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BOOK REVIEWS

PII: S0960-0760(96)00240-3

Biochemistry for the Medical Sciences. An Integrated Case Approach. S. J. Higgins, A. J. Turner & E. J. Wood. Published 1994 by Longman (Scientific & Technical) Group, U.K. ISBN: 0-582-10129-8. 201 pages.

The teaching of pre-clinical medical students is moving towards an integrated approach with emphasis on problem-solving. The major factor behind this evolution is the huge expansion in recent years of the knowledge of biochemistry and cell and molecular biology, which has had a profound effect on medical practice. This book will enable students to integrate factual knowledge to form diagnosis and management strategies.

This book covers 22 problems, each structured as follows:

— Introduction–giving background information

— Problem–giving details of a case history and diagnostic findings

— Questions–facilitating a step-by-step solution to the problem

— Commentary–answering and expanding on the questions

— Further questions–bringing in related clinical and biochemical issues

— Connections–highlighting key topics for revision and integrating medical knowledge

— References–a selection of topical short articles for further reading

and also includes 6 appendixes:

— Blood constituents

— Urinary constituents

— Concentrations of hormones in human plasma

— Incidence of genetic and chromosome disorders

— Amino acid designations

— The genetic code.

This is an essential text for undergraduate students of pre-clinical biochemistry, medical sciences, clinical biochemistry, biochemistry, chemical pathology and human biology, as well as a valuable reference text for medical laboratory technicians.

PII: S0960-0760(96)00241-5

Antibody Applications. P. J. Delves. Essential Techniques Series, edited by D. Rickwood. Published 1995 by John Wiley & Sons, Chichester, UK. 151 pages. ISBN: 0-471-95698-8Price at Oct. 1995: £14.95.

Antibodies have become one of the most important tools in the areas of cell and molecular biology. Antibodies offer a unique combination of sensitivity and specificity that surpasses nearly all other detection systems. Hence immunoassays of all types are now widely used in many areas of research. This book describes in clear, very precise protocols the whole range of important immunodetection methods in current use in cell and molecular biology and as such it is essential for anyone either using, or about to use, antibody techniques in their work. After a general introduction, this book covers the following:

— Labeling of antibodies

— Detection and quantification of soluble antigen or antibody

— Detection and quantification of cell-associated antigen or antibody

— Purification of antigen or antibodies

— Characterization of antigen or antibody

— Cell depletion and enrichment

and includes a list of buffers and reagents, and addresses of suppliers.

This book would be useful for people working in the fields of biochemistry, immunology, and molecular biology, as well as for advanced students.

PII: S0960-0760(96)00242-7

Gel Electrophoresis. Nucleic Acids. P. Jones. Essential Techniques Series, edited by D. Rickwood. Published 1995 by John Wiley & Sons, Chichester, UK. 150 pages. ISBN: 0-471-96043-8Price at Nov. 1995: £14.95.

Gel electrophoresis of nucleic acids is the one technique that spans the whole range of molecular biology techniques. The combination of its high resolution and versatility of its applications makes it the one method used by all molecular biologists. This book gives clear, step-by-step protocols for all the important techniques from simple analytical separations of nucleic acids to the latest PCR techniques, and hence is essential reading for all those working in the area of molecular biology. It is divided into the following main sections:

— Introduction to gel electrophoresis

— Isolation of DNA and RNA

— Methods for labeling nucleic acids

— Gel electrophoresis of RNA

— Electrophoresis of DNA

— Detection of nucleic acid species–autoradiography and fluorography

— Isolation of nucleic acids from gels

— Analysis of nucleic acids: protein interactions.

In addition, three appendixes cover:

— Calculation of moles and molarity