

have taken place in the last twenty years are having an impact on their practice or scientific endeavours that is expanding exponentially. It is increasingly important to have a grasp of molecular biological principles and the techniques by which these have become elucidated to allow us to integrate this information appropriately. Many of us have had very little training in molecular biology however, and the pace of this field is such that the methods, concepts, and implications of molecular biological research remain rather foreign to us. As remarked upon in the preface of this text, very few individuals upon opening the latest issue of *Science*, *Nature* or *Cell* are capable of understanding the vocabulary used in the majority of articles.

The *Encyclopedia of Molecular Biology* attempts to rectify the difficulties inherent in understanding the molecular biological literature by providing in encyclopedic and dictionary like format, a reference source to the nomenclature and jargon that this field is based upon. It is authored by approximately 250 molecular biologists and scientists who represent a virtual who's who of modern molecular medicine. Most of these individuals are from the United Kingdom, although some are from the European community and only a few from North America. It is formatted as both an encyclopedia and a dictionary where approximately 4,000 short definitions are listed alphabetically and interspersed with these are 217 longer reviews on selected important topics. There is extensive cross referencing to other entries in the text, and a bibliography following the longer reviews directs the reader to important articles in the field. The longer entries are quite comprehensive covering fields such as structural biology, molecular genetics, bacteria and bacteriophages, cell biology, evolution and developmental biology, immunology, neurobiology, molecular medicine, and plant molecular biology. Contents lists of long entries are provided alphabetically and by subject. Illustrative figures are drawn primarily from the peer-reviewed scientific literature, other texts, and review articles.

Few topics are covered in any great depth, however this is not the intent of the format of this publication. I found it a very useful book for filling in gaps in my knowledge and for updating me in principles and methodologies of molecular biology and how they might be applicable to the field of neuroscience. Despite its cost, it represents a very good value for anyone who would like to derive an increased understanding from the molecular biology literature that they encounter.

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HIV, AIDS, AND THE BRAIN. 1993. Edited by Richard W. Price and Samuel W. Perry III. Published by Raven Press. 352 pages. \$C129.00.

Human immunodeficiency virus infection (HIV) is associated with protean neurological complications and syndromes, which include primary effects of the virus at multiple levels of the neuroaxis, opportunistic infections, and neoplasms. *HIV, AIDS, and the Brain* was based on presentations given at the meeting of the Association for Research in Nervous and Mental Disease, which was held in New York, NY in December 1992. The book focuses on the pathogenesis and clinical aspects of HIV dementia, which is also known as the AIDS dementia complex in order to emphasize the motor and behavioural components of the disorder. The emphasis of the book is on basic science aspects of the complex pathogenesis of this disease.

The book begins with a comprehensive review of current knowledge on pathogenetic mechanisms of HIV dementia with useful background information on the molecular biology of the virus and on immunological aspects of the disease, including the role of cytokines. Pathological aspects are well covered and there are chapters comparing the brain pathology of HIV dementia with the simian immunodeficiency virus model in primates (Drs. L. Sharer and Clements et al.) and with peripheral nerve disorders in HIV infection (Dr. J. Griffin et al.). Dr. S. Lipton discusses therapeutic approaches to prevent HIV-induced neuronal injury using NMDA antagonists.

The clinical features of HIV dementia in adults and of progressive HIV encephalopathy in children are also well covered in chapters by Dr. J. McArthur et al. and Dr. A. Belman, respectively. The role of therapy with antiretroviral agents is discussed. Psychiatric disorders associated with HIV infection, including depression, are also well reviewed in two chapters. The book ends with an excellent chapter by Dr. R. Johnson who puts the infection in historical context with other viral diseases and addresses important unanswered questions about the associated neurological diseases.

In summary, this is a comprehensive book on the primary effects of HIV infection on the brain that summarizes recent basic and clinical research in the field. I highly recommend this book to neurologists, neuropathologists, neuroscientists, psychiatrists, and infectious disease specialists who have an interest in recent developments in neurological aspects of HIV infection.

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PEDIATRIC NEUROIMAGING. 1994. Second Edition. By A. James Barkovich. Published by Raven Press. 684 pages. \$C189.00.

The first edition of this outstanding book was published in 1990 with 355 pages. This edition, four years later, has nearly doubled in size but still is a most reasonable price, especially for such a useful textbook. There is an average of between 2 and 3 images per page. The author is most experienced and a member of one of the premier neuroradiology departments in North America and notwithstanding being in a general large teaching hospital and not a freestanding pediatric hospital, has a surprisingly large number of pediatric neuroradiological cases. The author, in his preface, acknowledges that the book is primarily that of magnetic resonance neuroimaging rather than general pediatric neuroimaging. This textbook would have been even better for the general audience had it contained a little more correlative CT or indeed CT as the only necessary examination and a few more suitable plain films. This reviewer acknowledges that the book then would have to be larger yet more expensive and this is merely a constructive and positive comment.

All aspects of pediatric central nervous system pathology have been dealt with, including a most succinct chapter on techniques and methods. Examining children such as these with complex conditions is often difficult. It is the rare book that deals with these, and they are by and large unobtainable elsewhere. The chapter on the normal developments of the brain and spinal cord as seen on MR is outstanding but again great advantage could have been made by including a concise discussion and demonstration of the bony components of the neural axis. These are relatively minor points when compared to the excellent style and substances of the chapters as a whole, in particular those dealing with toxic and metabolic brain disorders, congenital malformations of the brain and phakomatoses