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Emerging Viral Diseases - Institute of Medicine - 2013-03-19

Emerging Viruses: The next major wave of infectious disease, or pathogenesis, will be highlighted in the discussion of each virus family, and a chapter on the immune response to viruses will be included.

Further reading and laboratory exercises will be discussed, as well as anti-viral drugs, gene therapy, and the beneficial uses of viruses. By focusing on general virology principles, current and future technologies, familiar human viruses, and the effects of these viruses on humans, this textbook will provide a solid foundation for the practice of understanding viral diseases. Chapter 12 covers the classification and pathogenesis of enteroviruses, caliciviruses, astroviruses, and viruses causing gastroenteritis more rarely. Includes general biology, to medical epidemiology and human social behavior. The perspective represented by this book, that of Fenner and White's Medical Virology, Fifth Edition provides an integrated view of related sciences, from cell biology, to virology, molecular biology, and immunology to cover clinical diagnosis.

Viral Human Respiratory Infections - Sunit K. Singh - 2014-06-23

Using a multidisciplinary approach, Human Respiratory Viral Infections is set at the level between the definitive reference work and an advanced review, to allow readers to study pathology and have increased our understanding of the complex virus-host interactions that occur during viral infections. This book is focused on the principles of diagnosis, epidemiology, and how virus infections can be controlled. The first section concludes with a discussion on emergent and potential pathogens, and provides an overview of the current understanding of the complex interactions that occur between viruses and their hosts.

Viral Pathogenesis - Sunit K. Singh - 2014-06-23

Viral Pathogenesis is the study of the molecular mechanisms by which viruses cause disease, and the scientific and technological approaches in developing diagnostic tests and immunological diagnostic tests. Key Features: Provides a comprehensive, worldwide perspective of viral disease pathology * Bridges the fields of pathology and virology * Bridges the fields of virology, virology, and infectious diseases * Addresses topics from the perspective of the clinical pathologist * Illustrates unique, viral induced pathological lesions * Considers common and uncommon complications of infection

Pathology and Pathogenesis of Human Viral Disease - John E. Cruickshand - 2000-03-15

Pathology and Pathogenesis of Human Viral Disease is written from the unique perspective of the clinical pathologist. It will help clinicians and pathologists gain a better understanding of the impact of viral disease pathology on patients, and it is an appropriate resource for virologists, immunologists, and pediatricians.

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Neurotropic Viral Infections - Carol Shkolnik Reiss - 2016-09-08

Neurotropic Viral Infections is a comprehensive text on the neurosurgical infections and the central nervous system. Volume 2, Neurotropic Retroviruses, DNA Viruses, Immunity and Transplantation, includes chapters on the pathogenesis and pathology of RNA viruses that cause human disease of the central nervous system ranging from HIV to varicella zoster virus. Part 2 includes chapters on transmission of these viruses by transplantation, by bite or scratch, and by direct and indirect contact. Volume 1, Neurotropic RNA Viruses, includes chapters on the pathogenesis and pathology of RNA viruses that cause human disease of the central nervous system ranging from HIV to varicella zoster virus. Part 2 includes chapters on transmission of these viruses by transplantation, by bite or scratch, and by direct and indirect contact. Volume 1, Neurotropic RNA Viruses, includes chapters on the pathogenesis and pathology of RNA viruses that cause human disease of the central nervous system ranging from HIV to varicella zoster virus. Part 2 includes chapters on transmission of these viruses by transplantation, by bite or scratch, and by direct and indirect contact.

Viruses and Human Disease - Ellen G. Strauss - 2007-09-21

Completely revised and updated, this new edition of this bestselling text integrates basic virology with immunology and emphasizes the role of viral infections in human disease. The text builds on the basic sciences of epidemiology, virology, molecular biology, and immunology to cover clinical diagnosis.

Human Respiratory Viral Infections - Fenner and White's Medical Virology - 2016-11-09

Fenner and White's Medical Virology, Fourth Edition provides a comprehensive review of research on the biology of related viruses, from cell biology, to medical epidemiology and human social behavior. The perspective represented by this book, that of Fenner and White's Medical Virology, Fifth Edition provides an integrated view of related sciences, from cell biology, to virology, molecular biology, and immunology to cover clinical diagnosis.

Fenner and White's Medical Virology - Fenner White - 2016-11-09

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interplay between virus and host - Nature - Infectious disease models and the role of host genetics in determining disease outcome. In addition, the content has been augmented with short chapters on seminal breakthroughs and profiles of their provenance. The book closes with a look to the future, where it is expected that the approaches described will be more widely applicable. The authors use mathematical tools to uncover the infectious diseases spread within patients. They explain how this approach to understanding infectious diseases can reveal insights into the dynamics of viral and other infections, and the interactions between infectious agents and the immune system. Microbial Threats to Health - Institute of Medicine - 2003-08-25

Infectious diseases are a global threat that pits every nation and every person against it. The recent SARS outbreak is a prime example. Knowing whether geographic or political borders, often allowing surviving and lethal microorganisms to escape control of the health authorities, is the key to a better understanding of the spread of infectious disease as the greatest global problem they confront. Throughout history, human events, technological advances, and the ability of a population to adapt to the challenges of infectious diseases, have shaped the history of infectious disease. The authors describe the emergence of drug resistance, and the dynamics of infectious diseases and their continued impact on the health of populations, especially in resource-limited areas of the world. Students in public health, biomedical professionals, clinicians, public health practitioners, and decision-makers will find valuable information in this book that is relevant to the control and prevention of emerging and re-emerging infectious diseases that are a major cause of global morbidity and mortality. Although substantial gains have been made in public health interventions for the treatment, prevention, and control of infectious diseases, the last several decades has witnessed the emergence of drug-resistant strains of many major pathogens. The emergence of drug-resistant strains of many major pathogens, despite other remarkable advances in our understanding of individual viruses and cells of the immune system, has led to a resurgence of interest in the mathematical tools that can help researchers to understand the detailed dynamics of infection and the effects of antiviral therapy. This groundbreaking book describes the emerging field of theoretical immunology, in particular the use of mathematical models to describe the spread of infectious diseases within patients. It reveals fascinating insights into the nature of infectious diseases, transmits the key principles of infectious diseases, and the mathematical models to describe the dynamics of disease. Viral and Other Infections of the Human Respiratory Tract - Philip S. Brachman - 2010-04-05

Viral Dynamics: Mathematical Principles of Immunology and Virology - Martin Nowak - 2006-11-23

This groundbreaking book describes the emerging field of theoretical immunology, in particular the use of mathematical models to describe the spread of infectious diseases within patients. It reveals fascinating insights into the nature of infectious diseases, transmits the key principles of infectious diseases, and the mathematical models to describe the dynamics of disease. Viral Dynamics: Mathematical Principles of Immunology and Virology - Martin Nowak - 2006-11-23

This book brings together the latest thinking on the nature of infectious disease in a comprehensive and accessible manner. In particular, the book covers the mathematical models to describe the spread of infectious diseases within patients. It reveals fascinating insights into the nature of infectious diseases, transmits the key principles of infectious diseases, and the mathematical models to describe the dynamics of disease. The book contains chapters on the mathematical models to describe the spread of infectious diseases within patients. It reveals fascinating insights into the nature of infectious diseases, transmits the key principles of infectious diseases, and the mathematical models to describe the dynamics of disease. The book contains chapters on the mathematical models to describe the spread of infectious diseases within patients. 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Infections Diseases of Humans - Roy M. Anderson - 1992-02-07
This book brings together virology, human infection, and metapopulation dynamics. In the dynamics of the interaction with host populations. The book combines mathematical models with extensive use of epidemiological and other data. This analytic framework is highly useful for many other research areas, including the identification of strategies that control and eliminate infections. This framework is increasingly important in the light of widespread concern for public health care programs aimed at such diseases as measles, malaria, respiratory viruses, influenza, shingles, and schistosomiasis, and the advent of AIDS/HIV and other emerging viruses. Throughout the book, the mathematics is used as a tool for thinking clearly about fundamental and applied problems. Emphasis is given to do so at the expense of rigorous derivation and proof. This book is for researchers who work in this rapidly growing field (much of which is scattered between the ecological and the medical literature) with a broad outlook and an interest in the epidemiology of humber infections.

Trends in Emerging Viral Infections of Swine - Antonio Mollera - 2008-02-08
Trends in Emerging Viral Infections of Swine includes sections on global trade, vaccination regimens against new and emerging viruses, epidemiology, and control, as well as new outbreaks like the West Nile Virus. A contributor to Diseases of Swine, 8th edition, Dr. Zimmerman has selected three additional editors with international expertise.

Trends in Emerging Viral Infections of Swine - Antonio Mollera - 2008-02-08
Trends in Emerging Viral Infections of Swine provides an overview of the main emerging and re-emerging viral diseases of swine, with a focus on vaccines and control strategies.

Emerging and Re-emerging Viral Pathogens - Moulay Mustapha Emjati - 2019-03-14
Emerging and Re-emerging Viral Pathogens: Applied Virology Related to Human, Animal and Environments. Volume Two focuses on emerging and re-emerging viral pathogens and the disease syndromes they cause. A broad but comprehensive account, it provides an in-depth treatment of the virus and their pathology and control strategies. It is an essential reference book for virologists and medical scientists.

Covers a range of topics related to the epidemiology of infections diseases. This book provides an introduction to the scientific discipline of epidemiology and its role in informing and supporting public health decision making.

Infectious Diseases: Epidemiology, Theory and Practice - Kenda E. Nelson - 2007
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Zoonoses are considered as one of the most important threats for public health worldwide. Zoonoses can be defined as any disease or infection that is naturally transmissible from vertebrate or invertebrate animals to humans and vice-versa. Approximately 75% of recently emerging infectious diseases affecting humans are zoonotic in origin. This book introduces the basic concepts of epidemiology as a tool to study diseases in the field of zoonotic diseases. It is addressed to students in the field of animal and human sciences, to practitioners in the field of veterinary and human medicine, to researchers in the field of zoonotic diseases, and to public health officials dealing with zoonotic diseases. The book is divided into four parts: the first part introduces the basic concepts of epidemiology and zoonotic diseases; the second part focuses on specific infectious diseases as examples of different transmission modalities; the third part is dedicated to the study of the impact of zoonotic diseases on human health and veterinary medicine; and the fourth part is dedicated to selected important zoonotic diseases and their control.

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Spillover: Animal Infections and the Next Human Pandemic - David Quammen - 2012-10-01
Examines the emergence and causes of new diseases all over the world, describing a process called "spillover" where illness originates in wild animals before being passed to humans and discusses the potential for the next huge pandemic. 70,000 first printing.

Textbook of Medical Virology - Erik Lycke - 2014-06-28
Textbook of Medical Virology presents a critical review of general principles in the field of medical virology. It discusses the description and molecular structures of virus. It addresses the morphology and classifications of viruses. It also demonstrates the principal aspects of virus particle structure. Some of the topics covered in the book are the symmetrical arrangements of viruses; introduction to different families of animal viruses; biochemistry of virus particles; the immunological properties and biological activities of viral gene products; description of enzymatic activities of viruses; and haemagglutination, cell fusion, and haemolysis of viruses. The description and characteristics of viral antigens are covered. The identification and propagation of viruses in tissue and cell cultures are discussed. An in-depth analysis of the principles of virus replication is provided. A study of the morphogenesis of viruses is also presented. A chapter is devoted to virus-induced changes of cell structures and functions. The book can provide useful information to virologists, microbiologists, students, and researchers.

Infectious Disease Epidemiology - Ibrahim Abdulaker - 2014-04-07
Infectious Disease Epidemiology is a concise reference guide which provides trainees and practicing epidemiologists with the information that they need to understand the basic concepts necessary for working in this specialist area. Divided into two sections, part one comprehensively covers the basic principles and methods relevant to the study of infectious disease epidemiology. It is organised in order of increasing complexity, ranging from a general introduction to subjects such as mathematical modelling and semi-epidemiology. Part two examines key major infectious diseases that are of global significance. Grouped by their route of transmission for ease of reference, they include diseases that present a particular burden or a high potential for causing mortality. This practical guide will be essential reading for postgraduate students in infectious disease epidemiology, health protection trainees, and practicing epidemiologists.

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