

Contents

Chapter 1

Capsaicinoid synthesis in the Habanero pepper under conditions of abiotic stress

Nancy Ruiz-Lau, Fátima Medina-Lara, Ileana Echevarría-Machado and Manuel Martínez-Estévez

1

Chapter 2

Banana, plantain and black Sigatoka disease. Survey from the past to genomic times

Blondy Canto Canché

19

Chapter 3

Pathogenesis related proteins in pathogen-challenged plants:

Chitinase and β -1,3-glucanase activities in the *Capsicum chinense*-*Phytophthora capsici* interaction

Brito-Argáez Ligia, Canché-Fuentes René, Carballo-Bautista Miguel Cristóbal-Alejo Jairo, Zúñiga-Aguilar José Juan and Islas-Flores Ignacio

57

Chapter 4

High-affinity potassium transport in plants and their expression in heterologous systems

José R. Pacheco-Arjona, Nancy Ruiz-Lau, Fátima Medina-Lara Ileana Echevarría-Machado and Manuel Martínez-Estévez

77

Chapter 5

Abiotic stress tolerance in coffee: Compartmentalization as a mechanism to tolerate toxic ions

César De los Santos-Briones, Lucila A. Sánchez-Cach, Naivy F. Gamboa Tec, J. Emanuel de A. Bojórquez-Quintal Yereni Minero-García and Manuel Martínez-Estévez

93

Chapter 6	
Molecular analysis of pathogens agents on citrus plants	107
<i>José A. Narváez-Zapata, Iván Rosas-Hernández and Claudia Patricia Larralde-Corona</i>	
Chapter 7	
Single sequence repeats 20 years later and its application for assessing genetic diversity in guava	121
<i>Lorenzo Felipe Sanchez Teyer, Lina Maribel Cabrera-Espadas, Karen Becerril-Chi, Leonardo Verdugo-Figueroa and Adriana Quiroz-Moreno</i>	
Chapter 8	
Phytoplasmas of the papaya plant (<i>Carica papaya</i> L): Underestimated pathogens in Mexico	133
<i>Abelardo Elías Navarrete Yabur, María del Refugio González Losa and Oscar Alberto Moreno Valenzuela</i>	