

cribed. The importance of the financial support by these interests is probably considerable; scientific support in the subject is, by contrast, largely a by-product of more fundamental research.

The last chapter is mainly speculative and qualitatively deals with social, economic and legal aspects; this chapter is more suitable for the non-scientist. I feel that it is somewhat laboured, could have been condensed considerably and is something of an anticlimax. The importance of

military and political interests in research and experiment are again brought out, and perhaps this, above all, emphasizes the lack of proportion in the weather-modification picture. Indeed, it is not clear from this book that the present approach to weather modification is any more scientific than the original experiments in cloud seeding. □

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Rats in the lab

Maurice Smith

The Laboratory Rat. Volume I, Biology and Diseases. Edited by H.J. Baker, J. Russell Lindsay and S.H. Weisbroth. Pp. 448. (Academic: New York and London, 1979.) \$52.50, £29.40.

THIS IS the first of two volumes on the laboratory rat, following earlier publications on the laboratory rabbit and guinea pig which were also sponsored by the American College of Laboratory Animal Medicine.

Contributions from 24 authors have been brought together in 15 chapters and two appendices, forming a most comprehensive reference work. The success of the editors in consolidating the technical material available has been balanced by their equivalent success in producing a readable and yet authoritative work which should be available for reference by almost any worker using laboratory bred rats. This is best illustrated by the first chapter which describes in great detail and clarity the origin of the major outbred strains and the early development of inbred strains.

That this is a mainly American story is some reflection of the earlier recognition by the American research world of the need for defined laboratory animals. However it is significant that despite the understandable selection of authors mainly from the USA, those asked to write the chapters on taxonomy, genetics and inbred strains were British, which is due recognition for the work done in Britain on this aspect of laboratory animal science.

The biological chapters in the first half of the book cover genetics, anatomy, physiology, haematology, clinical biochemistry, nutrition, feeding and housing. They show a refreshing recognition of the relationship between biological and experimental variables, which is sometimes not adequately recognized by those using animals as experimental tools.

One of the best examples of this approach is Chapter 8, "Housing to Control Research Variables", which replaces what could have been a standard chapter on housing with a consideration of the effects of physical, chemical and micro-

bial factors on biological responses.

The chapters on disease are without exception well done and each may be considered a definitive text in its own right, especially when supported by the very comprehensive references which are a characteristic of the book as a whole.

There are, however, occasional anomalies which could cause misunderstanding among British readers. Examples of this are the description of *Corynebacterium kutscheri* as the causative agent of pseudotuberculosis, which in the UK is usually attributed to *Yersinia pseudotuberculosis*. Also, at no point is the term chronic respiratory disease (which is generally recognized in the UK) used in reference to respiratory infection. There is a tendency to deal with respiratory infections as quite separate conditions, and the mixed nature of the outbreaks of respiratory disease so commonly found in conventional rat colonies is not sufficiently emphasized.

It is particularly gratifying that chapters on neoplasia and lesions associated with ageing have been included, while the chapter on human health hazards will prove very useful to those involved with safety problems in animal units.

The appendices on drug dosage and selected normative data are welcome and useful additions. It is to be hoped that some consideration may be given to the enlargement of these sections in future editions.

The book is profusely illustrated throughout with black and white photographs of excellent quality together with more-than-adequate tables, diagrams and figures. Understandably, colour has not been used, but despite this the quality of the publication with its strong hard-backed binding is of the high standard one has come to expect from ACLAM.

Volume I of *The Laboratory Rat* is without doubt a timely and very welcome addition to the literature. I await Volume II, *Research Applications*, with considerable interest and with the certain knowledge that *The Laboratory Rat* will become the standard work of reference on this subject. □

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Reproduction in perspective

Barry Cross

Oxford Reviews of Reproductive Biology. Volume 1, 1979. Edited by C.A. Finn. Pp. 485. (Clarendon/Oxford University Press: Oxford and New York, 1979.) £30.

UNLIKE several biological disciplines of recent origin, the biology of reproduction has cast its spell on enquiring man for centuries, if not millenia. Even so the acceleration of activity in the last three decades has been remarkable, with research proliferating in the new universities and colleges as well as in long-established academic institutions. Whereas 40 years ago reproductive research was almost exclusively a male preserve, the recession of sex discrimination has brought a tide of female workers to reproduction laboratories, much to the advantage of the subject. Dr Anne McLaren FRS is the chairman of the editorial board of this annual review series and two of the chapters in the first volume are written by talented women scientists.

The book contains seven reviews of uniformly high quality, clearly written and appropriately comprehensive. The authors, who are all at the height of their investigative careers, do not skimp, plagiarize or patronize the reader. They dig deep into the foundation of their respective subjects often referring to much earlier work, and critically examine much present-day dogma. The mix is certainly not what one would expect to find in a textbook on the subject or in an introduction for the educated layman. It perhaps most obviously reflects the impact of refinements in chemical techniques on physiological problems. We have authoritative discussions on the current status of relaxin (D. G. Porter), uterine proteins (R. J. Aitken), molecular biology of spermatogenesis (A.R. Bellvé) and preservation of semen (P. F. Watson), as well as on the established favourites — sexual differentiation of the brain (J. E. Booth), control of gonadotrophins (C. A. Wilson) and milk secretion (R. C. Richards). All are treated in a refreshing way and make stimulating as well as informative reading.

The text is efficiently edited by Professor C.A. Finn and contains very few misprints. Some readers may feel that the scarcity of figures is a disadvantage and that the quality of some of the micrographs in the plates at the end of the book is not very impressive.

But these are small defects, and annual reviews in the series will be eagerly awaited.

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