the effect of some obstetric or paediatric intervention; however, the less scientifically rigorous but nonetheless often very valuable approach of retrospective analysis of large survey data bases gets little mention.

There are two criticisms of the first half of the book. Though the references cited are extensive, there are a number of omissions of valuable studies, particularly a number from Great Britain which have the great advantage of being truly population based. Also, the interpretation of two of the commonly studied antecedent factors, maternal age and parity, has not entirely adequately emphasised the extraordinary non-biological meaning of these apparently biological factors. In a population where effective birth control is practiced, they reflect the circumstances underlying the decisions of whether and when to initiate a pregnancy, as much as the direct effects of advancing age and reproductive history. Rightly has this area been termed 'epidemiological tiger country'.

Among the methodological issues addressed, there are two of crucial importance in the design of investigations: sample size requirements and power to detect associations, and the randomised controlled trial as the method of choice for evaluating different treatments or treatment policies. Hitherto many of the resources, human and financial, that have gone into medical research have produced a poor return of firm knowledge and much research has been carried out with little more than blind hope that the desired effect would be demonstrated. Proper application of the above principles would be the most important step investigators and those overseeing their work could take to ensure a reasonable anticipation of truly important results.

Readers of this review who specialise in medical genetics may feel these considerations apply much less to themselves than to those in other specialties. Many genetically determined disorders are so infrequent as to impose severe restrictions on sample size and hence statistical power obtainable. While it may not be possible to get around this problem, the consequent limitations on the interpretation of the results should not be ignored. And, while so far effective treatments for genetically determined disorders have been few, it can be anticipated that this situation may soon change as exact knowledge of the basic DNA defect and its biochemical mediation becomes available. The resulting therapeutic advances would need to be tested prospectively, just as in any other branch of medicine.

All in all, this book contains valuable information with a wide range of application.

ROBERT G NEWCOMBE

Laboratory Animal Medicine

Edited by James G Cox, Bennett J Cohen, and Franklin M Loew. (Pp 750; figures + tables. £42.00, \$60.00.) Florida: Academic Press. 1984.

This book is the most recent in a series compiled by the American College of Laboratory Animal Medicine. Previous volumes have dealt with each species but this one has amalgamated and updated those chapters concerning laboratory animal medicine. The book is intended primarily for the veterinary surgeon but there is much to interest others in biomedical research who use animals.

There are 26 chapters which cover the biology and diseases of mice, rats, hamsters, guinea pigs, rabbits, primates, ferrets, birds, amphibia, reptiles, and fish, as well as other less common species. There are also miscellaneous chapters on historical perspectives, law (USA), dogs, cats, ungulates, design and management of animal facilities, anaesthesia, analgesia and euthanasia, zoonoses, biohazards, techniques used in research, as well as a section on factors concerning husbandry and disease which can affect experimental results. Quality control, including genetic monitoring, is also covered, although the latter rather sparsely, and may therefore not be of great use to the more experienced geneticist.

The clinical content of the chapters is perforce directed towards diseases commonly seen in America but, sadly, like AIDS, sooner or later many seem to arrive in the UK. The section on analgesia was disappointing, as was that on laboratory animal allergy, which in UK surveys has been shown to affect up to 25% of staff. There seemed to be an unfortunate reluctance by our transatlantic colleagues to quote work published in Europe; thus Green's book *Laboratory animal anaesthesia* was not mentioned, nor were numerous publications on analgesia and biochemical genetic monitoring. Perhaps we are equally guilty!

The style and presentation is to the usual high standard of Academic Press with very good illustrations and a double column layout. Overall there are no other textbooks, as far as I am aware, which deal with such a range of material as this tome (750 pp) at this price (£42, probably now nearer £50) which makes it a valuable reference book. For the medical geneticist I would have recommended the more detailed chapters in earlier texts in the series, but for the veterinary surgeon associated with an experimental animal facility or the curator it will be extremely useful.

D B MORTON