

Secondary Metabolites in Fungi-Plant Interactions

Guest Editors:

Prof. Dr. Jolanta Jaroszuk-Ścisiet

Department of Industrial and Environmental Microbiology, Faculty of Biology and Biotechnology, Maria Curie-Skłodowska University in Lublin, Lublin, Poland

jolanta.jaroszuk-scisiel@umcs.pl

Dr. Artur Nowak

Department of Industrial and Environmental Microbiology, Faculty of Biology and Biotechnology, Maria Curie-Skłodowska University in Lublin, Lublin, Poland

artur.nowak@mail.umcs.pl

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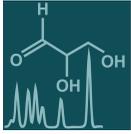
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Message from the Guest Editors

Plant–fungal interactions are extremely complex and varied as the fungi involved in these interactions can combine different lifestyles—saprophytic, symbiotic (e.g., mycorrhizal), or pathogenic; necrotrophic, hemibiotrophic, and biotrophic—and the plant can trigger numerous defense reactions. A result of many plant–fungal interactions is the promotion of plant growth and development by improving the plant uptake of nutrients and water and stress tolerance. Fungal SMs mimicking such plant hormonal substances as auxins, gibberellins, and jasmonic, salicylic, and abscisic acids may be responsible for such effects. SMs significantly contribute to the ability of fungi to colonize and penetrate plants and play important roles in the virulence and lifestyle of fungal plant pathogens. An important aspect of this Special Issue will be the presentation of the latest modern techniques for obtaining and analyzing the structure, functions, and studies of the interaction of fungal SMs with plant host metabolites.

The aim of this Special Issue is to collect the latest data and systematize the knowledge of the diversity of secondary metabolites (SMs) produced by fungi interacting with plants and to elucidate the role of these metabolites in the types of fungus–plant interaction. There is a need to describe the results of intensive genomic, transcriptomic, and metabolomic research on genes encoding fungal SMs, the expression of these genes in various environmental conditions, SM biosynthesis pathways, and possibilities of using fungal SMs in many fields of science (e.g., agriculture, medicine, pharmacy, etc.).





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Editor-in-Chief

Prof. Dr. Markus R. Meyer

Department of Experimental and Clinical Toxicology, Institute of Experimental and Clinical Pharmacology and Toxicology, Center for Molecular Signaling (PZMS), Saarland University, 66421 Homburg, Germany

Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

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Metabolites
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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metabolites@mdpi.com