

Lewin renewed

W.J. Brammar

Genes II. By Benjamin Lewin. Wiley: 1985. Pp. 716. Hbk \$52.55, £40.35; pbk \$20.70, £16.75.

THE first edition of *Genes* was well received as a balanced overview of an important and rapidly developing subject. The field has moved a long way in the two years since the first edition and Dr Lewin has now revised the book in the attempt to stay "au courant with present opinion".

In his preface the author apologizes for the fact that "the brute force of DNA technology has . . . obscured the elegance of traditional genetics". As editor of *Cell*, he is in a strong position both to report and to influence the balance between brute force and elegance in molecular genetics.

The main discernible change between the first and second editions is in Lewin's perspective on the subject matter. The introductory chapters have been reworked, with more emphasis on the biochemistry of heredity and the structure of DNA. The replacement of "What is a Gene? A Genetic View", the first chapter, by "DNA is the Genetic Material" gives the sense of the change in approach. There are times when the biochemistry is less than authoritative, most seriously perhaps when the definition of the crucial hydrogen bond excludes two of the five types of such bond that are responsible for the duplicity of the DNA helix. *Genes II* should not be judged as a biochemistry text, however, and it does provide a readable, well-illustrated and detailed account of the most important aspects of molecular genetics.

By judicious rewriting, Lewin has made space for new material without increasing the overall length of the text. Many developments at the forefront of the subject, including the structure of the T-cell receptor, homeotic sequences and the powerful transgenic animal technology are presented, and a new final chapter discusses ways of "engineering changes in the genome" to study aspects of tissue-specificity and the control of gene expression.

Like its predecessor, this edition of *Genes* can be highly recommended as a text suitable for advanced undergraduate teaching of molecular genetics. The carefully selected references to important reviews and research papers at the end of each chapter will be invaluable in guiding the serious student more deeply into the subject. But make haste: even while you read, the frontiers are advancing and Dr Lewin is doubtless at work on *Genes III*. □

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Figuring out what's happening in immunology

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Immunology.* By Ivan Roitt, Jonathan Brostoff and David Male. Churchill Livingstone/Mosby: 1985. Pp. 320. Pbk £12.95; hbk \$21.95.

Introducing Immunology. By Norman Staines, Jonathan Brostoff and Keith James. Gower Medical, London: 1985. Pp. 59. Pbk £1.95.

THE rise of immunology as a biomedical science has been matched by the increasing recognition of the central role of the immune system in health and disease. This has underlined the need for texts designed for undergraduates, graduates and students of medicine, and for books which are aimed at an intelligent non-professional audience. *Immunology* is intended as a first text in immunology accessible to undergraduates but with sufficient content to be of value to starting graduate and medical students. *Introducing Immunology* explains the immune system to a general audience in a very concise format.

Immunology is a remarkable book which sets a new standard for introductory texts on the subject. It covers authoritatively the basic areas of immunology and deals, in an introductory way, with many of the key aspects of clinical immunology. But its most innovative and striking feature is the extensive use of figures, many of which are very handsome. For example, Chapter 1 ("Adaptive and Innate Immunity") consists of nine pages which include 25 figures, many of them in four or more colours. These illustrations were obviously planned with care and have been executed with considerable style; indeed, study of the figures and legends alone would serve as a fine introduction to immunology.

Immunology places heavy reliance on the illustrations in an effort to create a superior teaching device. To a large degree this succeeds, although I sometimes found them distracting as they often break the logical chain of development of specific issues. Furthermore, in many cases there is considerable redundancy between the text and the figure legends, so that there are essentially two descriptions side-by-side of the same material, both in a highly telegraphic style. Indeed, some of the fig-

**Slide Atlas of Immunology*, which contains 750 transparencies of illustrations in *Immunology*, together with supporting material, is available from Gower Medical in London and New York, and C.V. Mosby in St Louis, Missouri, price £500, \$850.

ures illustrate points which could have been made in the text alone, and elimination of them would have allowed a better presentation of the main points in each chapter.

The authors received a great deal of expert assistance in the preparation of the book, as noted in their acknowledgements. This has lent authority to each chapter, while the overall direction of Roitt and his colleagues has maintained continuity and uniformity of style. However, while obvious efforts have been made to keep the book up to date, it appears that the detailed planning and the time necessary to produce this unusual volume may have led to a relatively long period of writing and production. Some chapters, then, are a bit dated, though the passages concerned can be put right in the second edition which will undoubtedly follow.

It would be unfair to close this review on even a modestly negative note. *Immunology* breaks new ground and all introductory texts on the subject will in future be judged against it.

Introducing Immunology has a very different purpose. Its goal is to provide a short picture of immunology for secondary school and university students, and for the general public. It represents an effort, supported by the British Society for Immunology, to encourage students to consider a career in immunology and makes some practical suggestions concerning opportunities for education and degrees in immunology in Britain.

In less than 50 pages, the authors present the major elements of the immune system and discuss aspects of clinical immunology. Again, the figures are outstanding, which is no surprise because the production team was the same as for *Immunology*.

This slender volume does not stint in its presentation of the technical aspects of the field. A good example of its depth is found in the section on complement, where the principal components of the classical and alternative pathways are presented in a rather sophisticated manner. For both the general reader and the student seeking a brief introduction to immunology, *Introducing Immunology* will be a challenging but rewarding experience. □

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Textbooks supplement — prices

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