

## Mass-spectrometric characterisation of host-fungal pathogen interactions



The occurrence of life-threatening fungal infections in Europe is steadily increasing due to the increasing number of immuno-compromised patients. However, the survival rates are low because of the difficult diagnosis and limited therapeutic options for these infections. Therefore, it is important to investigate the pathogenicity of human pathogenic fungi in order to develop more efficient diagnostics and to improve antifungal therapies.

Novel high-resolution mass-spectrometers with an orbitrap mass analyzer have a high potential to contribute to advances in fungal infection biology. These instruments can capture a significant portion of the proteome of a microorganism and allow analyses on peptide as well as on protein level. Thus it is now possible to study dynamic changes in proteins (modification, synthesis, degradation and disruption) during host-pathogen-interactions and to characterise the complex interactions. The results from functional proteomics research will be used to improve the diagnosis and therapy of fungal infections.

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