



HERBERT P. WIEDEMANN, MD, EDITOR

RETROVIRUS BIOLOGY AND HUMAN DISEASE

Edited by Robert C. Gallo and Flossie Wong-Staal
Marcel Decker, Inc.

The first human retrovirus, human t-leukemia virus type I (HTLV-I), was discovered in 1979. HTLV-1 was the forerunner of several human retroviruses which were isolated and characterized in the 1980s, the most prominent of these being human immunodeficiency virus type 1 (HIV-1, the AIDS virus). Although only recently identified as human pathogens, retroviruses have been long known and studied as pathogens in species as diverse as mice, cats, horses, and cattle, where they cause hematologic, neurologic, and immunologic disorders, as well as cancers of various types. Indeed, much of the credit for the rapid advances in human retrovirology can be attributed to the pioneering work done on animal retroviruses during the first three quarters of this century.

In *Retrovirus Biology and Human Disease*, the editors have drawn together an excellent series of minireviews written by experts in the field of retrovirus biology. The lead chapter provides a historical perspective, and sets the stage for other chapters that discuss animal retroviruses whose biology has particular relevance to human retroviruses. Chapters are devoted to each human retrovirus that has been recognized and studied to date. These and other chapters review the putative origins of retroviruses and their relationships to one another, their molecular biology, their structure, the functions of their genes, their epidemiology, their immunology, and the conditions and diseases with which they are associated. Throughout, the importance of the molecular biology of these viruses is evident. References to the pathogenic consequences of interplay between viral regulatory gene products and other viral and cellular genes make fascinating reading and bring to life aspects of molecular virology and cellular biology that make the study of viral pathogenesis captivating and rewarding.

Several chapters focus on HIV-1, including one on antiviral drugs and one on prevention of infection, and references to this virus are woven throughout other

chapters as well. This emphasis is understandable in view of the medical importance of HIV and the intense effort that has gone into understanding its pathogenesis. Whereas most of the chapters are quite current, the pace of retrovirus research ensures that some information is already dated or soon will be. This is, of course, a common fault with books which review rapidly advancing fields. The book is well edited, concise, interesting, and generally well written. The editors bring together a vast amount of information on a timely subject and present it in a readable and understandable format. The book should appeal to a wide audience of scientists, students, physicians, and others interested in knowing more about an intriguing and medically important family of viruses.

MAX R. PROFFITT, PhD
Department of Microbiology and The Research Institute

HEART-LUNG INTERACTIONS IN HEALTH AND DISEASE

Edited by Steven M. Scharf and Sharon S. Cassidy
Marcel Dekker, Inc.

The series, *Lung Biology in Health and Disease* (chief editor Claude L'Enfant), strives to combine basic physiology with clinical medicine. The present volume, number 42 in the series, is true to this goal and is unique in its scope. Editors Scharf and Cassidy strive to "provide the reader with a rational basis for understanding the ways in which cardiac and pulmonary systems interact." They attain this goal and provide a sense of the controversy and need for future study in this emerging field.

The book is divided into three sections: basic physiology, pathophysiology, and clinical applications. Most of the chapters are written by investigators active in their fields. The basic physiology section includes chapters on gas transport, pulmonary circulation, mechanical function of the cardiorespiratory system, and indirect heart-lung interactions. Particularly good chapters include "How Changes in Pleural and Alveolar Pressures Cause Changes in Afterload and Preload," "Mechanical Effects of Intrathoracic Pressure