

Book review

Functional Genomics: A Practical Approach

Edited by Stephen P Hunt and Frederick J Livesey
Oxford University Press, New York; 2001. 253 pp. £29.95,
paperback. ISBN 0-19-963774-1

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Good but Wrongly Titled

I have been a fan of the *Practical Approach* series since my days as a graduate student. The usefulness of these books is reflected on my bookshelves where I have 11 titles from this series. I was, therefore, pleased to be able to review the latest entitled '*Functional Genomics*'.

The series uses experienced users to write individual chapters describing specific approaches or techniques. The advantage is that the authors can relay their working protocols directly to your lab and you get hands on knowledge and even troubleshooting hints about techniques. This is often conveyed with the theoretical aspects of the subject at hand. This forms a foundation of knowledge to troubleshoot and further develop the technology.

The format of '*Functional Genomics*' has changed slightly: the chapters now contain an introduction, experimental details (in clearly indicated gray boxed protocol sections), and discussions of results together with conclusions. Coupled with useful information such as a list of suppliers (UK and US suppliers are mostly listed), a scientist should be able to get a good start on getting a technique up and running in their own lab. However it should be noted that some of the protocols can only be implemented if there is institutional support for equipment such as mass spectrometry or microarrays.

Rather than list the individual chapters I will direct potential purchasers to look up the contents on the web

(www.oup.com or www.amazon.com;) the latter link contains reproductions of the table of contents, the index and the introductory chapter. These sites will enable the reader to see if the experimental techniques discussed and the protocols are a match for their needs.

My largest complaint with the book is the title. The term functional genomics is used a lot, perhaps too much, these days. Along with proteomics it has become the 'buzz' term to use. I cannot help but feel that the book has been titled in order to capture that buzz. The book is 70% devoted to methods to study gene expression (seven of 10 chapters are devoted to some aspect of gene expression analysis, including differential display, microarrays, representational difference analysis and a modification of SAGE for use with small amounts of sample called SADE). Only the final two chapters are devoted to 2D gel electrophoresis and proteome research. The book should really be entitled 'Gene Expression Analysis'.

My understanding of functional genomics is to ascribe function of genes using methods that are amenable to studying multiple genes at a time, as well as understanding the complex relationships between the genome, proteome and organism. Gene expression analysis is one tool for defining gene function – but it is not the only one. To be fair the editors openly acknowledge that they have 'chosen to emphasize the area of expression profiling' in their introductory chapter. Perhaps the best correction should be a second volume which encompasses technologies such as mutagenesis, reverse genetics, antisense techniques, two-hybrid technologies and transgenic approaches to complement this volume.

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