final short section, 'Alternative amplification strategies', details two examples of the use of the Ligase Chain Reaction to detect single base pair changes in known sequences.

As the whole aims at diversity of subject coverage plus detailed protocols, many chapters come across quite dry and sparsely written. This is however, a manual not a 'good read', so this can be forgiven in view of the wealth of protocol detail and diagrams/photographs provided. Having said this, almost all chapters are well written, and the editors (and authors) have managed to avoid extensive repetition of basic theory and techniques. Whilst the editors would not claim this volume provides an exhaustive list of the current state of the art of PCR (and it is an art, isn't it?), it provides more than enough novel directions and details to make it a necessary addition to any DNA laboratory's library (if you have *PCR Protocols*, that is).

PAUL W. SHAW
Department of Applied Biology
University of Hull
Hull HU6 7RX
U.K.

Cell Cycle Control (Frontiers in Molecular Biology, 10). C. Hutchinson and D.M Glover (eds). IRL Press (Oxford University Press), Oxford. 1995. Pp.304. Price £29.50, paperback. ISBN 0 19 963410 6.

How does the average cell spend its day? The simple answer is that it depends! A human somatic cell, for example, will grow, enter mitosis and divide but the cellular processes associated with these dramatic events only occur in concert with careful monitoring and integration of a plethora of intra and extracellular signals. The truth is that there is no such thing as an average cell and the study of the progression and co-ordination of these events, the cell cycle, in a variety of organisms and cell types has grown into one of the most fascinating areas of modern biology.

Studies of the eukaryotic cell-cycle have their origins in the 1950s; earlier observations of the process of cell division date back to the latter part of the nineteenth century. However, the last decade has seen a veritable explosion in our understanding of its intricate control mechanisms. *Cell Cycle Control* is a compilation of ten chapters, each contributed by different authors active in cell cycle research. The overall aim of this volume is to provide a summary of the most recent advances in this area. Inevitably, the rapidity of research progress coupled with publishing limitations renders this goal unattainable. In spite of these problems, *Cell Cycle Control* comes remarkably close to its objective.

Leland Hartwell opens the batting with a concise introduction to the basic principles which underpin our current understanding of cell cycle control. In particular, the central, unifying role of the cyclin dependent kinases (CDKs) is described which establishes the perspective of the remainder of the book. The following chapter by Reed, Hutchinson and MacNeill continues in this introductory vein with an historical perspective including a lucid and reasonably comprehensive discussion of a variety of genetic and molecular tools used in cell cycle research. Arguably the most powerful genetic systems, those of budding and fission in yeast, are prominent in Chapters 3 and 4, respectively, in the context of studies of START and the G1-S transition and then control of entry into mitosis. S-phase regulation in higher eukaryotes is dealt with by Julian Blow in Chapter 7 following chapters focussed on the structure and activation of cdc2 CDK along with a more general analysis of the ever growing family of CDKs and their regulatory subunits, the cyclins. Zetterberg and Larsson continue on a more macroscopic scale with a description of the use of time-lapse video techniques for kinetic analyses of cell-cycle progression and specifically, events occurring during the G1 phase. This leads nicely into a consideration of disruptions of cell cycle control and the development of cancer by Lees and Harlow. White-Cooper and Glover round off affairs with a discussion of the role of cell cycle control in *Drosophila* development as the best characterised multi-cellular system.

Overall, the layout of the book is excellent. The order of presentation is logical and well conceived with the happy result that there is precious little redundancy in the information provided. It is not, however, a book for the casual reader. The contributions are detailed and well referenced. Illustrations are, by and large, clear and unfussy. For these reasons it will be a valuable reference source in many labs and a good general introductory text to those entering the field of cell cycle research.

STEVE SMERDON
National Institute for Medical Research
The Ridgeway
Mill Hill
London NW7 1AA
U.K.

Gel electrophoresis: Nucleic Acids. Robin Martin. Bios Scientific Publishers, Oxford. 1996. Pp.175. Price £17.95, paperback. ISBN 1 872748 28 7.

This is an elementary introduction to the principles, methods and applications of gel electrophoresis of nucleic acids. At one point early in this book the importance of the sequencing gel to the science of this century is noted. The electrophoretic gel is the cornerstone of the practise of modern molecular biology, and it is hard to think of another technique that is so central. Go into any laboratory and you will be confronted by gels of different size, orientation and type. Despite their simplicity, gels have enormous resolving power. They are used to analyse the size and sequence of nucleic acids, for the purification and preparation of DNA and RNA, and the humble gel has