

CURRENT TOPICS IN MICROBIOLOGY AND IMMUNOLOGY

Steven Tracy  
M. Steven Oberste  
Kristen M. Drescher  
Editors

# Group B Coxsackieviruses

 Springer

# Group B Coxsackieviruses Current Topics In Microbiology And Immunology

**Victor M. Corman**



## **Group B Coxsackieviruses Current Topics In Microbiology And Immunology:**

Group B Coxsackieviruses Steven Tracy,M. Steven Oberste,Kristen M. Drescher,2008-02-13 At last a volume that virologists have been waiting for a fully updated new edition of a major study in a key subject area The first edition of this work published in 1997 described the molecular biology of coxsackie B viruses as well as clinical epidemiological and immunological aspects of group B coxsackievirus disease This brand new edition covers all the research accomplishments of the last ten years in this vital area of medicine including immunopathology *Current Topics in Microbiology and Immunology* W. Arber,W. Henle,P. H. Hofschneider,J. H. Humphrey,J. Klein,P. Koldovský,H. Koprowski,O. Maaløe,F. Melchers,R. Rott,H. G. Schweiger,L. Syru?ek,P. K. Vogt,2012-12-06 **Viral Infections of Humans** Richard A. Kaslow, Lawrence R. Stanberry,James W. Le Duc,2014-09-27 Striking changes have occurred in the world since the publication of the last edition of *Viral Infections of Humans* The global population is rapidly approaching 8 billion climate change is leading to the introduction of new hosts vectors and virus diseases heretofore never seen in many parts of the world technological advances have revolutionized the ability to recognize and characterize viruses new and old vaccines are altering the epidemiological landscape of the diseases they target in some cases raising the hope of their eradication and remarkably powerful computational tools are enabling not only detection of outbreaks of disease much sooner than in the past but also through complex mathematical modeling more accurate prediction of their potential impact The new Fifth Edition of *Viral Infections of Humans* captures the both the excitement and frustration of the dynamic struggle between humankind and the viruses that continue to cause immense suffering It presents the latest concepts methods and technologies in epidemiology detection investigation modeling and intervention Updated and entirely new chapters by dozens of experts across the field provide analytic summaries of current knowledge of viruses and prions causing acute syndromes chronic illnesses and or malignancies In sum this ambitiously expanded volume offers a uniquely comprehensive perspective on viruses in humans from agents of classic diseases e g hepatitis measles polio rabies and yellow fever to those with greatest pandemic impact e g influenza and human immunodeficiency virus to those discovered relatively recently e g henipavirus metapneumovirus and norovirus The new Fifth Edition of *Viral Infections of Humans* is an invaluable reference for students fellows and established professionals in the fields of microbiology public health and infectious disease epidemiology medicine and health policy *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases E-Book* John E. Bennett,Raphael Dolin,Martin J. Blaser,2019-08-08 For four decades physicians and other healthcare providers have trusted Mandell Douglas and Bennett s *Principles and Practice of Infectious Diseases* to provide expert guidance on the diagnosis and treatment of these complex disorders The 9th Edition continues the tradition of excellence with newly expanded chapters increased global coverage and regular updates to keep you at the forefront of this vitally important field Meticulously updated by Drs John E Bennett Raphael Dolin and Martin J Blaser this comprehensive two

volume masterwork puts the latest information on challenging infectious diseases at your fingertips Provides more in depth coverage of epidemiology etiology pathology microbiology immunology and treatment of infectious agents than any other infectious disease resource Features an increased focus on antibiotic stewardship new antivirals for influenza cytomegalovirus hepatitis C hepatitis B and immunizations and new recommendations for vaccination against infection with pneumococci papillomaviruses hepatitis A and pertussis Covers newly recognized enteroviruses causing paralysis E A71 E D68 emerging viral infections such as Ebola Zika Marburg SARS and MERS and important updates on prevention and treatment of C difficile infection including new tests that diagnose or falsely over diagnose infectious diseases Offers fully revised content on bacterial pathogenesis antibiotic use and toxicity the human microbiome and its effects on health and disease immunological mechanisms and immunodeficiency and probiotics and alternative approaches to treatment of infectious diseases Discusses up to date topics such as use of the new PCR panels for diagnosis of meningitis diarrhea and pneumonia current management of infected orthopedic implant infections newly recognized infections transmitted by black legged ticks in the USA Borrelia miyamotoi and Powassan virus infectious complications of new drugs for cancer new drugs for resistant bacteria and mycobacteria new guidelines for diagnosis and therapy of HIV infections and new vaccines against herpes zoster influenza meningococci PPID continues its tradition of including leading experts from a truly global community including authors from Australia Canada and countries in Europe Asia and South America Includes regular updates online for the life of the edition Features more than 1 500 high quality full color photographs with hundreds new to this edition Enhanced eBook version included with purchase which allows you to access all of the text figures and references from the book on a variety of devices

**Visualizing Immunity** Dorian McGavern, Michael Dustin, 2009-06-12

Researchers have used a variety of techniques over the past century to gain fundamental insights in the field of immunology and as technology has advanced so too has the ability of researchers to delve deeper into the biological mechanics of immunity The immune system is exceedingly complex and must patrol the entire body to protect us from foreign invaders This requires the immune system to be highly mobile and adaptable able to respond to diverse microbial challenges while maintaining the ability to distinguish self from a foreign invader This latter feature is of great importance because the immune system is equipped with toxic mediators and a failure in self non self discrimination can result in serious diseases Fortunately in most cases the immune system operates within the framework of its elegant design and protects us from diverse microbial challenges without initiating disease Because the immune system is not confined to a single tissue a comprehensive understanding of immunity requires that research be conducted at the molecular cellular and systems level Immune cells often find customized solutions to handling microbial insults that depend on the tissues in which the pathogen is found

**The Cocksackie B Viruses** Steven Tracy, Nora M. Chapman, Brian W.J. Mahy, 2013-06-29

S TRACY Late in the 1940s a virus was isolated from a young patient with a flaccid paralysis in the sleepy Hudson River town of Cocksackie in the state of New York Within the next few years it

was apparent that this and other similar viruses were not polioviruses but were indeed a new group of viruses that by the mid 1950s had been found to be commonly associated with pediatric inflammatory heart disease. Two groups of coxsackieviruses A and B were differentiated on the basis of the type of paralysis induced in suckling mice by these viruses. Group B coxsackieviruses because of their primacy as etiologic agents of human acute viral myocarditis and its relatively common sequela dilated cardiomyopathy are the focus of this volume of the century approaches the massive international effort to eradicate polioviruses through vaccination as causes of human disease has been successful in the Western Hemisphere and in many parts of Europe and it is expected that worldwide eradication may be achieved within the near future. While this is wonderful news there are sadly no similar efforts being planned to combat the numerous other human enteroviruses that daily incur widespread morbidity and mortality throughout the world. While this is due in part to the lack of specific knowledge about the other human enteroviruses it is also due to the perceptions of industry that there is insufficient profit to be made by developing these vaccines.

*The Role of Viruses and the Immune System in Diabetes Mellitus* Thomas Dyrberg, 2013-06-29 Research in diabetes has accelerated in two areas both of which are being reviewed in CTMI. The first is the use of a variety of animal models the second is basic research in human investigation islet cell antigens and mapping of genes associated with susceptibility to disease. Dr Thomas Dyrberg accepted editorial responsibility for this volume which covers the first area. A second book to be published later in the year is edited by Drs Brekkeskov and Hansen. CTMI 164 see page VI for contents. Although the contributors to both volumes represent the international scientific community the editors are from the Hagedorn Research Laboratory in Denmark. Work at this institute and the Steno Memorial Hospital has been dedicated to research in diabetes for decades and the institutions were appointed WHO Collaborating Centres for Research and Training on the Pathogenesis of Diabetes Mellitus in 1983. It is worth noting that while addressing the hypothesis of the role of class II major histocompatibility glycoproteins in autoimmune diabetes insulin dependent diabetes IDDM a number of investigators established animal models in which class II molecules were expressed under the control of the rat insulin promoter. While generating interesting information on IDDM the finding of immunologic tolerance in such transgenic mice has attracted the attention of several basic immunologic laboratories for quite different reasons. Thus we are reminded again of the Pasteur dictum that chance favors the prepared mind. Michael B A Oldstone M D

**Tumor Microenvironment** Dietmar W. Siemann, 2011-06-24 The microenvironment in which a tumor originates plays a critical role in its initiation and progression. *Tumor Microenvironment* reviews the importance of tumor microenvironment in cancer management. Particular emphasis is placed on discussing how the unique characteristics of the tumor microenvironment not only impact disease progression and response to conventional anticancer therapies but have also led to the identification of potential new therapeutic targets and treatment possibilities for cancer patients. *Tumor Microenvironment* also reviews the fundamental basis of target development preclinical assessment and the current clinical

status of these therapies      Hsiung's Diagnostic Virology Gueh Djen Hsiung,Caroline K. Y. Fong,Marie L. Landry,1994-01-01 This generously illustrated book the fourth edition of the highly acclaimed Diagnostic Virology is a handbook for the recognition and characterization of virus induced cellular changes seen by light microscopy as well as virus morphology seen by electron microscopy The authors cover all aspects of the subject from specimen collection and laboratory safety to virus isolation and identification and cell culture This edition includes a new chapter on the human retroviruses especially relevant since the onset of the AIDS epidemic and expands the chapters on the arboviruses and hepatitis viruses      **Dengue Virus** Alan L. Rothman,2009-10-03 Scientific research on dengue has a long and rich history The literature has been touched by famous names in medicine Benjamin Rush Walter Reed and Albert Sabin to name a very few and has been fertile ground for medical historians The advances made in those early investigations are all the more remarkable for the limited tools available at the time The demonstration of a viral etiology for dengue fever the recognition of mosquitoes as the vector for transmission to humans and the existence of multiple viral variants serotypes with only partial cross protection were all accomplished prior to the ability to culture and characterize the etiologic agent Research on dengue in this period was typically driven by circumstances Epidemics of dengue created public health crises although these were relatively short lived in any one location as the population of susceptible individuals quickly shrank Military considerations became as a major driving force for research With the introduction of large numbers of non immune individuals into endemic areas dengue could cripple military readiness taking more soldiers out of action than hostile fire Dengue and dengue hemorrhagic fever which assumed pandemic proportions during the latter half of the last century have shown no indication of slowing their growth during this first decade of the twenty first century Challenges remain in understanding the basic mechanisms of viral replication and disease pathogenesis in clinical management of patients and in control of dengue viral transmission Nevertheless new tools and insights have led to major recent scientific advances As the first candidate vaccines enter large scale efficacy trials there is reason to hope that we may soon turn the corner on this disease      Desk Encyclopedia of Human and Medical Virology Brian W.J. Mahy,Marc H.V. van Regenmortel,2010-05-21 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      *The Infectious Etiology of Chronic Diseases* Institute of Medicine,Board on Global Health,Forum on

Microbial Threats,2004-06-16 In recent years a number of chronic diseases have been linked in some cases definitively to an infectious etiology peptic ulcer disease with *Helicobacter pylori* cervical cancer with several human papillomaviruses Lyme arthritis and neuroborreliosis with *Borrelia burgdorferi* AIDS with the human immunodeficiency virus liver cancer and cirrhosis with hepatitis B and C viruses to name a few The proven and suspected roles of microbes does not stop with physical ailments infections are increasingly being examined as associated causes of or possible contributors to a variety of serious chronic neuropsychiatric disorders and to developmental problems especially in children The Infectious Etiology of Chronic Diseases Defining the Relationship Enhancing the Research and Mitigating the Effects summarizes a two day workshop held by the Institute of Medicine's Forum on Microbial Threats to address this rapidly evolving field Participants explored factors driving infectious etiologies of chronic diseases of prominence identified difficulties in linking infectious agents with chronic outcomes and discussed broad based strategies and research programs to advance the field [Current Bibliography of Epidemiology](#) ,1972

**Immunological Synapse** Takashi Saito,Facundo D. Batista,2009-12-03 The proper physiological functioning of most eukaryotic cells requires their assembly into multi cellular tissues that form organized organ systems Cells of the immune system develop in bone marrow and lymphoid organs but as the cells mature they leave these organs and circulate as single cells Antigen receptors TCRs of T cells search for membrane MHC proteins that are bound to peptides derived from infectious pathogens or cellular transformations The detection of such specific peptide MHC antigens initiates T cell activation adhesion and immune effectors functions Studies of normal and transformed T cell lines and of T cells from transgenic mice led to comprehensive understanding of the molecular basis of antigen receptor recognition and signaling In spite of these remarkable genetic and biochemical advances other key physiological mechanisms that participate in sensing and decoding the immune context to induce the appropriate cellular immune responses remain unresolved TCR recognition is tightly regulated to trigger sensitive but balanced T cell responses that result in the effective elimination of the pathogens while minimizing collateral damage to the host The sensitivity of TCR recognition has to be properly tempered to prevent unintended activation by self peptide MHC complexes that cause autoimmune diseases It is likely that once the TCR is engaged by a peptide MHC and TCR signaling begins additional regulatory mechanisms involving other receptors would increase the delicacy of the response

**The Chemokine System in Experimental and Clinical Hematology** Oystein Bruserud,2010-09-30 The aim of the issue is to describe and explain the importance of the chemokine system in hematology The chemokine system is probably important for many aspects of normal as well as malignant hematopoiesis A major focus is the development and treatment of hematologic malignancies including the immunobiology of stem cell transplantation The present reviews illustrate that chemokines can be involved in leukemogenesis The chemokine system is also important both for the crosstalk between malignant cells and their neighbouring nonmalignant stromal cells including endothelial cells as well as for immunoregulation in patients treated with allogeneic stem cell transplantation Thus

chemokines are important both for the pathogenesis and treatment of hematological diseases

**Cancer Immunology and Immunotherapy** Glenn Dranoff, 2011-04-11 The interplay between tumors and their immunologic microenvironment is complex difficult to decipher but its understanding is of seminal importance for the development of novel prognostic markers and therapeutic strategies The present review discusses tumor immune interactions in several human cancers that illustrate various aspects of this complexity and proposes an integrated scheme of the impact of local immune reactions on clinical outcome Current active immunotherapy trials have shown durable tumor regressions in a fraction of patients However clinical efficacy of current vaccines is limited possibly because tumors skew the immune system by means of myeloid derived suppressor cells inflammatory type 2 T cells and regulatory T cells Tregs all of which prevent the generation of effector cells To improve the clinical efficacy of cancer vaccines in patients with metastatic disease we need to design novel and improved strategies that can boost adaptive immunity to cancer help overcome Tregs and allow the breakdown of the immunosuppressive tumor microenvironment

**Current Topics in Microbiology and Immunology** Louis Du Pasquier, Gary W. Litman, 1967 *Mandell, Douglas y Bennett. Enfermedades infecciosas. Principios y práctica* John E. Bennett, Raphael Dolin, Martin J. Blaser, 2020-09-15 Cubre la epidemiología la etiología la patología la microbiología la inmunología y el tratamiento de los agentes infecciosos en mayor profundidad que ninguna otra obra de la especialidad Presta especial atención a temas como la optimización del uso de antibióticos los nuevos antivirales para la gripe el citomegalovirus la hepatitis C la hepatitis B y las vacunaciones así como las nuevas recomendaciones para la vacunación contra la infección por neumococos el virus del papiloma la hepatitis A y la tos ferina Presenta contenidos exhaustivamente actualizados sobre la patogénesis bacteriana el uso y la toxicidad de los antibióticos el microbioma humano y sus efectos sobre la salud y la enfermedad los mecanismos inmunológicos y la inmunodeficiencias así como los probióticos y los enfoques alternativos del tratamiento de las enfermedades infecciosas Aborda temas actuales como el uso de los nuevos paneles de PCR para el diagnóstico de la meningitis la diarrea y la neumonía el tratamiento de las infecciones asociadas a implantes ortopédicos las infecciones recién descritas transmitidas por garrapatas de patas negras en Estados Unidos *Borrelia miyamotoi* y el virus Powassan las complicaciones infecciosas de nuevos fármacos antineoplásicos los nuevos fármacos para bacterias y micobacterias resistentes las nuevas guías para el diagnóstico y el tratamiento de la infección por el VIH así como las nuevas vacunas contra el herpes zoster la gripe y los meningococos La obra continúa su tradición de contar con destacados expertos de una comunidad científica auténticamente global incluyendo autores australianos canadienses y de diversos países de Europa Asia y Latinoamérica Cuenta con más de 1 500 fotografías de alta calidad a todo color cientos de las cuales son nuevas para esta edición Incluye acceso a Expert Consult que ofrece no solo el ebook completo en inglés sino también frecuentes actualizaciones en inglés mientras está vigente la edición original incluyendo temas como el nuevo coronavirus SARS CoV 2

**Toll-like Receptors: Roles in Infection and Neuropathology** Tammy Kielian, 2009-08-19 Mammalian Toll like

receptors TLRs were first identified in 1997 based on their homology with *Drosophila* Toll which mediates innate immunity in the fly. In recent years the number of studies describing TLR expression and function in the nervous system has been increasing steadily and expanding beyond their traditional roles in infectious diseases to neurodegenerative disorders and injury. Interest in the field serves as the impetus for this volume in the Current Topics in Microbiology and Immunology series entitled Toll like receptors Roles in Infection and Neuropathology. The first five chapters highlight more traditional roles for TLRs in infectious diseases of the CNS. The second half of the volume discusses recently emerging roles for TLRs in non infectious neurodegenerative diseases and the challenges faced in these models with identifying endogenous ligands. Several conceptual theories are introduced in various chapters that deal with the dual nature of TLR engagement and whether these signals favor neuroprotective versus neurodegenerative outcomes. This volume should be informative for both experts as well as newcomers to the field of TLRs in the nervous system based on its coverage of basic TLR biology as well as specialization to discuss specific diseases of the nervous system where TLR function has been implicated. A must read for researchers interested in the dual role of these receptors in neuroinfection and neurodegeneration.

*Molecular Mechanisms of Bacterial Infection via the Gut* Chihiro Sasakawa, 2009-10-08. Our gut is colonized by numerous bacteria throughout our life and the gut epithelium is constantly exposed to foreign microbes and dietary antigens. Thus the gut epithelium acts as a barrier against microbial invaders and is equipped with various innate defense systems. Resident commensal and foreign invading bacteria interact intimately with the gut epithelium and can impact host cellular and innate immune responses. From the perspective of many pathogenic bacteria the gut epithelium serves as an infectious foothold and port of entry for dissemination into deeper tissues. In some instances when the intestinal defense activity and host immune system become compromised even commensal and opportunistic pathogenic bacteria can cross the barrier and initiate local and systematic infectious diseases. Conversely some highly pathogenic bacteria such as those highlighted in this book are able to colonize or invade the intestinal epithelium despite the gut barrier function is intact. Therefore the relationship between the defensive activity of the intestinal epithelium against microbes and the pathogenesis of infective microbes becomes the basis for maintaining a healthy life. The authors offer an overview of the current topics related to major gastric and enteric pathogens while highlighting their highly evolved host human adapted infectious processes. Clearly an in depth study of bacterial infectious strategies as well as the host cellular and immune responses presented in each chapter of this book will provide further insight into the critical roles of the host innate and adaptive immune systems and their importance in determining the severity or completely preventing infectious diseases. Furthermore under the continuous threat of emerging and re emerging infectious diseases the topic of gut bacteria molecular interactions will provide various clues and ideas for the development of new therapeutic strategies.

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