

Textbook Of Medical Virology

Now in four convenient volumes, Field's Virology remains the most authoritative reference in this fast-changing field, providing definitive coverage of virology, including virus biology as well as replication and medical aspects of specific virus families. This volume of Field's Virology: Emerging Viruses, 7th Edition covers recent changes in emerging viruses, providing new or extensively revised chapters that reflect these advances in this dynamic field.

Principles of Virology, the leading virology textbook in use, is an extremely valuable and highly informative presentation of virology at the interface of modern cell biology and immunology. This text utilizes a uniquely rational approach by highlighting common principles and processes across all viruses. Using a set of representative viruses to illustrate the breadth of viral complexity, students are able to understand viral reproduction and pathogenesis and are equipped with the necessary tools for future encounters with new or understudied viruses. This fifth edition was updated to keep pace with the ever-changing field of virology. In addition to the beloved full-color illustrations, video interviews with leading scientists, movies, and links to exciting blogposts on relevant topics, this edition includes study questions and active learning puzzles in each chapter, as well as short descriptions regarding the key messages of references of special interest. Volume I: Molecular Biology focuses on the molecular processes of viral reproduction, from entry through release. Volume II: Pathogenesis and Control addresses the interplay between viruses and their host organisms, on both the micro- and macroscale, including chapters on public health, the immune response, vaccines and other antiviral strategies, viral evolution, and a brand new chapter on the therapeutic uses of viruses. These two volumes can be used for separate courses or together in a single course. Each includes a unique appendix, glossary, and links to internet resources. Principles of Virology, Fifth Edition, is ideal for teaching the strategies by which all viruses reproduce, spread within a host, and are maintained within populations. This edition carefully reflects the results of extensive vetting and feedback received from course instructors and students, making this renowned textbook even more appropriate for undergraduate and graduate courses in virology, microbiology, and infectious diseases.

This is a short well established textbook of medical virology. It also includes sections on chlamydia, rickettsia and mycoplasma. The subject is largely presented in terms of presenting disease, discussing epidemiology, diagnosis, clinical features, complications and vaccines. The text is illustrated throughout with colour clinical photographs. The emphasis of the whole book is on information relevant to clinical practice.

The Virology Methods Manual is a comprehensive source of methods for the study, manipulation, and detection of viruses. Edited by Brian Mahy and Hillar Kangro, this work describes the most up-to-date, definitive techniques, provided by experts in each area, and presented with easy-to-use, step-by-step protocols. This new manual will satisfy the needs of virologists and all those working with viruses who need a practical guide to methods that work! Provides up-to-date techniques by experts worldwide Presents common, step-by-step protocols in an attractive, easy-to-use fashion Contains useful appendices including virus taxonomy,

metabolic inhibitors, and Bio-safety in the virology laboratory

Principles of Molecular Virology, Third Edition provides an essential introduction to modern virology in a clear and concise manner. It is a highly enjoyable and readable text with numerous illustrations that enhance the reader's understanding of important principles. This edition has been updated and revised with new figures and text. New to the Third Edition: Viruses and Apoptosis (Chapter 6) Bacteriophages and Human Disease (Chapter 7) Learning objectives for each chapter Pronunciation section in Glossary and abbreviations section (Appendix 1) Key events in the history of virology (Appendix 3) Addition of colour in text and figures to enhance understanding of key points Also: Self assessment questions at the end of each chapter Classification of Subcellular Infectious agents Approx. 20% new material and completely revised throughout Over 120 figures

Medical Virology

An updated volume focusing on human virology and incorporating knowledge that has been gained in recent years, including contemporary information on the molecular biology of viruses.

An understanding of virus infection and the underlying role of the immune system in protection against these diseases is vital in today's medical climate. Previously, only symptoms could be treated, as there were no antiviral therapies. The increasing amounts of research and the huge number of discoveries of immunologic agents and pathways has led to the opportunity to look to the basic physiology of the various disease process as never before. This book is designed to provide the clinician with a thorough and yet approachable textbook describing the relationships between immunology, virology and the disease process.

Encyclopedia of Virology, Fourth Edition, builds on the solid foundation laid by the previous editions, expanding its reach with new and timely topics. In five volumes, the work provides comprehensive coverage of the whole virosphere, making this a unique resource. Content explores viruses present in the environment and the pathogenic viruses of humans, animals, plants and microorganisms. Key areas and concepts concerning virus classification, structure, epidemiology, pathogenesis, diagnosis, treatment and prevention are discussed, guiding the reader through chapters that are presented at an accessible level, and include further readings for those needing more specific information. More than ever now, with the Covid19 pandemic, we are seeing the huge impact viruses have on our life and society. This encyclopedia is a must-have resource for scientists and practitioners, and a great source of information for the wider public. Offers students and researchers a one-stop shop for information on virology not easily available elsewhere Fills a critical gap of information in a field that has seen significant progress in recent years Authored and edited by recognized experts in the field, with a range of different expertise, thus ensuring a high-quality standard

Fenner and White's Medical Virology, Fifth Edition provides an integrated view of related sciences, from cell biology, to medical epidemiology and human social behavior. The perspective represented by this book, that of medical virology as an infectious disease science, is meant to provide a starting point, an anchor, for those who must relate the subject to

clinical practice, public health practice, scholarly research, and other endeavors. The book presents detailed exposition on the properties of viruses, how viruses replicate, and how viruses cause disease. These chapters are then followed by an overview of the principles of diagnosis, epidemiology, and how virus infections can be controlled. The first section concludes with a discussion on emergence and attempts to predict the next major public health challenges. These form a guide for delving into the specific diseases of interest to the reader as described in Part II. This lucid and concise, yet comprehensive, text is admirably suited to the needs of not only advanced students of science and medicine, but also postgraduate students, teachers, and research workers in all areas of virology. Features updated and expanded coverage of pathogenesis and immunity Contains the latest laboratory diagnostic methods Provides insights into clinical features of human viral disease, vaccines, chemotherapy, epidemiology, and control

Textbook of Medical Virology Butterworth-Heinemann

Completely revised and updated, the new edition of this groundbreaking text integrates basic virology with pathophysiological conditions to examine the connection between virology and human disease. Most virology textbooks focus on the molecular biology involved without adequate reference to physiology. This text focuses on viruses that infect humans, domestic animals and vertebrates and is based on extensive course notes from James Strauss' virology class at the California Institute of Technology taught for over 30 years. Expertly depicting in color the molecular structure and replication of each virus, it provides an excellent overview for students and professionals interested in viruses as agents of human disease. Includes over 30% new material - virtually all of the figures and tables have been redrawn to include the latest information and the text has been extensively rewritten to include the most up-to-date information Includes a new chapter on emerging and reemerging viral diseases such as avian flu, SARS, the spread of West Nile virus across America, and the continuing spread of Nipah virus in Southeast Asia Further reading sections at the end of each chapter make it easy find key references World maps depicting the current distribution of existing and newly emerging viruses are also incorporated into the text

The knowledge and practice of clinical virology continues to expand. This new fifth edition has thirty-six comprehensive chapters, each of which has been extensively revised or rewritten, with the addition of new colour plates. This updated version takes into account knowledge accumulated in molecular biology with its applications for laboratory diagnosis, immunisation and antiviral chemotherapy. Each chapter highlights the clinical features and epidemiological patterns of infection. Similarly, in response to the global concern of the threat posed by new viruses, a new chapter on Emerging Infections is included. There is also new material on Hospital Acquired Infections, including some advice relating to SARS, that will be of benefit to those dealing with the day-to-day management of patients in hospital.

Designed for students learning about viruses for the first time at the undergraduate or graduate level, Fundamentals of Molecular Virology is presented in a style which relates to today's students and professors. This book is also a valuable, up-to-date source of information for graduate students, postdoctoral fellows and research scientists working with viruses. Chapters contributed by prominent virologists were edited to conform to a clear and accessible style. The text provides a thorough presentation of basic and contemporary concepts in virology for a student's first exposure to the field.

The Textbook of Influenza is a comprehensive resource covering all aspects of influenza, from the genetic and molecular biology of the virus through to clinical aspects of the disease and the latest drug developments and treatments. This new edition has been completely revised and reflects the integration of disciplines concerning the emergence, evolution, pathogenesis and control of influenza viruses in the field of human and veterinary public health. Textbook of Influenza examines the lessons learnt from the latest pandemic and provides the current state of knowledge for many yet unresolved issues related to virus origin, spread, pathogenesis and disease severity to better prepare for future pandemics. It covers the background to recent advances in influenza genomics and reverse genetics which have allowed the identification of virus virulence factors and the analysis and reconstruction of influenza viruses such as the 1918 Spanish flu strain. This new edition is divided into eight key sections, containing chapters co-written by international experts from both the clinical and scientific communities, covering: • Influenza Perspectives • Structure and Replication • Evolution and Ecology • Epidemiology and Surveillance • Immunology • Vaccines and Vaccine Development • Clinical Aspects and Antivirals • Public Health Textbook of Influenza is for all those working in the area of influenza including clinical and basic scientists, immunologists, molecular and structural virologists, public health officials and global pandemic control planners.

Simian Virology is the first text to comprehensively cover all currently known simian viruses. Chapters provide an overview of nonhuman primate models of medically important viral diseases as well as natural infections of nonhuman primates with human and animal viruses. The text covers a variety of topics including primate models of medically important viral diseases such as AIDS, hypotheses on the origins of epidemic forms of HIV, and viral diseases caused by non-simian viruses in both wild and captive primates.

No other area of biology has grown as fast and become as relevant over the last decade as virology. It is with no little amount of amazement, that the more we learn about fundamental biological questions and mechanisms of diseases, the more obvious it becomes that viruses permeate all facets of our lives. While on one hand viruses are known to cause acute and chronic, mild and fatal, focal and generalized diseases, on the other hand, they are used as tools for gaining an understanding of the structure and function of higher organisms, and as vehicles for carrying protective or curative therapies. The wide scope of approaches to different biological and medical virological questions was well represented by the speakers that participated in this year's Symposium. While the epidemic by the human immunodeficiency virus type 1

continues to spread without hope for much relief in sight, intriguing questions and answers in the area of diagnostics, clinical manifestations and therapeutical approaches to viral infections are unveiled daily. Let us hope, that with the increasing awareness by our society of the role played by viruses, not only as causative agents of diseases, but also as models for better understanding basic biological principles, more efforts and resources are placed into their study. Luis M. de la Maza Irvine, California Ellena M.

This book provides overviews and updates on basic research, diagnosis, epidemiology, and public health on enteric viruses, as well as on treatment and intervention to prevent their waterborne transmission. Data are presented and interpreted by leading researchers in the field in 13 chapters. An essential resource for virologists, epidemiologists, medical and public health professionals, graduate students and postdoctoral scientists at various levels of their careers. Key Topics Include: * Ecology of enteric viruses * Intervention measures from risk assessment to virus disinfection practices * Cutting edge technology on procedures for virus detection and monitoring in water and the water environment * Quality assurance and quality control measures in water virology * Legal regulations regarding viruses in the environment

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 virions 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. The foundational textbook on the study of virology Basic Virology, 4th Edition cements this series' position as the leading introductory virology textbook in the world. It's easily read style, outstanding figures, and comprehensive coverage of fundamental topics in virology all account for its immense popularity. This undergraduate-accessible book covers all the foundational topics in virology, including: The basics of virology Virological techniques Molecular biology Pathogenesis of human viral disease The 4th edition includes new information on the SARS, MERS and COVID-19 coronaviruses, hepatitis C virus, influenza virus, as well as HIV and Ebola. New virological techniques including bioinformatics and advances in viral therapies for human disease are also explored in-depth. The book also includes entirely new sections on metapneumoviruses, dengue virus, and the chikungunya virus.

This book provides a comprehensive overview of recent novel coronavirus (SARS-CoV-2) infection, their biology and associated challenges for their treatment and prevention of novel Coronavirus Disease 2019 (COVID-19). Discussing various aspects of COVID-19 infection, including global epidemiology, genome organization, immunopathogenesis, transmission cycle, diagnosis, treatment, prevention, and control strategies, it highlights host-pathogen interactions, host immune response, and pathogen immune invasion strategies toward developing an immune intervention or preventive vaccine for COVID-19. An understanding of the topics covered in the book is imperative in the context of designing strategies to protect the human race from further losses and harm due to SARS-CoV-2 infection causing COVID-19.

Respiratory syncytial virus (RSV) was first identified half a century ago in 1956. Following its discovery, the virus soon became recognised as a major viral pathogen causing extensive outbreaks of respiratory tract infections in both the very young and in vulnerable adults. It is an unusual virus in that it can cause repeated reinfections throughout life. The topics covered within this volume are wide ranging in scope from

the most basic molecular biology of the virus to the clinical picture of RSV in the developing world. The internationally recognised experts were invited not only to review the present state of knowledge but also to give their perspective on the current situation and to identify the gaps and future requirements for research in an effort to stimulate new cross-cutting approaches to tackle this major viral pathogen.

Viruses are some of the simplest infectious agents on the planet, yet can cause severe and even life-threatening diseases in all forms of life - including humans. Despite relying on host cells in order to replicate, viruses can be capable of extremely rapid reproduction and very effective transmission from one person to another. Because of this, they have historically represented a significant proportion of the disease burden affecting humans. Human Virology provides a vivid introduction to this fascinating field, by incorporating both the molecular and clinical aspects of the subject. Throughout the text, case studies bring the subject to life by providing a unique perspective from real practicing doctors. In addition new 'hot topic' boxes have been incorporated into this edition, featuring current important areas of research. Little prior knowledge is assumed, making Human Virology the perfect text for those students new to the subject.

Viruses are big news. From pandemics such as HIV, swine flu, and SARS, we are constantly being bombarded with information about new lethal infections. In this Very Short Introduction Dorothy Crawford demonstrates how clever these entities really are. From their discovery and the unravelling of their intricate structures, Crawford demonstrates how these tiny parasites are by far the most abundant life forms on the planet. With up to two billion of them in each litre of sea water, viruses play a vital role in controlling the marine environment and are essential to the ocean's delicate ecosystem. Analyzing the threat of emerging virus infections, Crawford recounts stories of renowned killer viruses such as Ebola and rabies as well as the less known bat-borne Nipah and Hendra viruses. Pinpointing wild animals as the source of the most recent pandemics, she discusses the reasons behind the present increase in potentially fatal infections, as well as evidence suggesting that long term viruses can eventually lead to cancer. By examining our lifestyle in the 21st century, Crawford looks to the future to ask whether we can ever live in harmony with viruses, and considers the ways in which we may need to adapt to prevent emerging viruses with devastating consequences. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

A key resource for FRCPATH and MRCP trainees, mapped to the current curriculum, using over 300 exam-style Q&A.

The explosion in clinical testing has been especially rapid in virology, where emerging viruses and growing numbers of viral infections are driving advances. The Guide to Clinical and Diagnostic Virology offers a digestible view of the breadth and depth of information related to clinical virology, providing a practical, working knowledge of the wide array of viruses that cause human disease. Introductory chapters cover the basics of clinical virology and laboratory diagnosis of infections, including virus structure, life cycle, transmission, taxonomy, specimen types and handling, and a comparison of assays used for detection. Detailed sections on important topics include Viral pathogens and their clinical presentations Diagnostic assays and techniques, including culture-based, immunological, and molecular Prevention and management of viral infections, with guidance on biosafety, vaccines, and antiviral therapies The regulatory environment for laboratory testing, including regulatory requirements and assay performance and interpretation Critical concepts are carefully curated and concisely summarized and presented with detailed illustrations that aid comprehension, along with important highlights and helpful hints. These features, plus question sections that reinforce

significant ideas and key concepts, make this an invaluable text for anyone looking for an accessible route through clinical and diagnostic virology. Laboratory technologists, medical students, infectious disease and microbiology fellows, pathology residents, researchers, and everyone involved with viruses in the clinical setting will find the Guide to Clinical and Diagnostic Virology an excellent text as well as companion to clinical virology references.

Medical Virology first appeared in 1970 and was immediately hailed as a classic. The Fourth Edition has been completely updated, substantially rewritten, and considerably expanded. Acknowledging that today's students possess a more sophisticated background of molecular and cellular biology, the book is pitched a little higher than was the third edition. Nevertheless, it maintains the exceptionally high standards of the three previous editions, including the now famous user-friendly style. Hundreds of instructive diagrams and succinct tables smooth the path for the reader. Extensive lists of recent authoritative reviews at the end of each of the 36 chapters simplifies the reader's entry into the scientific literature. Throughout, the focus is on fundamental principles, mechanisms and basic facts, rather than on overwhelming detail. Part I of the book, expanded to over 400 pages, comprises in effect a self-contained overview of the Principles of Virology. Part II, entitled Viruses of Humans, deals comprehensively with all the families of human viruses. Extensive coverage is given to the molecular biology of the viruses and of viral replication, pathogenesis and immunity, clinical features of all important diseases caused by all viruses affecting humans, the latest laboratory diagnostic methods, epidemiology and control, including chemotherapy and vaccines. This lucid and concise yet comprehensive text is admirably suited to the needs not only of advanced students of science and medicine but also particularly of postgraduate students, teachers, and research workers in all areas of virology. Molecular biology of viruses and viral replication Pathogenesis and immunity Latest laboratory diagnostic methods Clinical features of human viral diseases Vaccines and chemotherapy Epidemiology and control

This is a concise, highly accessible introduction to medical virology, incorporating essential basic principles as well as a systematic review of viruses and viral diseases. It pays particular attention to developments in anti-viral therapy that are becoming increasingly effective in modern medicine. It is an ideal textbook for the information-overloaded student and an invaluable everyday companion for the busy professional who needs a good understanding of the current state of medical virology. In keeping with the highly successful format of other Illustrated Colour Texts, it presents the subject as a series of succinct 2 page 'learning units', using a superb collection of clear illustrations and clinical photographs, concise yet comprehensive text and key point boxes to aid quick access to information and examination preparation. So whether you are a medical student, junior doctor, medical scientist, trainee in infectious diseases or student on another allied medical course, this book is here to make your life easier! It will also provide a very solid foundation for any who plan to delve deeper into this fascinating field. Part of the popular Illustrated Colour Text series Information presented in double page spreads for easy learning Highly illustrated with both full colour graphics and clinical photographs Each spread includes a key point box for exam preparation

Essential Human Virology is written for the undergraduate level with case studies integrated into each chapter. The structure and

classification of viruses will be covered, as well as virus transmission and virus replication strategies based upon type of viral nucleic acid. Several chapters will focus on notable and recognizable viruses and the diseases caused by them, including influenza, HIV, hepatitis viruses, poliovirus, herpesviruses, and emerging and dangerous viruses. Additionally, how viruses cause disease, or pathogenesis, will be highlighted during the discussion of each virus family, and a chapter on the immune response to viruses will be included. Further, research laboratory assays and viral diagnosis assays will be discussed, as will vaccines, 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 in virology while keeping the interest of undergraduate students. Focuses on the human diseases and cellular pathology that viruses cause Highlights current and cutting-edge technology and associated issues Presents real case studies and current news highlights in each chapter Features dynamic illustrations, chapter assessment questions, key terms, and summary of concepts, as well as an instructor website with lecture slides, test bank, and recommended activities

Fenner's Veterinary, Virology, Fourth Edition, is the long awaited new edition of Veterinary Virology, 3e, which was published in 1999. Fully revised and updated by the new author team, part I presents the fundamental principles of virology related to animal infection and disease, and part II addresses the clinical features, pathogenesis, diagnosis, epidemiology and prevention of individual diseases. New to this Edition New author team - one main author to ensure that the book reads like an authored book but with the benefit of using experts to contribute to specific topics Text has been refocused - part I has been condensed and where appropriate incorporated into part II to make it more user friendly The number of figures have been increased and are now in full color Fully revised and updated to include the latest information in the field of veterinary virology Beautifully illustrated color figures throughout Organized and current information provided by an expert team of authors

This volume contains 82 chapters that provide detail and understanding to the fields of human and medical virology. The first section describes general features of common human viruses with specialized chapters related to HIV/AIDS. The volume goes on to describe exotic virus infections, including one now eradicated virus (smallpox) and some now controlled by vaccination such as yellow fever. Concepts of medical virology are further developed with entries on viruses associated with oncogenesis and selections of interest to medical virology. The most comprehensive single-volume source providing an overview of virology issues related to human and medical applications Bridges the gap between basic undergraduate texts and specialized reviews Concise and general overviews of important topics within the field will help in preparation of lectures, writing reports, or drafting grant applications

Virology is one of the most dynamic areas of clinical medicine. The new second edition of this essential reference has been extensively revised and updated to incorporate the latest developments and relevant citations. Covering pathogenesis, epidemiology, diagnosis, treatment, and prevention, Clinical Virology informs scientists and health care professionals about all the medically relevant aspects of this rapidly evolving field. Clinical Virology is divided into two major sections. The first section

addresses infections and syndromes related to particular organ systems, as well as the fundamentals of modern medical virology, including immune responses and vaccinology, diagnostics, antivirals, and gene therapy. The second section provides agent-specific chapters that detail the virology, epidemiology, pathogenesis, clinical manifestations, laboratory diagnosis, and prevention and treatment of important human viral pathogens. Offering comprehensive, original coverage of the viruses that cause human disease, this is the definitive reference work on clinical virology. Key Features Common templates for the syndrome-specific and separately for the agent-specific chapters allow the reader to readily access material New chapters on TTV and zoonotic paramyxoviruses Covers molecular biology, pathogenesis, immunity, clinical manifestations, treatment, and prevention Contributors are all internationally recognized experts actively involved in their fields To see the complete table of contents [click here](#)

Medical microbiology concerns the nature, distribution and activities of microbes and how they impact on health and wellbeing, most particularly as agents of infection. Infections remain a major global cause of mortality and in most hospitals around one in ten of those admitted will suffer from an infection acquired during their stay. The evolution of microbes presents a massive challenge to modern medicine and public health. The constant changes in viruses such as influenza, HIV, tuberculosis, malaria and SARS demand vigilance and insight into the underlying process. Building on the huge success of previous editions, Medical Microbiology 18/e will inform and inspire a new generation of readers. Now fully revised and updated, initial sections cover the basic biology of microbes, infection and immunity and are followed by a systematic review of infective agents, their associated diseases and their control. A final integrating section addresses the essential principles of diagnosis, treatment and management. An unrivalled collection of international contributors continues to ensure the relevance of the book worldwide and complementary access to the complete online version on Student Consult further enhances the learning experience. Medical Microbiology is explicitly geared to clinical practice and is an ideal textbook for medical and biomedical students and specialist trainees. It will also prove invaluable to medical laboratory scientists and all other busy professionals who require a clear, current and most trusted guide to this fascinating field.

Viruses interact with host cells in ways that uniquely reveal a great deal about general aspects of molecular and cellular structure and function. Molecular and Cellular Biology of Viruses leads students on an exploration of viruses by supporting engaging and interactive learning. All the major classes of viruses are covered, with separate chapters for their replication and expression strategies, and chapters for mechanisms such as attachment that are independent of the virus genome type. Specific cases drawn from primary literature foster student engagement. End-of-chapter questions focus on analysis and interpretation with answers being given at the back of the book. Examples come from the most-

studied and medically important viruses such as HIV, influenza, and poliovirus. Plant viruses and bacteriophages are also included. There are chapters on the overall effect of viral infection on the host cell. Coverage of the immune system is focused on the interplay between host defenses and viruses, with a separate chapter on medical applications such as anti-viral drugs and vaccine development. The final chapter is on virus diversity and evolution, incorporating contemporary insights from metagenomic research. Key selling feature: Readable but rigorous coverage of the molecular and cellular biology of viruses Molecular mechanisms of all major groups, including plant viruses and bacteriophages, illustrated by example Host-pathogen interactions at the cellular and molecular level emphasized throughout Medical implications and consequences included Quality illustrations available to instructors Extensive questions and answers for each chapter

It would have been difficult at the beginning of the 80's to have predicted that by the end of the decade, Medical Virology would have become one of the most important topics in the area of both basic and clinical research. Although we were expecting a progressive increase in awareness of the role played by viruses in different diseases, we did not expect the outbreak of a fatal disease that was going to shake the roots of our society. The appearance of the human immunodeficiency virus (HIV-1) in the early 80's, has prompted a unique re search impetus in the area of Medical Virology. The knowledge that we are gaining in our attempt to understand the biology of HIV-1 and the immuno logical response to this virus should not only help us control the spread of this virus, but should also help us to better understand other viral infections. Let us hope that during the 1990's we can learn how to control HIV-1 infections so that by the end of the decade, no more human lives succumb to an infection with this virus. Luis M. de la Maza Irvine, California Ellena M. Peterson March, 1990 v ACKNO~EDGEMENTS We would like to thank all the speakers that came to San Francisco and shared their knowledge during the lectures and for writing the chapters in this book.

Advances in Virus Research

The essential reference of clinical virology Virology is one of the most dynamic and rapidly changing fields of clinical medicine. For example, sequencing techniques from human specimens have identified numerous new members of several virus families, including new polyomaviruses, orthomyxoviruses, and bunyaviruses. Clinical Virology, Fourth Edition, has been extensively revised and updated to incorporate the latest developments and relevant research. Chapters written by internationally recognized experts cover novel viruses, pathogenesis, epidemiology, diagnosis, treatment, and prevention, organized into two major sections: Section 1 provides information regarding broad topics in virology, including immune responses, vaccinology, laboratory diagnosis, principles of antiviral therapy, and detailed considerations of important organ system manifestations and syndromes caused by viral infections. Section 2 provides

overviews of specific etiologic agents and discusses their biology, epidemiology, pathogenesis of disease causation, clinical manifestations, laboratory diagnosis, and management. Clinical Virology provides the critical information scientists and health care professionals require about all aspects of this rapidly evolving field.

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