for antimicrobial therapy as it provides a controlled way to target cells and induce the desired response without the adverse effects common to many traditional treatments nanoparticles represent one of the most promising therapeutic treatments to the problem caused by infectious microorganisms resistant to traditional therapies this volume discusses this promise in detail and also discusses what challenges the greater use of nanoparticles might pose to medical professionals the unique physiochemical properties of nanoparticles combined with their growth inhibitory capacity against microbes has led to the upsurge in the research on nanoparticles as antimicrobials the importance of bactericidal nanobiomaterials study will likely increase as development of resistant strains of bacteria against most potent antibiotics continues shows how nanoantibiotics can be used to more effectively treat disease discusses the advantages and issues of a variety of different nanoantibiotics enabling medics to select which best meets their needs provides a cogent summary of recent developments in this field allowing readers to quickly familiarize themselves with this topic area

**Husband & Reznek’s Imaging in Oncology 2020-10-18**

this comprehensive reference provides an overview of the general principles of cancer staging as well as specific discussions of each tumour type across the body including lymphoma and haematological malignancies for each tumour the pattern of disease involvement and disease spread are emphasized the state of the art imaging features surveyed and the latest tumour staging and methods to assess treatment response are addressed separate sections discuss metastatic disease and the effects of treatment on normal and diseased tissues the final section of the book highlights emerging functional and molecular imaging techniques to evaluate the different biological hallmarks of cancer
Biotechnological Advances in Aquaculture Health Management  2022-01-13

This book is an inclusive coverage of advances in aquaculture health management. It offers latest updates as well as explains the novel concepts and issues related to aquatic animal health management to support the understanding of the concepts. There is extensive use of illustrations. Chapters emphasize on the state of art techniques and hold great promise for the sustainable development of aquaculture. This book is of interest to teachers, researchers, aquatic biologists, capacity builders, and policymakers. Also, the book serves as additional reading material for undergraduate and graduate students of aquatic sciences, marine sciences, biotechnology, ecology, and environmental sciences. National and international aquatic scientists, policy makers will also find this to be a useful read.

Guide to Protein Purification  2009-11-03

Guide to protein purification second edition provides a complete update to existing methods in the field reflecting the enormous advances made in the last two decades, in particular, proteomics, mass spectrometry, and DNA technology have revolutionized the field. Since the first edition's publication, but through all of the advancements, the purification of proteins is still an indispensable first step in understanding their function. This volume examines the most reliable robust methods for researchers in biochemistry, molecular and cell biology, genetics, pharmacology, and biotechnology and sets a standard for best practices in the field. It relates how traditional and new cutting edge methods connect to the explosive advancements in the field. This guide gives imminently practical advice to avoid costly mistakes in choosing a method and brings in perspective from the premier researchers. While, it presents a comprehensive overview of the field today. It gathers the top global authors from industry, medicine, and research fields across a wide variety of disciplines including biochemistry, genetics, oncology, pharmacology, dermatology, and immunology. It assembles chapters on both common and less common relevant techniques. It provides robust methods as well as an analysis of the advancements in the field that for an individual investigator can be a demanding and time-consuming process.

Oxford Textbook of Palliative Medicine  2015-04-30

The definitive Oxford textbook of palliative medicine now in its fifth edition has again been thoroughly updated to offer a truly global perspective in this field of extraordinary talent and thoughtfulness. Updated to include new sections devoted to assessment tools, care of patients with cancer and the management of issues in the very young and the very old. This leading textbook covers all the new and emerging topics since its original publication in 1993. In addition, the multi-disciplinary nature of palliative care is emphasized throughout the book. Covering areas from ethical and communication issues, the treatment of symptoms, and the management of pain. This fifth edition of the Oxford textbook of palliative medicine is dedicated to the memory of Professor Geoffrey Hanks, pioneer in the field of palliative medicine and co-editor of the previous four editions. Winner in the medicine category of the British Medical Association Book Awards, this is a truly comprehensive text no hospital, hospice, palliative care service or medical library should be without this essential source of information.
Membrane Proteins Production for Structural Analysis 2014-06-20

This book updates the latest development in production stabilization and structural analysis techniques of membrane proteins. This field has made significant advances since the elucidation of the first 3D structure of a recombinant G protein coupled receptor (GPCR) rhodopsin with the structure of several more GPCRs having been solved in the past five years. In fact, the 2012 Nobel Prize in Chemistry was awarded for groundbreaking discoveries on the inner workings of GPCRs. This book is essential reading for all researchers, biochemists, and crystallographers working with membrane proteins who are interested in the structural characterization of their favorite protein and who wish to follow the expression, migration, modifications, and recycling of a membrane protein.

International HRM in an Uncertain World 2022-11-28

This book explores international human resource management (HRM) practices in the contexts of high uncertainties. It encompasses situations of financial crisis, political and civil uncertainty, environmental collapse, and recession. Research on unstable and unpredictable contexts in business and HRM remain relatively scarce and scattered across disciplines. This volume brings together recent thinking from a range of different perspectives and methodologies. MNEs are often distinguished by the supposedly superior ability to implement highly tactical, more robust talent management practices, including work-based HRM, international systems, and international systems in line with the rest of their worldwide operations. However, they often fall short. The chapters in this book explore the 'how, why, and when' at a theoretical level. This collection brings together developments and extensions of a range of salient theories. They explore common methodological challenges and ways forward for future researchers on HRM in high contextual uncertainty. The chapters in this book were originally published as a special issue of the International Journal of Human Resource Management.

Natural Bio-active Compounds 2019-09-06

Bioactive compounds produced by natural sources such as plants, microbes, endophytic fungi, and others can potentially be applied in various fields including agriculture, biotechnology, and biomedicine. Several bioactive compounds have proved to be invaluable in mediating plant-microbe interactions and promoting plant growth and development due to their numerous health-promoting properties. These compounds have been widely used as a source of medication since ancient times, however, there is an unprecedented need to meet the growing demand for natural bioactive compounds in the flavor and fragrance, food and pharmaceutical industries. Moreover, discovering new lead molecules from natural sources is essential to overcoming the rising number of new diseases. In this regard, natural bioactive compounds hold tremendous potential for new drug discovery. Therefore, this field of research has become a vital area for researchers interested in understanding the chemistry, biosynthetic mechanisms, and pharmacological activities of these bioactive metabolites. This book describes the basics of bioactive plant compounds, their chemical properties, and their pharmacological and biotechnological properties with regard to various human diseases and applications in the drug, cosmetics, and herbal industries. It offers a valuable asset for all students, educators, researchers, and healthcare experts involved in agronomy, ecology, crop science, molecular biology, stress physiology, and natural products.
Functional Imaging in Oncology 2014-07-08

in the new era of functional and molecular imaging both currently available imaging biomarkers and biomarkers under
development are expected to lead to major changes in the management of oncological patients this two volume book is a
practical manual on the various imaging techniques capable of delivering functional information on cancer including diffusion
mri perfusion ct and mri dual energy ct spectroscopy dynamic contrast enhanced ultrasonography pet and hybrid modalities
this second volume considers the applications and benefits of these techniques in a wide range of tumor types including their
role in diagnosis prediction of treatment outcome and early evaluation of treatment response each chapter addresses a
specific malignancy and is written by one or more acclaimed experts the lucid text is complemented by numerous high quality
illustrations that highlight key features and major teaching points

Synthesis of Bionanomaterials for Biomedical Applications 2023-01-11

synthesis of bionanomaterials for biomedical applications summarizes a range of procedures including green synthesis of
metal nanoparticles metal oxide nanoparticles and other types of nanoparticles while also exploring the appropriate use of
these nanoparticles in various therapeutic applications such as anticancer antibacterial antifungal drug delivery and more the
book provides important information for materials scientists and pharmaceutical scientists on the synthesis of various
nanoparticles using a variety of eco friendly bionanomaterials as concern has arisen regarding the environmental impact
caused by some of nanomaterials as well as their possible toxicity to cells this book presents information on a new generation
of eco friendly materials in addition the green synthesis of nanoparticles shows how environmentally friendly nanoparticles
can be synthesized from different biological sources such as microbes fungi algae and plants provides information on the
synthesis and application of eco friendly bionanomaterials offers coverage of nanomaterials generated through green
synthesis assesses the challenges of manufacturing eco friendly nanomaterials on an industrial scale

Nanoconjugate Nanocarriers for Drug Delivery 2018-09-03

this new volume presents a plethora of new research on the use of nanoconjugate nanocarriers in drug delivery
nanotechnology as drug carriers has been observed to increase the level of sophistication through a variety of ways it helps
to alleviate some of the pitfalls of conventional dosage forms such as few pitfalls such as non specific drug delivery dose
dumping poor patient compliance toxicities linked with higher doses etc with chapters from highly skilled experienced and
renowned scientists and researchers nanoconjugate nanocarriers for drug delivery is divided into four sections providing an
introduction to nanocarriers for drug delivery physicochemical features of nanocarriers and specific applications dealing with
drug delivery in particular the materials used as well as formulation and characterization have been discussed in detail the
nanocarriers covered in the book include nanoparticles vesicular carriers carriers having carbon as the core constituent
dispersed systems etc the book also delves into the interaction and associations between drug delivery research and its
therapeutic applications in practice the book integrates a wide variety of case studies research and theories in an attempt to
reveal the diversity and capture the novel approaches of nanoconjugate nanocarriers for drug delivery employed by
developers and content experts in the field this timely publication will be an essential reference and current awareness source
building on the available literature in the field of pharmacy and biomedical science while also providing ideas for further
research opportunities in this dynamic field

**Modern Topics in the Phototrophic Prokaryotes 2017-04-18**

This book offers authoritative contributions by world experts actively working on different aspects of phototrophic prokaryotes providing up to date information in this rapidly advancing field it covers the range of topics that are currently the focus of research with this group of organisms as essentially single celled organisms phototrophic prokaryotes process many environmental signals and use this information to optimize their metabolism growth rate dna replication and cell division phototrophic prokaryotes are collectively of great interest for a number of different fundamental and applied perspectives and have long served as models for understanding such basic fundamental biological processes as photosynthesis and respiration on an ecological environmental level they are extremely important being the most abundant photosynthetic organisms on earth and responsible for the majority of the primary productivity in the oceans they also hold great promise as biotechnological catalysts being able to couple solar energy conversion through photosynthesis and carbon fixation to the production of biofuels commodity chemicals and nutraceuticals the book is recommended to advanced students and scientists dealing with life sciences especially in genetics microbiology and molecular biology

**Advances in Clinical Chemistry 2023-02-27**

Advances in clinical chemistry volume 113 the latest installment in this internationally acclaimed series contains chapters authored by world renowned clinical laboratory scientists physicians and research scientists the serial discusses the latest and most up to date technologies related to the field of clinical chemistry with sections in this release focusing on biosensors for saliva biomarkers biochemistry and pathophysiology of the transient potential receptor vanilloid 6 trpv6 calcium channel protein glycation in diabetes mellitus biomarkers of oxidative stress and reproductive complications cortisol analytical and clinical determinants and hemophilia a emicizumab monitoring and impact on coagulation testing provides the most up to date technologies in clinical chemistry and clinical laboratory science authored by world renowned clinical laboratory scientists physicians and research scientists presents the international benchmark for novel analytical approaches in the clinical laboratory

**Grainger & Allison’s Diagnostic Radiology: Abdominal Imaging 2015-11-24**

The 20 chapters in this book have been selected from the contents of the abdominal imaging section in grainger allison s diagnostic radiology 6e these chapters provide a succinct up to date overview of current imaging techniques and their clinical applications in daily practice and it is hoped that with this concise format the user will quickly grasp the fundamentals they need to know throughout these chapters the relative merits of different imaging investigations are described variations are discussed and recent imaging advances are detailed

**Clinical Pediatric Urology 2001-11-15**

The fourth edition of this internationally acclaimed seminal textbook on the subject of clinical pediatric urology is completely updated world renowned experts in the field present state of the art developments in all areas of clinical pediatric urology
from diagnosis to treatment and from theory to practice clinical pediatric urology is clinical in orientation and practical in presentation covering every illness diagnostic method and appropriate treatment in pediatric urology from the embryo onwards each chapter is lavishly illustrated with full color photographs and medical artwork tables graphs and charts lend further support to the detailed and comprehensive text all in a single easily accessed volume this is a useful and informative reference for students and specialists alike

Advances in Computing and Data Sciences 2018-10-30

despite two volume set ccis 905 and ccis 906 constitutes the refereed proceedings of the second international conference on advances in computing and data sciences icacds 2018 held in dehradun india in april 2018 the 110 full papers were carefully reviewed and selected from 598 submissions the papers are centered around topics like advanced computing data sciences distributed systems organizing principles development frameworks and environments software verification and validation computational complexity and cryptography machine learning theory database theory probabilistic representations

Microbial Production of High-Value Products 2022-09-06

this edited volume emphasizes how microorganisms have become a reliable pillar of biotechnology the authors discuss advances in synthetic biology and genetic engineering that have made it possible to reprogram the microbial cellular capabilities this enables an economically viable production of high value products at an industrial level the first part of the book provides an overview of synthetic biology and genome editing tools for engineering microbial cell factories in modern fermentation readers also learn how high throughput bioprocessing methods are used to recover and purify microbial products the remaining parts of this book explore the implementation and challenges of these upstream and downstream processing techniques for manufacturing high value products cost effectiveness and quality control are key factors when discussing the production of low molecular weight products biopharmaceuticals biopolymers and protein based nanoparticles this book is a valuable resource for biotechnologists both in the industry and in academia

Laboratory Methods in Enzymology: Protein 2014-03-22

in this volume we have brought together a number of core protocols concentrating on protein carefully written and edited by experts indispensable tool for the researcher carefully written and edited by experts to contain step by step protocols in this volume we have brought together a number of core protocols concentrating on protein

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