market in compact, relatively easily digestible "how to" manuals for the techniques required to visualise human chromosomes. This is the third offering that they have edited or written in recent years, all aimed at those interested in the craft of obtaining human chromosomes from a variety of human tissues.

This manual is aimed primarily, but not exclusively, at those working in the diagnostic setting of clinical cytogenetics. It is practically packaged in a compact, ring-bound, format, which means that it will lie flat at any page. The information is clearly laid out and easily accessible. Due consideration is given to the safe handling of buffers and reagents and there is a comprehensive list of suppliers. Much of the information in the manual applies to techniques which are in routine use in laboratories worldwide. There is an illustrated section on fluorescence in situ hybridisation (FISH) that, sensibly, is not too ambitious in its scope. It deals with FISH applications such as whole chromosome painting that most diagnostic laboratories now use routinely.

So who or what is this book for? This manual is no substitute for learning from experienced practitioners. Nevertheless it will be useful to the large numbers of trainees and visitors who pass through clinical cytogenetics laboratories, as a source of reference, in gaining a modicum of technical expertise in basic techniques as quickly and efficiently as possible.

J WATERS

PRINS and in-situ PCR Protocols. Gosden J, ed. (£45.00.) Humana Press, 1996. ISBN 0 8960 3395 3.

This multiauthor textbook, part of the *Methods in Molecular Biology* series from Humana Press is timely in its publication. John Gosden has done a fine job in editing this excellent text. Gosden initially introduces the reader to PRINS (primed in situ synthesis) technology and its application to metaphase chromosome spreads. Detailed protocols are presented in a clear and organised fashion. The reader is immediately directed to which materials and chemistries are required to achieve successful PRINS. The methodology is clearly presented, with helpful hints highlighted throughout the text. Of interest also to the first time user of such technology is the notes section, which answers many of the fundamental questions that laboratory workers ask in relation to PRINS technology. Good representative examples of PRINS applications are presented in the chapter.

The remainder of the text is organised in a simple direct style, easy to read and follow, again with the notes feature, which is warmly welcomed.

The reader is presented with detailed methodologies to perform chromosome specific PRINS, PRINS DNA synthesis on frozen tissue sections and multiple sequential oligonulceotide PRINS (multi PRINS). The chapter on PRINS using extended chromatin preparations is extremely welcome, as many laboratory investigators have attempted this technique, largely unsuccessfully. The helpful hints and notes section again raises many important points in relation to extended chromatin PRINS.

Gosden and his co-workers also present a detailed chapter dealing with combined immunocytochemistry and PRINS DNA synthesis. This is another area of difficulty for people working in the area of in-cell DNA and RNA synthesis. The reader will gain many helpful tips from reading this section.

The final chapters of the book deal with in situ PCR methodologies, ranging from direct in situ single copy (DISC) PCR, reverse transcriptase (RT) in situ PCR, combined flow cytometry, and in-cell DNA synthesis of HIV-1 proviral DNA to localised in situ amplification (LISA). The final chapter written by Paul Komminoth gives an excellent overview of in situ PCR technology and its possible advantages and pitfalls.

In general, all chapters are well referenced with excellent representative illustrations of the various applications of PRINS and in situ PCR technologies. The use of colour plates adds to the text, but I feel that more extensive use throughout the text would have contributed significantly to the impact of this book.

In summary, John Gosden and his co-authors are to be congratulated on a fine text, which gives the uninitiated and the experienced an excellent template with which to perform in-cell amplification experiments. I am sure that this text will be an excellent addition to any science or pathology laboratory.

J J O'LEARY

The Immunopathology of Lung Disease. Kradin RL, Robinson BWS, eds. (£87.99.) Butterworth-Heinemann, 1996. ISBN 0 7506 9282 0.

This is a multiauthor book of almost 700 pages, edited by two leading authorities in the field. The first few chapters deal with the immune response to inflammation and infection in general as well as the function of the various cells involved, including lymphocytes, macrophages, and dendritic cells. The greater part of the remainder of the book is devoted to chapters on the immunological aspects of specific diseases. Sarcoid, tuberculosis, HIV infection, vasculitis, parasitic disease, and aspergillosis are covered, and there are sections dealing with silica and asbestos, and tumours of the lung and pleura. Most chapters conclude with between 100 and 200 references, and sometimes there are many more—for example, the section on AIDS cites 677.

In his preface, Dr Kradin, who is trained in general and chest medicine, immunology, and anatomic pathology, is at pains to point out that this book is not primarily to dispense information. The aim is to give each author the space to present their own interests, perspectives and perhaps prejudices—to expound their own "mythologies"—thereby providing a framework for the reader's personal development of the topic. Dr Robinson's separate preface counterpoints his colleague's observations, pointing out quite rightly that books of this type are essentially punctuation marks in the evolution of a topic. They present paradigms that by their very nature are ephemeral, and which may not always be in accord with current perceptions.

This book will prove a useful source of information an a rapidly expanding and changing field. It is not an exhaustive text, nor does it set out to be—and by its very nature it will soon become dated. But as a distillation of current ideas, as a source book for research, and as an adjunct to standard works it cannot be bettered. It is recommended reading for clinicians and laboratory workers alike. It is to be hoped that the authors will be able to produce a second edition in the fullness of time.

C W EDWARDS

PRINS and in-situ PCR Protocols

J J O'Leary

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