# book reviews

reflects 'echoes of childhood'. Perhaps we need to repress styles of social interaction learned then in order to function adequately as parents, as she suggests. But we are still some way from a comprehensive explanation, as opposed to a mere description, of the way the sexes differ in their behaviour. The popularity of books lamenting the difficulty men and women have in understanding each other's verbal and non-verbal discourse is testimony to that sad fact.

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# Students' dilemma

## **Essential Cell Biology: An** Introduction to the Molecular **Biology of the Cell**

by Bruce Alberts, Dennis Bray, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts and Peter Walter Garland: 1998. Pp. 630. \$59.95, £24.95

**David S. Latchman** 

Even before I opened this book, the fact that it was from the authors of the highly acclaimed Molecular Biology of the Cell led me to expect it to be outstanding in both the lucidity of the text and the clarity of the illustrations. I was not disappointed. If anything, this book is even easier to follow than its predecessor.

A conscious effort to make things as simple as possible seems to have been made: the subheadings for each section make the appropriate point simply and effectively, and the order of the chapters has been carefully thought out. So, unlike Molecular Biology of the Cell, the chapter on mitosis and meiosis precedes that on the cell cycle, which is, in my opinion, much better for undergraduates. The work is generally up to date, although if it was written today I suspect there would be at least a mention of the effect of histone acetylation on gene expression, and the cloning of Dolly would receive more than a brief mention in a figure legend.

But overall this is an excellent work, and normally I would recommend it wholeheartedly. Given the success of Molecular Biology of the Cell, however, one must ask how it is intended to be used in relation to the previous book. The introduction to Essential Cell Biology says it should be "easily understood by first or second year undergraduates with little background in biology". Apparently Molecular Biology of the Cell is aimed at "advanced undergraduates specialising in the life sciences or medicine". It was not always so: the preface to the first edition, which is still included in the current edition, says it was intended "for students taking a first course in cell biology" and that "even a stranger to biology could follow it by starting at the beginning". Perhaps the authors changed their opinion as the field advanced and they received comments from readers.

Nonetheless, it would have been helpful to have been told the target audience for each of these texts. A student taking an isolated introductory course would buy Essential Cell Biology and find it highly appropriate. But should a student taking an introductory course who wants to go further and take specialist courses buy Essential Cell Biology and then Molecular Biology of the Cell, even though there is considerable duplication, or risk buying just the more complex Molecular Biology of the Cell?

The excellence of both books makes this question all the more pressing. The clarity and attractiveness of Essential Cell Biology will surely ensure it a worldwide audience in the same way as Molecular Biology of the Cell. But the financially and academically hardpressed student is entitled to know which book they should purchase and when. David S. Latchman is in the Windeyer Institute of Medical Sciences, University College London Medical School, Windever Building, 46 Cleveland Street, London W1P 6DB, UK.

# **At a glance**

## **Nucleosynthesis and Chemical Evolution of Galaxies**

by Bernard E. J. Pagel

Cambridge University Press: 1997. Pp. 378. £19.95, \$29.95 (pbk); £55, \$74.95 (hbk) Take 10<sup>11</sup> solar masses of gas with almost primordial composition, add many generations of stars formed at a suitable rate, let the elements be synthesized inside the stars, add some heavy elements in ejecta from dying stars, and stir the ejecta with the surrounding medium over a low heat for 1010 years. The result should be the pattern of elemental abundances observed in our own Galaxy and external galaxies. Surprisingly, the cosmic soup tastes the same (with a few exceptions) almost everwhere. Why?

This subject is addressed by Bernard Pagel as he guides the reader magisterially through the secrets of measuring elemental abundances and producing the first light elements by cosmological nucleosynthesis, and later all the others by stellar processing (primary and secondary elements, hydrostatic and explosive phases, in single and binary stars and through neutron-capture synthesis). He also discusses the concepts of galactic chemical evolution and its theoretical modelling in steps of different complexity, and finally the comparison of the observational data with the theoretical results for galaxies of different morphological type and starformation history. Each topic is explained from the ground up, giving the reader all the information needed to proceed further. The book manages to present (without losing scientific rigour) one of the most fascinating subjects of modern astrophysics.

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### **New Journals**

This year, Nature's annual new journals review supplement will appear in the issue of 10 September. Publishers and learned societies are invited to submit journals for review, as well as details of any eligible electronic journals, taking note of the following criteria:

 Journals must have first appeared during or after June 1996 and issued at least four separate numbers by the end of May 1998.

• Journals covering any aspect of science are eligible, although those dealing with clinical medicine and pure mathematics are excluded, as are newsletters and publications of abstracts.

 Frequency of publication must be at least three times a year.

• The main language is English.

• Deadline for submission is 5 June.

Please send at least four different issues (the first, the most recent and any two others) of each eligible title, together with full details of subscription rates, to: Peter Tallack, Nature, Porters South, Crinan Street, London N1 9XW, UK. Tel: +44 (0)171 843 4567. e-mail: p.tallack@nature.com

#### Mitosis and Apoptosis: Matters of **Life and Death**

by I. D. Bowen, S. M. Bowen and A. H. Jones Chapman and Hall: 1997. Pp. 182. £24.99, \$49.95 (pbk)

A book of modest size but great ambition, this endeavours to explain cell proliferation and cell death at the molecular, cellular, physiological and philosophical levels. It is aimed at students at graduate and advanced undergraduate levels, and covers a broader area, but in less depth, than the title suggests.

For example, in addition to the mechanics of cell-cycle control and apoptosis, one of the six chapters is devoted to signal transduction. Because signal transduction controls both proliferation and death, this chapter nicely links the two topics. But there is a price to pay. In exchange for the broad coverage, the reader gets short-changed on several concepts central to cell division and cell death.

There is no serious discussion of chromosome dynamics, and DNA replication is covered in just a few brief paragraphs.

The chapters on cell death are more complete, including some useful discussions on non-apoptotic types of death. In general, the book is fairly up to date and contains many references to primary research articles. If a brief introduction to cell proliferation and cell death is required, this concise, enjoyable book might well be it.

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