virus 1, adenovirus), as well as methods to achieve localised delivery by physical means, are presented in section III. Only one chapter is devoted to clinical trials, namely the treatment of severe combined immune deficiency and cerebral tumours using different types of retroviral vectors. While this certainly reflects the state of clinical gene therapy trials when the book went to press, it means that advances are proceeding at a very fast pace.

Very recently (Nature Genetics 1994;6:335–41) Jim Wilson’s group has published data on treatment of familial hypercholesterolaemia, and further clinical trials using adenovirus and liposomes for the treatment of cystic fibrosis should become available very soon. This section also describes various preclinical applications of HSV-1 vectors in the treatment of brain tumours, the potential use of adenovirus for the treatment of cystic fibrosis and inherited metabolic disorders. The potential of adenovirus and retrovirus for the treatment of Duchenne muscular dystrophy are also elegantly reviewed. Two further very original contributions present the current status and future perspectives of gene transfer into the cardiovascular system, and the treatment of disorders of complex simplex virus 1 outlines the future development of truly non-toxic long term expression vectors. Such vectors will have an enormous impact on future developments of non-viral gene therapy. This book will be of much interest to researchers interested in gene transfer and gene therapy independently of their actual fields of interest, molecular geneticists interested in methods and applications of gene transfer, molecular biologists, and clinicians interested in basic aspects of gene therapy.

A series of valuable chapters are by industrial pharmacologists (DNA based drugs, receptor mediated gene transfer, among others). This is of vital importance since industry is playing a major role in developing these new technologies. Another important aspect of this book is the concentration on techniques that can be eventually applied to in vivo models of disease and thus possible clinical applications. Most of the chapters are short, filled with information easy to read. References are available for most chapters are also very up to date; most reviews contain 1993 references. Although all possible methods to achieve gene transfer into cells are not included (for example, adeno-associated virus and Semliki forest virus vectors, yeast (human?) artificial chromosomes) Professor Wolff has done an excellent job in concentrating on those methods which today show the greatest promise for their application to human gene therapy. Nevertheless, many methods that so far have not been used in human gene therapy clinical protocols, will undoubtedly be used in the not too distant future.

With respect to the organisation of the book, I felt that a detailed overview explaining and discussing the state of the field and the techniques presented would have been very useful. Also, chapters covering similar topics were placed in different sections of the book, leading to some repetition in the introductory statements and many of the discussions. Most of this was a consequence of the book being split into two volumes. Nevertheless, the book should be an asset which will appeal to many practising clinicians. Other sections are approached more through the biochemical classification, with a greater stress placed on defining the diseases within the framework of the chosen classification. Sometimes, this emphasis lessens the clinical utility of the topic. Another difficulty arises when considering some of the topics that are included in and excluded from the book. For example, when the inherited disorders of steroid biosynthesis have been included, those involving thyroid hormone biosynthesis and a number of other hormone biosynthetic defects are absent.

Despite these aspects, the book is a comprehensive, yet concise account of the vast majority of inherited metabolic diseases. It has been written with the student in mind and each section has an extensive bibliography directing the reader to more comprehensive references. Overall, the compact nature of the book, and the broad multidisciplinary coverage of topics makes this book useful for those studying biochemistry, chemical pathology, and molecular genetics as well as medical postgraduates seeking a concise overview of a large topic.

P R LOWENSTEIN


Those familiar with Metabolic basis of inherited disease of Scriver, Stanbury, and their colleagues will be curious about the niche filled by a much smaller text, particularly as there are other short texts already available on the inherited metabolic diseases.

This multi-authored book, written by clinicians, biochemists, and molecular biologists aims to be a concise source of the background information that need to understand the clinical presentation, diagnosis, and management of this diverse group of disorders. Eighteen European authors have written on subjects in which they are known to have a major interest. The topics cover the major accepted subdivisions within the subject and the editor has focused on ensuring the book has an appeal for students, clinicians, and scientists seeking a quick and reasonably comprehensive review of inherited metabolic diseases. The book, now in its second edition, has been extensively rewritten to include recent molecular genetic advances, especially those which allow further insights into disease pathogenesis as well as genotype-phenotype correlates.

One practical problem for the reader is that a diversity of approach is evident within many of the sections. This is likely to be reflecting the different backgrounds of the authors; however, it creates difficulties when considering the book’s likely audience. Some sections, for example those covering the disorders of carbohydrate metabolism, the amino acid disorders as well as the porphyrias, comprehensively cover the clinically important aspects which will appeal to many practising clinicians. Other sections are approached more through the biochemical classification, with a greater stress placed on defining the diseases within the framework of the chosen classification. Sometimes, this emphasis lessens the clinical utility of the topic. Another difficulty arises when considering some of the topics that are included in and excluded from the book. For example, when the inherited disorders of steroid biosynthesis have been included, those involving thyroid hormone biosynthesis and a number of other hormone biosynthetic defects are absent.

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D RAVINE


Nora and Fraser come close to achieving their stated objective of producing a book covering what a medical student wants and needs to know in an introductory course. Twenty-eight chapters cover the scientific background of human genetics, introduce the reader to a variety of monogenic and multifactorial disorders, and discuss the various ‘special topics’ in differing levels of detail.

On the whole the chapters are individually well structured and easy to read, with helpful diagrams and clear, appropriate photographs. I was particularly pleased to see several useful, although short, discussions of the ethical issues associated with both genetic screening and mapping of genetic loci. I am not sure that dermatoglyphics deserved a separate chapter, and as a topic it certainly does not merit a chapter of equal length to the ‘genetics and cancer’ section. The minimalistic referencing is reflected in some of the details being rather out of date; Marfan syndrome is most certainly more common than the 1 in 60 000 frequency quoted, for example.

This book undoubtedly has value as a teaching aid, and will supplement textbooks as a source of information that is most likely to be provided. As long as it is recognised that referencing is minimal, then other associated health workers should find the book offers helpful summaries of some of the important areas in medical genetics.

J GRAY


Over the last 10 years, our comfortable picture of the human genome as a stable repository of pristine information has been replaced by an image of an unsettlingly dynamic entity, the information hostage to its chemical composition and the imperfections of the enzymes which act upon it. The recent revelations of the unprecedented fluidity which underlies the trinitolide repeat expansions and other mechanisms have spawned a series of books and review articles which strive to describe and explain these phenomena.

This book carries the rather general title of ‘Genome Rearrangement and Stability’, the tenor of its contents page and
the provenance of its editors will ensure that most prospective readers of the volume expect a discussion of matters specifically pertinent to the role of genomic instability in human genetic disease.

Five of the eight chapters indeed fit together to form an eclectic but coherent core to the book. These comprise a fairly up to date review of human disorders associated with triplet repeat expansions (Nelson), a rigorous examination of potential mechanisms involved in minisatellite polymorphism (Armour et al), a description of factors regulating simple sequence stability in yeast (Lustig and Petes), and interesting discussions of the possible roles of the physical properties of DNA (Wells and Sinden, although their figure 2 appears to depict some unusual 3'→5' polymerase activity) and homology driven interactions (Radman et al) in genomie rearrangement. Although the editors do not attempt a synthesis (the preface differs from the contents page only in its word count), this collection of disparate pieces of work into a single volume is thought provoking.

The remaining three chapters struck me as outliers to this central core. One, a retelling of the discovery of the Huntington's disease gene as a detective story (MacDonald et al), while interesting and useful in its own right, covers none of the disorders that are rather tangential to the mechanisms of mutagenesis, the latter being adequately reviewed in Nelson's chapter. A chapter on recombination mediated generation of variability in trypanosome surface glycoprotein genes (Eisen and Strand) is too specialised to have a significant bearing on other matters raised in the book, and the subject is burdened by an arcane nomenclature. A chapter concentrating on the role of repetitive sequences in leukaemia translocations (Stallings et al) starts as a useful review but then descends into an obsessively detailed account of a family of chromosome 16 specific low abundance repeats whose role in translocations is unclear. This chapter also seems to merit the only colour plate in the book (FISH analysis of the aforementioned repeats).

The selection of authors for this volume betrays its origins as "The Book of the Meeting" (a Banbury Conference at Cold Spring Harbor), and the editors would probably have assembled an entirely different cohort given the title alone. Nevertheless, the circumstances are probably to some extent responsible for the profitable constellation of the five "core" chapters. This book will serve as a useful and readable briefing in mechanisms of genomic instability for those casting about for possible explanations of unusual mutational phenomena.

ROLAND G ROBERTS


Most clinicians are aware of the changes occurring in clinical medicine because of the ever quickening advances in molecular biology. For those keeping abreast of the progress within their own specialties, it is fast becoming clear there is a need to keep up or catch up with what DNA technology has on offer. The problem for many, in a time when information overload looms in from every side, is how to get the necessary information without being too diverted by a field that has seemingly limitless boundaries.

This reassuringly brief but informative book has a useful position in a market where there is a need for concise introductory information about the practical application of current DNA technology in clinical practice. The scope of the text is wide ranging and covers the major developments that have influenced the fields of medical genetics, fetal medicine, medical microbiology, medical oncology, therapeutics, and forensic medicine. Each topic is introduced assuming little previous knowledge, and considerable effort has been directed towards ensuring the reader is left with a clear understanding of important principles and techniques. Molecular biology comes with its own lexicon that is unfamiliar to many undergraduate students of medicine and foreign to a sizeable proportion of post-graduates. Important terms are explained as they arise and there is also a glossary at the back of the book covering the terms that are likely to be unfamiliar to many. Many useful cartoons have been included to complement the text.

The author points out that a major difficulty with any rapidly advancing field is the problem of a book becoming outdated before publication. With this in mind, there has been an emphasis placed on the various applications of recombinant DNA technology in medicine. Descriptions of diseases have been used as examples to highlight the principles involved, knowing there will almost certainly be a fast game of musical chairs played out by many diseases. This approach is successful and the easily readable style and layout will help ensure a longer shelf life before another edition becomes necessary.

This book, written by a clinician with a broad understanding of molecular biology, is successful in its aim of providing a succinct survey of the current and likely future impact of recombinant DNA technology on the practice of medicine. While written for medical students, it will also appeal to many clinicians who wish to update their knowledge of the principles of molecular biology.

D RAVINE

NOTICES

International Genetic Workshop on Crouzon and Other Craniofacial Disorders

This workshop will be held in Pittsburgh, Pennsylvania, USA on 10 and 11 March, 1995. The purpose is to synthesise the rapid interdisciplinary research progress that has been made on the genetic mapping and the molecular cloning and characterisation of genes and proteins that cause selected craniofacial-synostosis syndromes. Further research collaborations will be discussed. Proffered abstracts about current results will be considered for poster or platform presentations. Workshop Organisers are John J Mulvihill, J Christopher Post, and Garth D Ehrlich. Contact: University of Pittsburgh Medical Center, Center for Continuing Medical Education, Attn: Trish Smith, Nese-Barkan Building, Fifth Floor, 3811 O'Hara Street, Pittsburgh, PA 15213-2938, USA. Tel 412-647-8126; fax 412-647-8222; email cepsmith@dsv.nubpmc.edu.

IV International Fetal Genetic Pathology Workshop

This workshop will be held at Malelane Lodge, Kruger National Park, South Africa on 31 March to 2 April 1995. Main focus: "Craniofacial Development and Malformation." Other topics will be presented. Enquiries and further information from Lesley Stephenson, Conference Office, PO Box 327, WITS 2050, South Africa. Tel: 27 11 716 5091. Fax: 27 11 339 7835.


36th Annual Short Course in Medical and Experimental Mammalian Genetics, Bar Harbor, Maine, USA, 17-28 July 1995

A joint undertaking of The Jackson Laboratory and Johns Hopkins University, this course consists of 52 hours of lectures on a wide range of topics, including molecular genetics, biochemical genetics, immunogenetics, population genetics, developmental genetics, clinical genetics, etc, and 22 hours of workshops on molecular genetics, cytogenetics, biochemical screening and patient evaluation, computers in the management of genetic data, linkage analysis, transgenic methods, and mouse models, as well as a medical genetics clinic with patient presentations. Supported by: The March of Dimes Birth Defects Foundation, National Institute of Child Health and Human Development, NIH. The Course is limited to 120 participants and the registration fee is $475.00. Application can be made to either of the co-directors of the course: Edward H Birkenmeier, MD, The Jackson Laboratory, 600 Main Street, Bar Harbor, Maine 04609-0800, USA, or Victor A McKusick, MD, Center for Medical Genetics, Johns Hopkins Hospital, Baltimore, Maryland, 21287-4922, USA.

The Fragile X Syndrome and Inherited Mental Handicaps: to understand in order to help

This conference will be held in the Palais des Congrèes, Caen (Calvados), France on 19, 20, and 21 October 1995. Organised by the French Fragile X Syndrome Foundation 'Le Goeland'. Further details from Coordination Congrès, Association 'Le Goeland', Cucucines No 2, Les Fleurs, 61100 Fliers, France. Tel: (33) 33 64 95 17.