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Projects

Current Projects

Clarification of the structures and regulatory mechanisms that control the formation of vesicles that host SM pathways in fungi; and expand the knowledge of sorting signals

[Details](#)

New antifungal compounds

[Details](#)

Mechanisms of microbial communication leading to activation of silent gene clusters

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RNA cargo of extracellular vesicles

[Details](#)

Molecular Mechanisms of lipid raft formation

[Details](#)

Communication between bacteria and fungi by secondary metabolites

[Details](#)

Former Projects

Acute and chronic *Aspergillus* infection in mice studied by PET-CT and comparative gene expression

[Details](#)

Lysine biosynthesis in *Aspergillus fumigatus*

[Details](#)

Post-translational modifications and pathogenicity of the human pathogenic fungus *Aspergillus fumigatus*

[Details](#)

Cryo-stress of filamentous fungi

[Details](#)

Secretome analysis/pathogenicity mechanisms of *Arthroderma benhamiae*

[Details](#)

Prediction of gene regulatory networks involved in the differentiation, secondary metabolism and cross talk of *Aspergillus nidulans*

[Details](#)

Regulation of cell wall integrity signalling by mitogen-activated protein kinase MpkA in *Aspergillus fumigatus*

[Details](#)

The hypoxic (low-oxygen) response of the pathogenic mould *Aspergillus fumigatus* and its relevance to pathogenicity

[Details](#)

The genome of the endofungal bacterium *Burkholderia rhizoxinica*

[Details](#)

Bioinformatic investigation and prediction of gene regulatory elements in pathogenic fungi

[Details](#)

Integrated genome-wide data analysis by ensemble learning methods to understand infection processes

[Details](#)

Identification of immunogenic components of *Aspergillus fumigatus* for vaccine development

[Details](#)

Identifying the pulmonary phagocytic network of mice infected with *Aspergillus fumigatus*

[Details](#)

A surface hydrophobin in ectomycorrhiza interaction

[Details](#)

Molecular mechanisms of the interaction between *Aspergillus fumigatus* and alveolar macrophages

[Details](#)

Novel molecular mechanisms of iron sensing and homeostasis in *Aspergillus fumigatus*

[Details](#)

Functionality and plasticity of bacterial polyketide synthases

[Details](#)

The role of virulence determinants of the human pathogenic fungus *Aspergillus fumigatus* in the defense against fungivorous amoeba

[Details](#)

Heterologous expression of silent gene clusters in fungi

[Details](#)

Oxidative inactivation of primary metabolism pathways in the human pathogenic fungus *Aspergillus fumigatus*

[Details](#)

Developing molecular tools for the de novo assembling of biosynthetic routes

[Details](#)

Development of a user-friendly heterologous expression system and its applications for natural product biosynthesis

[Details](#)

Engineering of polyketide production routes in the amoeba *Dictyostelium discoideum*

[Details](#)

Communication via extracellular vesicles between immune cells and the human-pathogenic fungus *Aspergillus fumigatus*

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Adhäsionsmechanismen von *Escherichia coli* auf Titanoberflächen

[Details](#)