

Book reviews

R.S. Jackson, *Wine Science: Principle, Practice, Perception*, 2nd Edition, Academic Press, London, 2000 (xi + 648 pp., £79.95, ISBN 0-12-379062-X).

Wine is a very popular drink in the world. The archaeological record of it may go back more than seven and a half thousand years. However, wines began to take on their modern expression in the 17th century because the use of sulphur in barrel treatment increased the likelihood of producing better-quality wines and extended their aging potential. There are three major interrelated topics involved in the science of wine: grapevine growth, wine production, and wine sensory analysis.

Wine Science: Principle, Practice, Perception provides a structured and comprehensive, up-to-date account of the current processes and methods in wine science, and is composed of 12 sections. The first six sections are all about grapevine growth. They provide general information about grapevine structure and function, origins, classification, the quality and chemical constituents of wine, grape species and constituents; and how to select a vineyard, respectively. The next two chapters focus on wine production, and describe the basic procedures, various types of fermentation, post-fermentation treatment and related topics. The next section compares the specific and distinctive wine styles, while wine laws, authentication, and geography are covered in Section 10. The penultimate section deals with sensory analysis and wine assessment, and recent wine research related to the health is addressed in the final section. Comprehensive references are provided in each chapter, as well as a list of suggested reading to guide further study. A detailed index is provided to help locate information, along with a glossary of wine terminology.

The informative volume provides an up-to-date, clearly written and comprehensive account of wine science, and is therefore of value as an essential reference tool for students of enology and viticulture. It will also be of value to grape growers, wine makers and people interested in wine and its production.

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J. Davey, M. Lord (Eds.), *Essential Cell Biology, Volume 1: Cell Structure*, Oxford University Press, Oxford, UK, 2003 (v + 398 pp., £79.00, ISBN 0-19-963831-4).

It is an age-old scientific adage but function is determined by structure. As even the most junior of scientists appreciate function can only be elucidated once structure has been discovered. With the rate of change in this particular area to compile a comprehensive guide of all the techniques used in cell structure is impossible. *Essential Cell Biology Volume 1: Cell Structure* distils the essential components in this area and presents them in a manner that would provide scientists of all levels a useful guide to the area. In essence its success lies in the ability of it to outline and explain the most relevant techniques. Having on numerous occasion used methods from journals we have found that the practicality of this methods proved very difficult. However, the clarity with which the authors outline the methods and the suggested points for trouble-shooting give ample opportunity for success in the various techniques they describe.

Essential Cell Biology Volume 1: Cell Structure provides an excellent practical approach, especially for the student, to cellular structure and its investigation. The book is divided into chapters that initially outline the basics of cell structure investigation and microscopy. The text excellently develops and builds on the chapters laid down in the first chapters. For instance when the reader reaches the latter topics of the cytoskeleton and processes such as apoptosis many of the concepts and ideas of cellular structure are ingrained on the reader mind. The success of the book lies in the fact that each chapter begins with a broad overview of the particular area, followed by protocols to investigate or study particular cellular structure, microscopy and sub-cellular fractionation. The danger with many books that they try to explain methodologies but instead harp on continuously about the intricacies of each methods and lose the reader in

the mound of information. For example prior to reading this book we had little understanding of Southern hybridisation, but by the time we had read the section in this book we had a sound understanding of this particular area. The text is supplemented with informative diagrams. The protocols are outlined and explained excellently and give the scientific basis for the methods. Practical guidance is also given on the assembly of many apparatus.

Certainly after reading this book the word 'essential' is definitely needed in this book's title. We feel it would provide a indispensable guide to understanding and the investigation of cell structure for experienced and new researchers alike.

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J. Davey, M. Lord (Eds.), *Essential Cell Biology, Volume 2: Cell Function*, Oxford University Press, Oxford, UK, 2003 (v + 235 pp., £79.00, ISBN 0-19-963833-0).

The field of cell biology is an area of intense and dynamic research. Being such a dynamic area there is a rapid advancement of both knowledge and theories. The question of cell function is central to many disease processes and to the understanding of many of the properties of new protein discovered via, for instance, the Human Genome Project. The ability to integrate ideas from several different areas is central to form rational theories to the above questions.

There is a plethora of information and protocols available to investigate cell function. It is possible to lose oneself with this abundance of information; the success of *Essential Cell Biology Volume 2: Cell Function* is that it provides a structured and systemic form with which to approach these problems. The book looks methodically at each major area of cell function individually including measurement of signal transduction machinery and regulation of the cell cycle. Each chapter provides the reader with a summary of the essential and integral points in the appropriate area and in many instances the presence of diagrams helps to consolidate and supplement the text. This forms an excellent basis for a sound understanding for any student. The chapters are also supplemented with protocols

that scientists can utilise to investigate cell function. For example the assessment of MAP kinase is well described but having investigated the area myself the trouble shooting section is excellent and certainly would have helped us with many of the difficulties we had encountered. Although the protocols are not exhaustive they provide a useful basis with which to use in many cell types. Again the text provides the student with a sound scientific understanding as to the methodology of each protocol. There are comprehensive sets of references in each chapter directing the reader to more extensive areas of information.

This book provides an excellent resource for any scientist or student researching the area of cell function. It combines the basic science involved in designing protocols with its practical application. We congratulate the authors on a book that explain an area of biology that can be arduous in clarity and simple scientific language. It would be of equal value to the experienced scientist wishing to understand a new area or a student wishing to gain an overview of the protocols involved in cell biology. The first volume in this set of books provide useful information in cell structure which helps with a deeper understanding of the area of cell biology.

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W. Bains, *Biotechnology from A to Z, Third Edition*, Oxford University Press, Oxford, UK, 2003 (v + 413pp., £25.00, ISBN 0-19-963831-4).

As the authors of this book state 'Biotechnology has come of age'. The success of this particular book is its ability to explain the essence of well understood areas such as fermentation but also to provide the reader with the tools to understand relatively new areas such as scanning tunnelling microscopy. Even with the rapidly expanding knowledge in this field this provides scientists essential factual as well as ethical information. Whilst not being exhaustive on any one topic it provides an excellent introduction and starting point to an area of biotechnology. In an area of science where the terminology can confuse due the author's lack of jargon, focus on clarity is very refreshing.