

CONTENTS

Preface		vii
Chapter 1	Correlations- and Distances-Based Approaches to Static Analysis of the Variability in Metabolomic Datasets. Applications and Comparisons with Other Static and Kinetic Approaches <i>Nabil Semmar</i>	1
Chapter 2	Metabolomic Profile and Fractal Dimensions in Breast Cancer Cells <i>Mariano Bizzarri, Fabrizio D'Anselmi, Mariacristina Valerio, Alessandra Cucina, Sara Proietti, Simona Dinicola, Alessia Pasqualato, Cesare Manetti, Luca Galli and Alessandro Giuliani</i>	87
Chapter 3	From Metabolic Profiling to Metabolomics: Fifty Years of Instrumental and Methodological Improvements <i>Chiara Cavaliere, Eleonora Corradini, Patrizia Foglia, Riccardo Gubbiotti, Roberto Samperi and Aldo Laganà</i>	121
Chapter 4	Plant Environmental Metabolomics <i>Matthew P. Davey</i>	163
Chapter 5	Microbial Metagenomics: Concept, Methodology and Prospects for Novel Biocatalysts and Therapeutics from the Mammalian Gut Microbiome <i>B. Singh, T.K. Bhat, O.P. Sharma and N.P. Kurade</i>	181
Chapter 6	Nutrigenomics, Metabolomics and Metabonomics: Emerging Faces of Molecular Genomics and Nutrition <i>B. Singh, M. Mukesh, M. Sodhi, S.K. Gautam, M. Kumar and P.S. Yadav</i>	201
Chapter 7	Machine Reconstruction of Metabolic Networks from Metabolomic Data through Symbolic-Statistical Learning <i>Marenglen Biba, Stefano Ferilli and Floriana Esposito</i>	215

Chapter 8	Metabolomics	229
	<i>Viroj Wiwanikit</i>	
Chapter 9	The Role of Specific Estrogen Metabolites in the Initiation of Breast and Other Human Cancers	243
	<i>Eleanor G. Rogan and Ercole L. Cavalieri</i>	
Index		253