

Part one is covering culture techniques and grafting methods for human and mouse keratinocytes, three-dimensional skin equivalents and specialised keratinocyte cultures. The second part is in particular concerned with keratinocyte adhesion techniques, determination of proliferation and growth factor production in epithelial cells. Part three provides protocols for studying different subpopulations of keratinocytes. Part four is concerned with the detection of terminal differentiation markers and the final part provides in 3 sections methods and background for the introduction of foreign genes into keratinocytes. This booklet is written by 39 authors, mostly overlapping with the contributors to 'The Keratinocyte Handbook', who show their expertise in a very practically minded experimental cookbook like style.

Given the different aspects of keratinocyte functions in skin, the keratinocyte handbook was certainly an overdue endeavour to integrate the different aspects of keratinocyte biology and function in

one comprehensive reference. It is the strength of the editors to have chosen experts in the field, combining their contributions in such a way that the reader is never left with a puzzled aggregation of single entities, rather the reader is provided with the impression that structural and functional aspects of keratinocyte biology are interrelated and cannot be separated from each other. Especially helpful is the format of a handbook and an accompanying description of the methods involved in studying keratinocyte functions. Thus, 'The Keratinocyte Handbook' and 'Keratinocyte Methods' can be recommended to any scientist who is interested in entering the field of keratinocyte biology, but also to those already engaged as a reference providing an overview and detailed information on whichever aspect of keratinocyte biology.

Hans Smola
Thomas Krieg

ELISA, Theory and Practice; Edited by John R. Crowther. (A volume of Methods in Molecular Biology); Humana Press, Totowa, New Jersey, 1995; xi + 223 pp. \$ 59.50. ISN 0-896-032795.

This is a book for the beginner. The question that comes up with such a handbook is: 'Can one safely hand this book over to a new student and expect him/her to do successful experiments?' – The answer for this book is 'probably', it may even be handed to a very inexperienced student. Surprisingly, there have been few handbooks on ELISA, so this may fill a certain void on the laboratory shelf.

The purpose of this book and the best about it is the practical treatment of the theory and practice of ELISA. Chapter 2 describes the basic principles of various types of ELISA, chapter 3 gives practical hints to the various steps in an assay such as washing, reducing non-specific background, the pros and cons of various enzymes, etc. Chapter 3 is particularly good; every recipee in one place. Chapter 4 discusses the best way of setting up an assay given particular limitations in terms of reagents and biological circumstances. Chapter 5–8 give simple practice assays, some of which could be used as laboratory exercises for immunology/serology courses. The author goes to great length to describe every possible assay situation, including those that may never be encountered in practice. Perhaps there is even too much for the beginner. In general, the figures are very informative, and as they are so descriptive, perhaps fewer words could have been used to say the same thing in the text.

The basic science parts of the book are not as good as the practical parts. Chapter 1 deals with basic immunology, and I would prefer that

my students and associates would read a more accurate account of where immunology stands today. The final chapter 9 gives protocols for the purification of antibodies and immunoglobulins and conjugating them to enzymes. The author may expect the students to be advanced laboratory workers by the time they come to the end of the book. The protocols are very brief and not all that accurate, and I would not let an inexperienced student loose with these protocols as the only guide.

In the final analysis, this book has merits, but I would recommend to my students to use a more sophisticated book, such as the Cold Spring Harbor Laboratory, 'Antibodies, A Laboratory Manual' (1988). On the other hand, the format of this ELISA book is such that one can carry it around.

This book might be given to introduce ELISA to non-experts, for example science fiction authors. Except to Robin Cook, who already knows all about ELISA and a lot more. In the film 'Outbreak' based on Robin Cook's book, the heroine runs back to the lab ever so often to run an ELISA to try to identify the lethal virus, and in Cook's book 'Terminal', the hero, a medical student, runs some 50 ELISAs and 100 PCR assays every night before he is able to solve the mystery with the cancer patients.

Eva Engvall

Clinical Biochemistry; Edited by Allan Gaw, Robert A. Cowan, Denis St. J. O'Reilly, Michael J. Stewart, James Shepherd; Churchill Livingstone, Southport, 1995. 156 pp. £ 17.50 (pb). ISBN 0-443-044813.

In modules of two pages the book covers four themes: introducing clinical biochemistry, core biochemistry, endocrinology and specialised investigations. Each module consists of a concise text combined with brilliant diagrams and illustrations. A resumé box focuses the attention to the core information given, and a clinical note continuously ensures that this textbook focuses on the user of clinical biochemistry rather than the provider. Finally case stories give the reader a chance not only for self testing, but also for getting acquainted with 'typical' values for clinical biochemical tests in the diseased state.

The concise style has asked for some sacrifices. Virtually no attention is paid to the methodology employed in clinical biochemistry, even though a basic knowledge is essential also for the user. Numerous abbreviations are employed, but explained only when mentioned the first time. A list of abbreviations would have eased the use of the book, especially for those wanting to read the modules out of order. Finally the book contains no references and no suggestions for further readings.

The first section covering just 9 pages presents an excellent introduction to clinical biochemistry, covering subjects such as how to use clinical biochemistry as compared to other laboratory investigations, the collection of samples, the interpretation of results and the use of outside laboratory testing.

The second section gives a thorough review on clinical biochemistry in connection with fluid and electrolyte disturbances including renal diseases. The section also covers myocardial infarction, diabetes, liver diseases and mineral metabolism. Haematology including coagulation is not covered, properly because haematology in some countries is considered to be a subject not belonging till clinical biochemistry. The missing coverage of haematology and coagulation is unfortunate since diseases such as anemia and coagulation disturbances involve the use of numerous clinical biochemical analyses. In fact haemoglobin and leucocytes are amongst the 'top ten' clinical biochemical analyses.

The section covering endocrinology deals on just 20 pages with the pituitary glands, the thyroid, the adrenal gland and gonadal function,