Immunology Journals Impact Factor

Translational Autoimmunity: Etiology of Autoimmune Diseases is the first volume of the Translational Immunology book series. To attain its purpose as a detailed translational step to tackle autoimmunity, this volume sufficiently addresses basic questions on how the immune system is designed to distinguish self from nonself. It discusses the known mechanisms that lead to the maintenance of self-tolerance, presents potential triggers and malfunctions that impede normal immune processes, and demonstrates how the immune system induces an autoreactive state that results in the recognition of self-antigens seen in autoimmune conditions. Includes coverage of basic immunology, the clinical aspects of autoimmunity, and translational immunology studies in autoimmunity Presents key concepts supported by a systematic appraisal of the most recent evidence Assists students at all the academic levels while also being applicable to scientists who work with autoimmunity Designed for learning, teaching, review, testing, practice and research

Sensitive skin is a widely reported condition where there is subjective cutaneous hyper-reactivity to environmental factors. Progress has been made in many aspects of the background science that will help clinicians in their management of patients presenting with the condition. This new text sums up the advances in thinking on pathophysiology, classification, methods of investigation, and the different susceptibilities of different types of skin.

Surveys the biotechnologically influenced advances in the understanding of systemic autoimmune disorders, highlighting recent research using cell biology and biochemistry, the cloning of immune cells, recombinant DNA, and molecular genetics. Among the topics are the role of complement in inflammatio

Immunoendocrinology is a rapidly developing field of research that seeks to understand the intersection of the immune and endocrine systems. Immunoendocrinology: Scientific and Clinical Aspects explores in detail the current knowledge of immunoendocrinology, namely endocrine disorders produced by disorders of immune function. Chapters cover both basic pathophysiology informed by studies of animal models as well as current understanding of multiple related clinical diseases—their pathophysiology, diagnosis, and therapy. Immunoendocrinology: Scientific and Clinical Aspects captures the central role of immunoendocrinologic processes in the pathogenesis of not only type 1 diabetes but in a range of other autoimmune and endocrine disorders.

Guide for the Care and Use of Laboratory Animals

Spotlight on the Relationship between Sepsis and Infection: from Mechanisms to Therapy

Oral Microbiology and Immunology

Methods and Protocols

Immunoinformatics

Etiology of Autoimmune Diseases

Fish Immunology contains the proceedings of a symposium organized by the Fisheries Society of the British Isles, held in Plymouth, England, 11-13 July 1983. This volume contains 29 chapters and opens with a study on the prevention of disease outbreak or treatment of disease in fish farms with drugs or chemicals. Separate chapters follow on topics such as immune phenomena in Teleostei or Anura; phagocytosis in fish; the granulocyte elasmobranch species, namely Scyliorhinus canicula, Raja clavata and R. microcellata; and phagocytic cells in the dogfish (Scyliorhinus canicula l.); and levels of ?-precipitin in two groups of wild fish: a group believed to be suffering from Ulcerative Dermal Necrosis (UDN) and a healthy group showing no external evidence of disease. Subsequent chapters deal with sequential antigenic competition in teleosts challenged with the fish-furuncu Aeromonas salmonicida; the occurrence of vaccine uptake at the skin surface of rainbow trout; and vaccination and development of immunological memory in carp.

Host Response to Biomaterials: The Impact of Host Response on Biomaterial Selection explains the various categories of biomaterials and their significance for clinical applications, focusing on the host response to each biomaterial. It is one of the first books to connect immunology and biomaterials with regard to host response. The text also explores the role of the immune system in host response, and covers the regulatory environment fo with the benefits of synthetic versus natural biomaterials, and the transition from simple to complex biomaterial solutions. Fields covered include, but are not limited to, orthopaedic surgery, dentistry, general surgery, neurosurgery, urology, and regenerative medicine. Explains the various categories of biomaterials and their significance for clinical applications Contains a range of extensive coverage, including, but not limited to, orthopedic, su general surgery, neurosurgery, lower urinary tract, and regenerative medicine Includes regulations regarding combination devices

This volume of Methods in Enzymology aims to provide a reference for the diverse, powerful tools used to analyze RNA helicases. The contributions in this volume cover the broad scope of methods in the research on these enzymes. Several chapters describe quantitative biophysical and biochemical approaches to study molecular mechanisms and conformational changes of RNA helicases. Further chapters cover structural analysis, exan effects on several representative examples, and the analysis of cellular functions of select enzymes. Two chapters outline approaches to the analysis of inhibitors that target RNA helicases. This volume of Methods in Enzymology aims to provide a reference for the diverse, powerful tools used to analyze RNA helicases The contributions in this volume cover the broad scope of methods in the research on these enzymes

Providing an interface between immunologic and allergic skin diseases and systemic allergies, Cutaneous Allergy will appeal to both dermatologists interested in allergic diseases and allergists interested in dermatology. Organised by disease, it concentrates on clinical presentation, evaluation and treatment. Immune problems of the skin such as autoimmune bullous disease, erythema multiform and Stevens-Johnson syndrome are covered dermatologic manifestations of food, latex and drug allergies.

CVI

The Handbook of Transplant Immunology

Fish Immunology

Sensitive Skin Syndrome

Ocular Immunology

Translational Autoimmunity

This book covers a wide range of diverse immunoinformatics research topics, involving tools and databases of potential epitope prediction, HLA gene analysis, MHC characterizing, in silico vaccine design, mathematical modeling of host–pathogen interactions, and network analysis of immune system data. In that way, this fully updated volume explores the enormous value of computational tools and models in immunology research. Written for the highly successful Methods in Molecular Biology series, chapters include the kind of key insights and detailed implementation advice to encourage successful results in the lab. Authoritative and practical, Immunoinformatics, Third Edition serves as an ideal guide for scientists working at the intersection of bioinformatics, mathematical modelling, and statistics for the study of immune systems biology.

Systems Immunology and Infection Microbiology provides a large amount of biological system models, diagrams and flowcharts to illustrate the development procedure to understand the results of the systems immunology and infection microbiology. The results are not only remarkable, but also revolutionary in immunology and infection microbiology and can be also applied to systems drug design in infectious diseases.The book is divided into six parts. The first one discusses systems immunology; the second, systems infection microbiology; the third, systematic inflammation and immune responses in restoration and regeneration process; the forth introduces systems innate and adaptive immunity in infection process; systematic genetic and epigenetic pathogenic/defensive mechanism during bacterial infection on human cells is introduced in the fifth part; and the sixth and final part discusses systematic genetic and epigenetic pathogenic/defensive mechanism during the viral infection on human cells.This book provides a new big data-driven and systems-driven systems immunology and infection microbiology to researchers applying systems biology and bioinformatics in their works, and to several members of biomedical field who are interested to learn more about those approaches. Encompasses one applicable example in every chapter to illustrate the solution procedure from big data mining, network modelling, host/pathogen cross-talk detection, drug target identification and systems drug design Presents flowcharts to represent the development procedure of systematic immunology and infection in a very clear format Contains 100 colour diagrams to help readers understand the related biological networks, their corresponding mechanisms and significant network biomarkers for therapeutic drug design

This second edition text is designed to prepare nursing students to be advocates for the aging population in all practice settings. Information on demographics, active and dependent aging, and leadership and management skills has been expanded. More ethical issues are also covered in this edition, such as living wills, guardianship, and power of attorney. An instructor's guide is also available.

Fully revised for the fifth edition, this outstanding reference on bone marrow transplantation is an essential, field-leading resource. Extensive coverage of the field, from the scientific basis for stem-cell transplantation to the future direction of research Combines the knowledge and expertise of over 170 international specialists across 106 chapters Includes new chapters addressing basic science experiments in stem-cell biology, immunology, and tolerance Contains expanded content on the benefits and challenges of transplantation, and analysis of the impact of new therapies to help clinical decision-making Includes a fully searchable Wiley Digital Edition with downloadable figures, linked references, and more References for this new edition are online only, accessible via the Wiley Digital Edition code printed inside the front cover or at www.wiley.com/go/forman/hematopoietic.

Avian Immunology

Systemic Autoimmunity

The Journal of Immunology

Applied Respiratory Pathophysiology

Thomas' Hematopoietic Cell Transplantation, 2 Volume Set

Cancer Immunoprevention

Psychoendocrinology covers the advances in the field of biology and the development of highly refined measurement techniques for hormones. The book discusses the partitioning of neuroendocrine steroids and peptides between vascular and cerebral compartments; the mechanisms of the female reproductive behavior; and the sensory, hormonal, and neural determinant of maternal behavior. The text describes the effects of sexual behavior on gonadal function in rodents; the hormonal regulation of learning performance; and the hormonal modulation of memory. The psychobiological perspective on the psychoneuroendocrinology of stress and the behavioral effects of the endogenous opioids are also considered. The book further tackles the hormonal interactions on temperature regulation and temperature regulation under modified physiological states. Endocrinologists, psychobiologists, neurologists, neurobiologists, and students taking related courses will find the book useful.

As an internationally renowned specialist in childhood allergy and immunology, Prof. Susan Prescott takes us on a journey into the science behind the allergy epidemic. As both an allergy specialist working in a busy children's hospital and as a cutting edge research scientist, Prescott is perfectly placed to explore how and why we are experiencing an epidemic rise in allergic diseases, as well as the practical side of dealing with these potentially serious conditions. With clear, no-nonsense explanations and a very personable style, Prescott informs, assures, and educates in this book.

This book presents a comprehensive overview of important immune molecules and their structure-function relationships. The immune system is highly complex, consisting of a network of molecules, cells, tissues and organs, and the immune reaction is involved in various physiological as well as pathological processes, including development, self-tolerance, infection, immunity, and cancer. Numerous molecules participate in immune recognition, inhibition and activation, and these important immune molecules can be roughly divided into cell surface receptors, intracellular receptors and intracellular signaling molecules. The study of how these immune molecules function at molecular level has laid the foundation for understanding the immune system. The book provides researchers and students with the latest research advances concerning the structural biology of key immune molecules/pathways, and offers immunologists essential insights into how these immune molecules function.

"Frontiers in Anti-Infective Drug Discovery" is an Ebook series devoted to publishing the latest and the most important advances in Anti-Infective drug design and discovery. Eminent scientists write contributions on all areas of rational drug design and

Official Journal of the American Association of Immunologists

A Mystery of Modern Life

Psychoendocrinology

Pathways and Progress in the Transplantation of Organs and Tissues Between Species

Clinical Xenotransplantation

Systems and Synthetic Immunology

A respected resource for decades, the Guide for the Care and Use of Laboratory Animals has been updated by a committee of experts, taking into consideration input from the scientific and laboratory animal communities and the public at large. The Guide incorporates new scientific information on common laboratory animals, including aquatic species, and includes extensive references. It is organized around major components of animal use: Key concepts of animal care and use. The Guide sets the framework for the humane care and use of laboratory animals. Animal care and use program. The Guide discusses the concept of a broad Program of Animal Care and Use, including roles and responsibilities of the Institutional Official, Attending Veterinarian and the Institutional Animal Care and Use Committee. Animal environment, husbandry, and management. A chapter on this topic is now divided into sections on terrestrial and aquatic animals and provides recommendations for housing and environment, husbandry, behavioral and population management, and more. Veterinary care. The Guide discusses veterinary care and the responsibilities of the Attending Veterinarian. It includes recommendations on animal procurement and transportation, preventive medicine (including animal biosecurity), and clinical care and management. The Guide addresses distress and pain recognition and relief, and issues surrounding euthanasia. Physical plant. The Guide identifies design issues, providing construction guidelines for functional areas; considerations such as drainage, vibration and noise control, and environmental monitoring; and specialized facilities for animal housing and research needs. The Guide for the Care and Use of Laboratory Animals provides a framework for the judgments required in the management of animal facilities. This updated and expanded resource of proven value will be important to scientists and researchers, veterinarians, animal care personnel, facilities managers, institutional administrators, policy makers involved in research issues, and animal welfare advocates.

This title provides an illuminating examination of the current state of xenotransplantation – grafting or transplanting organs or tissues between members of different species – and how it might move forward into the clinic. To be sure, this is a critical topic, as a major problem that remains worldwide is an inadequate supply of organs from deceased human donors, severely limiting the number of organ transplants that can be performed each year. Based on presentations given at a major conference on xenotransplantation, this title includes important views from many leading experts who were invited to present their data and opinions on how xenotransplantation can advance into the clinic. Attention was concentrated on pig kidney and heart transplantation as it is in regard to these organs that most progress has been made. Collectively, these chapters effectively highlight the many advantages of xenotransplantation to patients with end-stage organ failure, thereby encouraging the mapping of a concrete pathway to clinical xenotransplantation. The book is organized across 22 chapters, beginning with background information on clinical and experimental xenotransplantation. Following this are discussions addressing how pigs can be genetically engineered for their organs to be resistant to the human immune response through deletion of pig xenoantigens, and the insertion of 'protective' human transgenes. Subsequent chapters analyze complications that arise in practice, comparing allotransplant and xenotransplant rejection. The selection of the ideal patients for the first clinical trials is discussed. Finally, the book concludes with an analysis on the regulatory, economic, and social aspects of this research, including FDA perspectives and the sensitive, psychosocial factors regarding allotransplantation and xenotransplantation. A major and timely addition to the literature, Clinical Xenotransplantation will be of great interest to all researchers, physicians, and academics from other disciplines with an interest in xenotransplantation.

Morphology Feature extraction Computational linguistics Phonetics Pragmatics Semantic Web Information retrieval

The field of oral microbiology has seen fundamental conceptual changes in recent years. Microbial communities are now seen as the fundamental etiological agent in oral diseases through their interface with host inflammatory responses. Study of structured microbial communities has increased our understanding of the roles of each member in the pathogenesis of oral diseases, principles that apply to both periodontitis and dental caries. Against this backdrop, the third edition of Oral Microbiology and Immunology has been substantially expanded and rewritten by an international team of authors and editors. Featured in the current edition are: links between oral infections and systemic disease revised and updated overview of the role of the immune system in oral infections thorough discussions of biofilm development and control more extensive illustrations and Key Points for student understanding Graduate students, researchers, and clinicians as well as students will find this new edition valuable in study and practice. The field of oral microbiology has seen fundamental conceptual changes in recent years. Microbial communities are now seen as the fundamental etiological agent in oral diseases through their interface with host inflammatory responses. Study of structured microbial communities has increased our understanding of the roles of each member in the pathogenesis of oral diseases, principles that apply to both periodontitis and dental caries. Against this backdrop, the third edition of Oral Microbiology and Immunology has been substantially expanded and rewritten by an international team of authors and editors. Featured in the current edition are: links between oral infections and systemic disease revised and updated overview of the role of the immune system in oral infections thorough discussions of biofilm development and control more extensive illustrations and Key Points for student understanding Graduate students, researchers, and clinicians as well as students will find this new edition valuable in study and practice.

Encyclopedia of Infection and Immunity

Stem Cell Transplantation

Gerontology and Leadership Skills for Nurses

Eighth Edition

Free Radicals in Biology and Medicine

An integrated view of the principal aspects of immune response to all types of infectious agents, emphasizing the immune system as a host defense system. * Illustrates how the dialogue between different types of pathogens and the host immune system, as well as the cross-talk between the different members of the immune response, works. * Serves as valuable reading for microbiologists interested in pathogenesis and immunology; clinicians with an interest in immunology, virology, vaccine development, infectious diseases, bacteriology, parasitology, pathology, and cell biology; and immunologists wanting to expand their knowledge of infectious diseases and their causative agents.

Every aspect of immune function and host defense is dependent upon a proper supply and balance of nutrients. Severe malnutrition can cause significant alteration in immune response, but even subclinical deficits may be associated with an impaired immune response, and an increased risk of infection. Infectious diseases have accounted for more off-duty days during major wars than combat wounds or nonbattle injuries. Combined stressors may reduce the normal ability of soldiers to resist pathogens, increase their susceptibility to biological warfare agents, and reduce the effectiveness of vaccines intended to protect them. There is also a concern with the inappropriate use of dietary supplements. This book, one of a series, examines the impact of various types of stressors and the role of specific dietary nutrients in maintaining immune function of military personnel in the field. It reviews the impact of compromised nutrition status on immune function; the interaction of health, exercise, and stress (both physical and psychological) in immune function; and the role of nutritional supplements and newer biotechnology methods reported to enhance immune function. The first part of the book contains the committee's workshop summary and evaluation of ongoing research by Army scientists on immune status in special forces troops, responses to the Army's questions, conclusions, and recommendations. The rest of the book contains papers contributed by workshop speakers, grouped under such broad topics as an introduction to what is known about immune function, the assessment of immune function, the effect of nutrition, and the relation between the many and varied stresses encountered by military personnel and their effect on health.

Focusing on all current applications, this book presents the various methods as well as their suitability and limitations for a specific question. One particular highlight is the presentation of all basic information on the structure of the relevant objects, thus allowing readers to choose the most suitable applications for any specific problem. They will also find in-depth background information on structure-function relationships, plus descriptions of sample preparations with respect to a particular technique and the necessary equipment. The whole is rounded off with an overview of the future application potential for devices and applications of upcoming interest in biotechnology.

For over 50 years, the mission of the National Institute of Allergy and Infectious Diseases (NIAID) has been to conduct and support basic and applied research to better understand, treat, and prevent infectious, immunologic, and allergic diseases with the ultimate goal of improving the health of individuals in the United States and around the world. As part of its mission to foster biomedical discovery and to reduce the burden of human disease, NIAID is committed to encouraging the accelerated translation of biomedical discoveries into effective clinical care and public health practice throughout the world. In pursuit of this goal and its disease-specific scientific objectives, NIAID seeks to broaden research opportunities and collaborations involving scientists and institutions outside the United States. National Institute of Allergy and Infectious Diseases, NIH: Volume 1, Frontiers in Research contains presentations given at the 2006 NIAID Research Conference held in Opatija, Croatia which brought internationally known researchers from the United States and Central and Eastern Europe to focus together on shared interests in microbiology, infectious disease, HIV/AIDS, and basic and clinical immunology. Some of the topics covered include emerging and re-emerging infections, the development of infectious disease prophylactics and therapeutics, drug resistance, and various topics in immunomodulation, autoimmunity, infections and immunity, and the development of vaccines. Extensive and in-depth, National Institute of Allergy and Infectious Diseases, NIH: Volume 1, Frontiers in Research is a valuable, comprehensive guide to the state of research today.

Clinical and Vaccine Immunology

Structural Immunology

2021 3rd International Conference on Natural Language Processing (ICNLP)

Current Protocols in Immunology

RNA Helicases

The Impact of Host Response on Biomaterial Selection

This easy yet comprehensive reference guide covers the mechanisms of respiratory diseases, explaining the main respiratory conditions for clinicians and postgraduate trainees. It discusses their aetiology as well as the basic concepts required to effectively evaluate and treat them. Applied Respiratory Pathophysiology is the first book to bring together detailed, clinically-relevant explanation of respiratory physiological processes and pathophysiological processes in one text. It is essential reading for anyone diagnosing and treating specific clinical conditions of the lungs.

Free Radicals in Biology and Medicine has become a classic text in the field of free radical and antioxidant research. Now in its fifth edition, the book has been comprehensively rewritten and updated whilst maintaining the clarity of its predecessors. Two new chapters discuss 'in vivo' and 'dietary' antioxidants, the first emphasising the role of peroxiredoxins and integrated defence mechanisms which allow useful roles for ROS, and the second containing new information on the role of fruits, vegetables, and vitamins in health and disease. This new edition also contains expanded coverage of the mechanisms of oxidative damage to lipids, DNA, and proteins (and the repair of such damage), and the roles played by reactive species in signal transduction, cell survival, death, human reproduction, defence mechanisms of animals and plants against pathogens, and other important biological events. The methodologies available to measure reactive species and oxidative damage (and their potential pitfalls) have been fully updated, as have the topics of phagocyte ROS production, NADPH oxidase enzymes, and toxicology. There is a detailed and critical evaluation of the role of free radicals and other reactive species in human diseases, especially cancer, cardiovascular, chronic inflammatory and neurodegenerative diseases. New aspects of ageing are discussed in the context of the free radical theory of ageing. This book is recommended as a comprehensive introduction to the field for students, educators, clinicians, and researchers. It will also be an invaluable companion to all those interested in the role of free radicals in the life and biomedical sciences.

This volume provides methods and techniques to further the study of cancer immunoprevention. Chapters describe tumor-associated antigens, cancer immune-preventive vaccines, generation of TILs, development of monoclonal antibodies, immunoprofiling technologies, tissue multispectral imaging techniques, mass cytometry on suspensions, mutiparametric flow cytometry, genomic expression analysis, and proteomic profiling of tumor microenvironment cell populations and metabolic assessment through novel imaging technologies. Written in the format of the highly successful Methods in Molecular Biology series, each chapter includes an introduction to the topic, lists necessary materials and reagents, includes tips on troubleshooting and known pitfalls, and step-by-step, readily reproducible protocols. Authoritative and cutting-edge, Cancer Immunoprevention: Methods and Protocol aims to further understanding, development of interventional active strategies, and immune-interception of cancer.

Systems and Synthetic Immunology focuses on the similarities between biology and engineering at the systems level, which are important for applying engineering theories to biology problems. With the advent of new genomic techniques, there are numerous systematic investigations underway in the scientific world. This volume highlights techniques that can be used to effectively combine two of the most essential biological fields - Systems Biology and Synthetic Immunology. The respective chapters discuss the role of synthetic immunology in biotechnology, production of biomaterials, and their use in vaccine delivery. Further topics include the importance of cytokines; the use of genomic engineering tools in immunotherapy; immunosensors; nanotherapeutics; and bioinformatics tools in biomedical applications. Given its scope, the book offers readers an up-to-date and comprehensive review of this unique and dynamic field of research.

Military Strategies for Sustainment of Nutrition and Immune Function in the Field

Microscopic Techniques in Biotechnology

National Institute of Allergy and Infectious Diseases, NIH

Experiments in International Benchmarking of U.S. Research Fields

Immunology of Infectious Diseases

Frontiers in Anti-Infective Drug Discovery

Encyclopedia of Infection and Immunity provides new insights into the interactions between bacteria, fungi, parasites and their hosts. Specific areas of interest include host cellular and immune response to microbes, molecular mechanisms of action of beneficial microbes or host-associated microbial communities, microbial pathogenesis, virulence factors, experimental models of infection, host resistance or susceptibility, and the generation of innate and adaptive immune responses. Comprised of over 200 chapters written and edited by leading experts in the field, this book will serve as a key resource for students, researchers, academics and industry practitioners in the fields of microbiology, immunology, and infectious diseases. More than 100 years after Robert Koch and Louis Pasteur established the microbial etiology of communicable diseases, the field of microbiology is experiencing a second period of rapid growth and expansion, driven by the realization that changes in host-associated microbial communities might be at the root of a broad spectrum of noncommunicable human diseases. These advances follow on the heels of recent progress in high-throughput sequencing technology, which has provided a wealth of information on the human microbiome and its physiological potential. Offers a contemporary review of current infection and immunity research, and insights into the future direction of the field Meticulously researched and cross-referenced to allow students, researchers and professionals to find relevant information quickly and easily Includes chapters written by academics and practitioners from various fields and regions, ensuring that the knowledge within is easily understood by, and applicable to, a large audience

How to Write and Publish a Scientific PaperCambridge University PressFlow Cytometry and Cell SortingSpringer Science & Business Media

Current Protocols in Immunology is a three-volume looseleaf manual that provides comprehensive coverage of immunological methods from classic to the most cutting edge, including antibody detection and preparation, assays for functional activities of mouse and human cells involved in immune responses, assays for cytokines and their receptors, isolation and analysis of proteins and peptides, biochemistry of cell activation, molecular immunology, and animal models of autoimmune and inflammatory diseases. Carefully edited, step-by-step protocols replete with material lists, expert commentaries, and safety and troubleshooting tips ensure that you can duplicate the experimental results in your own laboratory. Bimonthly updates, which are filed into the looseleaf, keep the set current with the latest developments in immunology methods. The initial purchase includes one year of updates and then subscribers may renew their annual subscriptions. Current Protocols publishes a family of laboratory manuals for bioscientists, including Molecular Biology, Human Genetics, Protein Science, Cytometry, Cell Biology, Neuroscience, Pharmacology, and Toxicology.

The analysis and sorting of large numbers of cells with a fluorescence-activated cell sorter (FACS) was first achieved some 30 years ago. Since then, this technology has been rapidly developed and is used today in many laboratories. A Springer Lab Manual Review of the First Edition: "This is a most useful volume which will be a welcome addition for personal use and also for laboratories in a wide range of disciplines. Highly recommended." CYTOBIOS

Volume 1: Frontiers in Research

How to Write and Publish a Scientific Paper

Host Response to Biomaterials

Cancer Immunotherapy Principles and Practice

Flow Cytometry and Cell Sorting

Cutaneous Allergy

How can the federal government gauge the overall health of scientific research--as a whole and in its parts--and determine whether national funding adequately supports national research objectives? It is feasible to monitor US performance with field-by-field peer assessments. This might be done through the establishment of independent panels consisting of researchers who work in a field, individuals who work in closely related fields, and research "users" who follow the field closely. Some of these individuals should be outstanding foreign scientists in the field being examined. This technique of comparative international assessments is also known as international benchmarking. Experiments in International Benchmarking of U.S. Research Fields evaluates the feasibility and utility of the benchmarking technique. In order to do this, the report internationally benchmarks three fields: mathematics, immunology, and materials science and engineering, then summarizes the results of these experiments.

Cancer Immunotherapy Principles and Practice, from the Society of Immunotherapy of Cancer (SITC), is the authoritative reference on cancer immunobiology and the immunotherapy treatments that harness the immune system to combat malignant disease. Featuring five sections and over 50 chapters covering the Basic Principles of Tumor Immunology, Cancer Immunotherapy Targets and Classes, Immune Function in Cancer Patients, Disease Specific Treatments and Outcomes, and Regulatory Aspects of Cancer Immunotherapy, this book covers all major topics that have shaped the development of immunotherapy and propelled it to its current place at the forefront of cancer treatment innovation. This volume is a comprehensive resource for oncologists and fellows, immunologists, cancer researchers, and related practitioners seeking understanding of the basic science and clinical applications of cancer immunotherapy. As well as presenting the evidence for immune-based cancer treatment, it positions immunotherapy in the context of other available cancer treatments and provides data on response rates, risks, and toxicities across a variety of diseases. Filled with detailed tables, and instructive illustrations, as well as key points for quick reference, Cancer Immunotherapy Principles and Practice simplifies a challenging and dynamic subject. Key Features: Clearly summarizes the basic principles and research supporting cancer immunotherapy clinical translation Contains expert guidance and treatment strategies for all immunotherapy classes and agents, including cell-based therapies, monoclonal antibodies, cytokine therapies, checkpoint inhibitors, oncolytic viruses, adjuvant approaches, and treatment combinations Includes expert perspectives from leading authorities in the field Provides information on all FDA-approved immunotherapies, including clinical management and outcome data Discusses clinical aspects of immunotherapy for individual cancer types, including melanoma and other skin cancers, lung cancers, gynecologic cancers, gastrointestinal cancers, hematologic cancers, genitourinary cancers, head and neck cancers, sarcomas, brain and other CNS cancers, breast cancer, and pediatric malignancies. Explains regulatory aspects behind the development and approval of immunotherapy drugs Includes Online Access to the Digital Book

The second edition of Avian Immunology provides an up-to-date overview of the current knowledge of avian immunology. From the ontogeny of the avian immune system to practical application in vaccinology, the book encompasses all aspects of innate and adaptive immunity in chickens. In addition, chapters are devoted to the immunology of other commercially important species such as turkeys and ducks, and to ecoimmunology summarizing the knowledge of immune responses in free-living birds often in relation to reproductive success. The book contains a detailed description of the avian innate immune system, encompassing the mucosal, enteric, respiratory and reproductive systems. The diseases and disorders it covers include immunodepressive diseases and immune evasion, autoimmune diseases, and tumors of the immune system. Practical aspects of vaccination are examined as well. Extensive appendices summarize resources for scientists including cell lines, inbred chicken lines, cytokines, chemokines, and monoclonal antibodies. The world-wide importance of poultry protein for the human diet, as well as the threat of avian influenza pandemics like H5N1 and heavy reliance on vaccination to protect commercial flocks makes this book a vital resource. This book provides crucial information not only for poultry health professionals and avian biologists, but also for comparative and veterinary immunologists, graduate students and veterinary students with an interest in avian immunology. With contributions from 33 of the foremost international experts in the field, this book provides the most up-to-date review of avian immunology so far Contains a detailed description of the avian innate immune system reviewing constitutive barriers, chemical and cellular responses; it includes a comprehensive review of avian Toll-like receptors Contains a wide-ranging review of the "ecoimmunology" of free-living avian species, as applied to studies of population dynamics, and reviews methods and resources available for carrying out such research

Systems Immunology and Infection Microbiology

The Allergy Epidemic

Immunoendocrinology: Scientific and Clinical Aspects