Immunoproteomics of *Aspergillus* for the development of biomarkers and immunotherapies.

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Abstract

Filamentous fungi of the genus Aspergillus play significant roles as pathogens causing superficial and invasive infections as well as allergic reactions in humans. Particularly invasive mycoses caused by Aspergillus species are characterized by high mortality rates due to difficult diagnosis and insufficient antifungal therapy. The application of immunoproteomic approaches has a great potential to identify new targets for the diagnosis, therapy, and vaccine development of diseases caused by Aspergillus species. Serological proteome analyses (SERPA) that combine 2D electrophoresis with Western blotting are still one of the most popular techniques for the identification of antigenic proteins. However, recently a growing number of approaches have been developed to identify proteins, which either provoke an antibody response or which represent targets of T-cell immunity in patients with allergy or fungal infections. Here, we review advances in the studies of immune responses against pathogenic Aspergilli as well as the current status of diagnosis and immunotherapy of Aspergillus infections.

Beteiligte Forschungseinheiten

Molekulare und Angewandte Mikrobiologie Axel Brakhage Mehr erfahren

Transfergruppe Antiinfektiva Axel Brakhage Mehr erfahren

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