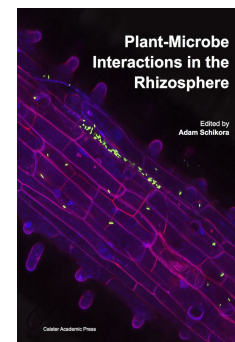


Plant-Microbe Interactions in the Rhizosphere



Edited by: Adam Schikora

Julius Kühn-Institut, Braunschweig, Germany

Published: August 2018. **Pages:** vi + 106

ISBN: Book: 978-1-912530-00-7. Ebook: 978-1-912530-01-4 £159, \$319

Published by: Caister Academic Press www.caister.com

The rhizosphere is the part of the soil directly influenced by the root system. It is intensively colonised by microorganisms and represents an environmental hot-spot in which the interactions between organisms reach a very complex level. There is a great deal of interest in understanding and manipulating these interactions with a view to development of new agricultural strategies and plant protection practices. In recent years the application of advanced technologies have permitted rapid progress in this field.

In this volume expert authors review current research on diverse aspects of the interactions which occur in the rhizosphere between the host plant and the microorganisms. The chapters focus on specific phenomena, from the biochemical and genetical level to complex inter-organism communication. The authors provide valuable insights into phenomena which are exemplary for diverse types of interaction and highlight emerging research providing important new insights into the interaction networks. Topics include: bacterial metabolism in the rhizosphere, the role of plasmids, plant immunity, the MTI-ETI model, endofungal bacteria, plant-nematode interactions, and apple replant disease.

This excellent volume is recommended for anyone involved in plant science or environmental microbiology and is indispensable for scientists working in the areas of soil microbiology and plant-microbe interactions.

Chapter 1. You Are What You Can Find to Eat: Bacterial Metabolism in the Rhizosphere (*Nicola Holden*)

Chapter 2. Role of Plasmids in Plant-Bacteria Interactions (*Jasper Schierstaedt, Nina Bziuk, Nemanja Kuzmanovic, Khald Blau, Kornelia Smalla and Sven Jechalke*)

Chapter 3. Plant Immunity: The MTI-ETI Model and Beyond (*Hanna Alhoraibi, Jean Bigeard, Naganand Rayapuram, Jean Colcombet and Heribert Hirt*)

Chapter 4. Endofungal Bacteria Increase Fitness of their Host Fungi and Impact their Association with Crop Plants (*Ibrahim Alabid, Stefanie P. Glaeser and Karl-Heinz Kogel*)

Chapter 5. Plant-Nematode Interactions Assisted by Microbes in the Rhizosphere (*Olivera Topalovic and Holger Heuer*)

Chapter 6. Apple Replant Disease: Causes and Mitigation Strategies (*Traud Winkelmann, Kornelia Smalla, Wulf Amelung, Gerhard Baab, Gisela Grunewaldt-Stöcker, Xorla Kanfra, Rainer Meyhöfer, Stefanie Reim, Michaela Schmitz, Doris Vetterlein, Andreas Wrede, Sebastian Zühlke, Jürgen Grunewaldt, Stefan Weiß and Michael Schloter*)

Order from:

Caister Academic Press <https://www.caister.com/order>

☞ **Plant-Microbe Interactions in the Rhizosphere**

Edited by: Adam Schikora (Published: 2018)

☞ **Porcine Viruses: From Pathogenesis to Strategies for Control**

Edited by: Hovakim Zakaryan (Published: 2019)

☞ ***Lactobacillus* Genomics and Metabolic Engineering**

Edited by: Sandra M. Ruzal (Published: 2019)

☞ **Cyanobacteria: Signaling and Regulation Systems**

Author: Dmitry A. Los (Published: 2018)

☞ **Viruses of Microorganisms**

Edited by: Paul Hyman and Stephen T. Abedon (Published: 2018)

☞ **Protozoan Parasitism: From Omics to Prevention and Control**

Edited by: Luis Miguel de Pablos Torró and Jacob-Lorenzo Morales (Published: 2018)

☞ **Genes, Genetics and Transgenics for Virus Resistance in Plants**

Edited by: Basavaprabhu L. Patil (Published: 2018)

☞ **DNA Tumour Viruses: Virology, Pathogenesis and Vaccines**

Edited by: Sally Roberts (Published: 2018)

☞ **Pathogenic *Escherichia coli*: Evolution, Omics, Detection and Control**

Edited by: Pina M. Fratamico, Yanhong Liu and Christopher H. Sommers (Published: 2018)

☞ **Postgraduate Handbook: A Comprehensive Guide for PhD and Master's Students and their Supervisors**

Author: Aceme Nyika (Published: 2018)

☞ **Enteroviruses: Omics, Molecular Biology, and Control**

Edited by: William T. Jackson and Carolyn B. Coyne (Published: 2018)

"frontiers in the study of the 12 species of the genus" (ProtoView); "the current most important enterovirus research" (Biotechnol. Agron. Soc. Environ.)

☞ **Molecular Biology of Kinetoplastid Parasites**

Edited by: Hemanta K. Majumder (Published: 2018)

☞ **Bacterial Evasion of the Host Immune System**

Edited by: Pedro Escoll (Published: 2017)

"The figures are expertly drawn" (SIMB News)

☞ **Illustrated Dictionary of Parasitology in the Post-Genomic Era**

Author: Hany M. Elsheikha and Edward L. Jarroll (Published: 2017)

"a guide for students, academic staff, medical and veterinarian professionals" (ProtoView); "an extensive and comprehensive glossary of contemporary concepts, terminologies, and vocabulary in modern parasitology" (Doodys); "a pure pleasure to explore and discover" (Epidemiol. Infect.); "highly recommended" (Biotechnol. Agron. Soc. Environ.)

☞ **Next-generation Sequencing and Bioinformatics for Plant Science**

Edited by: Vijai Bhaduria (Published: 2017)

☞ **The CRISPR/Cas System: Emerging Technology and Application**

Edited by: Muhammad Jamal (Published: 2017)

"reviews recent advances" (ProtoView)

☞ **Brewing Microbiology: Current Research, Omics and Microbial Ecology**

Edited by: Nicholas A. Bokulich and Charles W. Bamforth (Published: 2017)

"a valuable information source ... an authoritative overview" (IMA Fungus); "a must read book" (SIMB News)

☞ **Metagenomics: Current Advances and Emerging Concepts**

Edited by: Diana Marco (Published: 2017)

"presents those new to the field with important aspects of metagenomics" (Eur. J. Soil Sci.)