REVIEWS

HANDBOOK OF TERATOLOGY. Vols. 1 & 2. MECHANISMS AND PATHOGENESIS.
Edited by J. G. Wilson and F. Clarke Fraser. Plenum Publishing Co., New York and London, 1977. Pp. xi+491. Price \$46.80.

There are advantages in single author books, which give continuity, but rarely depth outside the author's main interest, and in multiple author books, where the authors combine distinction and punctuality, and can be constrained within the boundaries of their title.

Warkany's *Congenital Malformations* was a landmark in 1971, bringing within one volume a wealth of experience and erudition in a lucid and well illustrated text.

Now we have the inevitable multi-author handbook, the usual reviewer's nightmare, and it achieves all that Warkany did not, and could not, do. Within two volumes the whole range of errors, from conception to birth, in man, mouse, chick, frog and much else, are well covered. Every insult, from radiation and ultrasound to medication, is documented with a sound text and exhaustive references.

The production is good, and the editorship has been rapid. The book can be both read as a text, and used as a reference. Some difficult practical problems, such as the consequences of pregnancy to an epileptic or a diabetic (when the treatments seem to convey more hazard than the predisposition), are particularly well covered. Radiation, both ionising and other forms, including ultrasound, is also well covered with detailed references and balanced commentary.

The major omission is amniocentesis, which, while rarely teratogenic, is not quite devoid of hazard. The amniotic fluid is likewise omitted, although the origin and nature of its cells are of some practical interest. There is nothing on recurrence risk, and little on mathematical models; this is reasonable as these are dealt with elsewhere, and these volumes are extensive enough.

These are essential books for any medical school or maternity hospital library, and for anyone who is expected to give an opinion, at short notice, on the likely consequences of some drug, or member of a family of drugs, on a fetus.

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ADVANCES IN HUMAN GENETICS, Vol. 7. Edited by H. Harris and K. Hirschhorn. Plenum Press, New York and London, 1976. Pp. xiii+261. Price: £39.40.

This volume comprises five chapters, four of them being excellent reviews. Chapter 1 contains all the information on the biochemical genetics of carbonic anhydrase that anyone might ever need. Chapter 4 is a competent review of the genetics of the complement system. Chapter 3 is an excellent

summary of X inactivation in mammals, and is the best offering on this subject available. Chapter 5 is an equally excellent and informative review of selective systems in somatic cell genetics.

Only chapter 2 fails to get a bouquet. Human behaviour genetics is a diffuse and difficult field, badly in need of rigorous and critical treatment. Unfortunately, the reviewers fail to give it either. An introduction eulogising Galton warns us that worse is to come, and it does. The discussion of schizophrenia pertains completely to the situation in the U.S.A. (*e.g.* no mention is made of the work by Fish or Kendall on diagnosis and the differences between the U.S.A. and U.K. in this respect). The single page devoted to the behavioural effects of chromosomal disorders is inadequate and lacks detail. On the other hand, five pages are devoted to a miscellaneous collection of observations on reading disabilities with little relevance to genetics. Throughout the review, other reviews are cited uncritically, without discussion of the original work, and much of what is written is irrelevant padding.

It is unfortunate that this contribution should mar what is otherwise an exceptionally useful volume. However, the other four chapters more than compensate for this and no library should be without volume 7 of this helpful series.

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BASIC IMMUNOGENETICS (2nd Ed.). H. Hugh Fudenberg, J. R. L. Pink, An-Chuan Wang and Steven D. Douglas. Oxford University Press, New York, 1978. Pp. ix+262. £3.95.

There are many reasons why all geneticists should be acquainted with the contents of this book. First, in no higher eukaryote is there a group of linked genes with related biological effects as well studied as the major histocompatibility complex (the H2 complex) in the mouse, and the understanding of the human equivalent is not all that far behind. It remains to be seen whether this complex will prove to be the paradigm for understanding the relationship in the genome, and the evolution, of other genes with related biological effects, but evidence from some of the well studied complex loci in *Drosophila* suggests that there may be a common theme underlying these systems.

Second, the evolution of the gene for the immunoglobulin polypeptides by tandem duplication of an ancestral gene with or without gene fusion, and the subsequent distribution of these through the genome, is well understood. This basic strategy is echoed not only by the haemoglobin genes but also by the genes for other proteins in a variety of higher eukaryotes.

Third, until the recent discovery of non-translated intervening DNA sequences in coding sequences, the biggest upset to our clean and simple view of the linear relationship between coding sequences and polypeptides was the proposal that two genes coded for each immunoglobulin polypeptide chain.

Fourth, much of our understanding and much of the controversy between the neutralist and selectionist schools of evolution stems from the study of