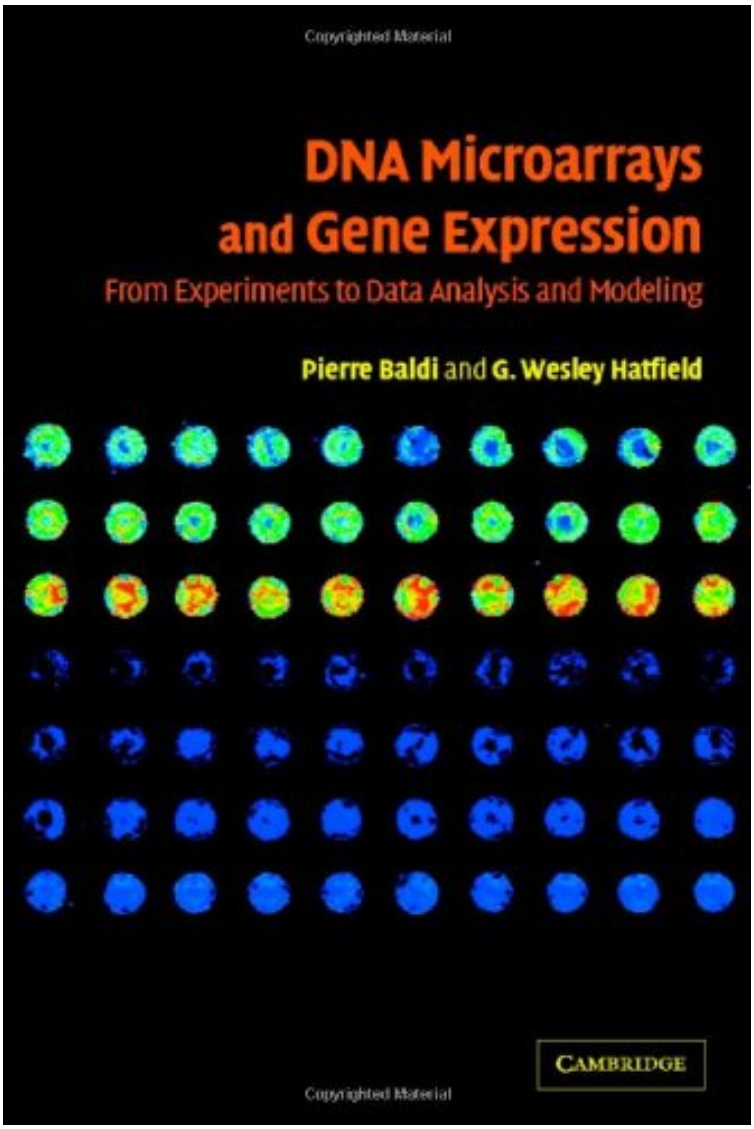
DNA Microarrays and Gene Expression: From Experiments to Data Analysis and Modeling

Pierre Baldi, G. Wesley Hatfield



#5539323 in Books 2002-09-30Format: Bargain PricePDF # 1 8.98 x .71 x 5.98l, #File Name: B008SLFJLI230 pages | File size: 43.Mb

Pierre Baldi, G. Wesley Hatfield : DNA Microarrays and Gene Expression: From Experiments to Data Analysis and Modeling before purchasing it in order to gage whether or not it would be worth my time, and all praised DNA Microarrays and Gene Expression: From Experiments to Data Analysis and Modeling:

7 of 7 people found the following review helpful. A stringing together of short essays.By ZacThis book tries to combine a practical and theoretical point of view concering microarray expermiments and the data analyis thereof.

This is a very honourable goal. Unfortunatelly, it fails. An indicator for this can already be seen in the low number of pages. This book has less than 140 pages (I exclude the last chapter and the appendix). It is clear, that it is impossible to discuss in detail this topic in this limited number of pages. Hence, during reading the chapters one gets the feeling, that one reads short essays which are stringed together. At no point the authors go into detail but give only a short idea and references.I see no reason, why I should recommend this book to anyone. It is in its current form just immature. My prediction: There will be no second edition because even its basic substance is very weak.Some words to the last chapter (systems biology). This is indeed the most interesting and best chapter of the book (35 pages) without going into details as the rest of the book. I think according to this chapter one realize under which premise this book was written. Unfortunatelly, combining buzz worlds in short essays is not enough for a good book. Sorry guys, I think you can do better!0 of 0 people found the following review helpful. Good overviewBy JoeTThat's about all I can say about this book.Don't expect any detailed information and given how the field changes, probably needs a an upgrade.However, if you want a overview of the topic, I thought it was good.8 of 16 people found the following review helpful. Excellent book. Recommended.By A CustomerThis book has a good balance between experimental and computational methods. It provides a description of DNA microarray technologies, experimental protocols, and the multiple sources of noise and variability. The book contains an insightful overview of the computational issues and available algorithms for data analysis from differential expression, to dimensionality reduction and visualization (e.g. PCA), to clustering (e.g. hierarchical). New methods are described to gether with a good overview of available software, data bases, web sites, and other resources, as well as several "walk through" examples. I particularly enjoyed the last chapter on Systems Biology.

Massive data acquisition technologies--such as genome sequencing, high-throughput drug screening, and DNA arrays--are in the process of revolutionizing biology and medicine. This concise, user-friendly and interdisciplinary guide to DNA microarray technology is an introduction and a reference for both biologists and computational scientists. The authors describe the underlying technologies and offer an awareness of the "noise" and pitfalls present in the data generated. They also provide an idea of the different data mining techniques and algorithms that are available to interpret data, and the advantages and disadvantages of each in differing situations.

of the hardback: 'The book, written by Baldi and Hatfield, is an important and timely addition to the DNA microarray literature ... the first several chapters of the book provide an easy-to-digest overview of the current state of DNA microarrays.' Briefings in Functional Genomics Proteomics of the hardback: 'Writing a book such as this was a challenging remit and one that the authors have achieved with great success.' Human Genomics of the hardback: 'I recommend very highly this book to statisticians in particular.' Journal of Statistical Computation SimulationAbout the AuthorPierre Baldi is Professor and Director of the Institute for Genomics and Bioinformatics in the Department of Information and Computer Science and in the Department of Biological Chemistry in the College of Medicine at the University of California, Irvine. Wes Hatfield is a Professor in the Department of Microbiology and Molecular Genetics in the College of Medicine and the Department of Chemical Engineering and Material Sciences in the School of Engineering at the University of California, Irvine.