

which is the object of the symposium – the award winning paper by T.J. Martin and P.R. Ebeling on the role in physiology and pathology of a novel parathyroid hormone-related protein. Although the award was for a *published* paper, there is no indication of where or when the previous publication occurred. Detective work in the library revealed it to be a revised and updated version of Martin et al. (cited in the article) that appeared in the golden jubilee issue of the Australian and New Zealand Journal of Medicine in 1988.

Three major areas of calcium and phosphate metabolism are considered. Martin and Ebeling's paper falls into the first (and largest) category discussing novel aspects of calcitropic hormone action. The six articles deal with various aspects of PTH-related protein, vitamin D, the calcitonin receptor and a speculative paper on the secretory protein-I produced by the parathyroid. The two smaller sections cover aspects of calcium (and to a much lesser extent phosphate) transport and bone pathophysiology.

As with most multi-author symposium proceedings, the styles of the articles are mixed. A few are in the strict format of reviewed papers in journals detailing methodology and results, whereas the majority are in the less formal style of most symposium papers being a mixture of review and experimental data, often without detailed methodology.

One disappointing aspect, which I feel is all too frequent today, is the somewhat misleading title of the book. It is really about calcium and not phosphate. On scanning the index, references to phosphate occur on only 21 out of 230 pages, and many of these are minor. Only two chapters deal with phosphate to any significant extent, and even in those it is not the major thrust of the article.

Because of the camera-ready production (presumably retyped by the editors as the typeface is consistent throughout) the book has been published relatively quickly for a symposium report. As many of the chapters deal with work that was in progress at the time and many of the conclusions may have been somewhat speculative, this work represents a 'snapshot' of what was happening towards the end of 1988. It covers a reasonably wide area of research ranging from a mechanistic analysis of renal calcium transport to treatment of osteoporosis and I found a number of the articles interesting. However, because of the background to its production the book falls between two stools; the articles are not adequate reviews for the uninitiated and probably cover information known to those working in the field. As such it is difficult to see where the market for this book might lie.

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**Animal Cell Culture (Methods in Molecular Biology, Volume 5);** Edited by J.W. Pollard and J.M. Walker; Humana Press; Clifton, New Jersey, 1990; xiv + 713 pages; £59.10

There is quite a shortage of specialised method-oriented books relating to animal cell culture, so that the publication of a volume such as this is a welcome event. The book contains 55 short 'stand-alone' chapters by experts in particular topics including basic culture techniques, culture of specific cell types (e.g. keratinocytes, lung, brain, thyroid, liver, muscle and kidney cells, and lymphocytes, haemopoietic cells and their precursors) and specific techniques including in situ hybridisation, flow cytometry, hybridoma technology and transfection. **Animal Cell Culture** therefore covers a wide range of areas but the choice of the specific topics by the Editors seems to have been a little arbitrary, so that even within the chosen areas the coverage is not comprehensive. The most serious criticism, from my point of view, is that in many of the chapters the references stop in the mid-1980s or earlier, and often important recent references are not included; it is difficult to understand the reason for this, since several of the chapters have recent references right up to 1989.

On a more positive note, the format is extremely clear and easy to follow; detailed practical information including recipes for solutions and valuable hints based on the authors'

experience is given. For example, Reid's Chapter on 'Defining Hormone and Matrix Requirements for Differentiated Epithelia' has a very useful appendix on sources and storage.

This book will certainly be used in my laboratory. It partially fills the need for a cell culture manual covering details of specific techniques at a more advanced level than is possible in Ian Freshney's very useful introductory practical manual *Culture of Animal Cells – A Manual of Practical Technique* (Alan R. Liss).

I would recommend it as a useful acquisition for science libraries and for laboratories very much involved in animal cell culture, but because of the outdated referencing in many chapters and the somewhat random choice of topics, it must be considered as *one* of the methods books to have at hand, rather than *the* essential *laminar flow*-side manual for every cell culture researcher. The Gold Standard in this regard, Kruse and Patterson's *Tissue Culture Methods and Applications* (published by Academic Press in 1973 and therefore now a little out-dated) has yet to be equalled.

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