

CONTENTS

Foreword		vii
Acknowledgments		ix
Chapter 1	UPIBI and the Biotechnology <i>Juan Aranda, Inés Peña and Luis G. Torres</i>	1
Chapter 2	Chloroplast Transformation in Plants for the Production of Vaccines <i>Jesús Agustín Badillo-Corona and Nuria González-Rábade</i>	5
Chapter 3	The Role of Glycosides on Biotechnology <i>Marco A. Brito-Arias</i>	25
Chapter 4	State Estimation Based on Projection Observers Applied to Sequential Treatment Based on Ozonation and Aerobic Biodegradation: Application for Phenolic Wastewaters <i>Pamela Guerra, Alan García, Tatyana Poznyak, Ines García and Isaac Chairez</i>	43
Chapter 5	Metal Adsorption and Nanoparticles Formation by Microorganisms <i>Luis C. Fernández Linares, Dorian A. Bautista Hernández and Isaías Martínez Bautista</i>	65
Chapter 6	Microalgae Culture as Feedstock for Biofuels <i>Luis Fernández Linares</i>	89
Chapter 7	Methane and Bio-Hydrogen Production from Fruit and Vegetable Waste (FVW): From CH ₄ and H ₂ to Electricity <i>Ines García-Peña, Edgar Salgado-Manjarrez, Juan Aranda-Barradas, Isaac Chairez, Prathap Parameswaran and Rosa Krajmalnik-Brown</i>	115
Chapter 8	Biological Degradation of Aromatic Acids <i>C. Garibay-Orijel and A. Ordaz-Cortés</i>	139
Chapter 9	Flavonoids with Pharmacological Activity of Medicinal Plants <i>Yolanda Gómez y Gómez, María Esther Bautista Ramírez and Abraham Balderas López</i>	153

Chapter 10	Microbial Sulfate Reduction Combined with Reductive Dechlorination of Trichloroethylene in Hydrothermal Vents Sediments <i>Claudia Guerrero-Barajas, Jessica K. Suastes-Rivas, Lisiana E. Rosas-Rocha, Victor G. Rodríguez-García, Claudio Garibay-Orijel, Erika T. Quintana-Cano and Luis A. Maldonado-Manjarrez</i>	169
Chapter 11	Hydrogen Bonding in Pharmacy: Oxalic Acid Derivatives as a Case of Study <i>Francisco J. Martínez-Martínez, Efrén V. García-Báez, Juan Saulo González-González, and Itzia I. Padilla-Martínez</i>	189
Chapter 12	Fractal And Multifractal Study of Heartbeat Interval Time Series Analysis in Young Patients with Metabolic Syndrome <i>A. Muñoz Diosdado and G. Gálvez Coyt</i>	207
Chapter 13	Optimization of the Ultrafiltration in Fermentation Broths <i>Carlos Orozco Álvarez, Gerardo Albarrán Torres, Sergio García Salas and Leobardo Ordaz Contreras</i>	237
Chapter 14	New Approaches to Microbial Enhanced Oil Recovery (MEOR) <i>Norma G. Rojas-Avelizapa, Regina Hernandez-Gamaz and Luis G. Torres</i>	261
Chapter 15	Microbial Growth Modeling and Analysis <i>Edgar Salgado-Manjarrez, Juan S. Aranda-Barradas and Inés García-Peña</i>	283
Chapter 16	Plant Polysaccharides as a New Source for Coagulant-Flocculant Aids and Surfactants <i>Luis G. Torres Bustillos</i>	303
Index		323