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Book Review

Van Eyk JE and Dunn MJ: Proteomic and Genomic Analysis of Cardiovascular Diseases, 396 pp, New York, Wiley, 2003 ($95).

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Since the successful completion of the Human Genome project, there has been accelerating interest in the power and potential of genomics and proteomics. The focus of this book is the application of these technologies to development of new diagnostics and therapeutics for cardiovascular disease.

The book's author–editors have organized a broad-based journey across this rapidly expanding field. The book is organized into three sections: the first on genomics, the second on proteomics and the third offering an overview of the application of these to the systematic discovery of drugs and diagnostics.

Genomics research today entails using microarray techniques to quantify gene expression. The genomics section has several insightful overviews of large-scale expression profiling in chronic cardiac diseases using microarray techniques. The chapters on heart failure were especially interesting as they featured work on acute as well as chronic failure.

The section on proteomics turns on the concept that while gene function is important, it is also true that a cell's function depends on the activity of the gene's protein products.

In the final section of the book, an experienced scientist–manager from the pharma industry casts a high-level perspective of modern drug and diagnostic discovery. The key to new generations of diagnostics and therapeutics is the context of gene and protein expression—each in relationship to underlying disease pathophysiology. What follows is a concise review of the modern discovery process including new technologies for capture and analysis of the high volumes of signal information—bioinformatics.

This is a delightful book with something to offer both novice and experts in the field. It can also be a useful reference for medical school teachers.

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