

RNA Biology of Fungal Infections

Fungi are a major source of human infections; however, both diagnosis and treatment remain very difficult. We desperately need new therapeutic and diagnostic options due to the increased occurrence of antifungal resistance and the lengthy time to diagnosis.

The Junior Research Group “RNA Biology of Fungal Infections” will close the gap between basic and translational research into fungal pathogenesis through an interdisciplinary research program focused on RNA biology. It has been shown previously that numerous RNAs have an influence on the outcome of infections caused by fungi. We are particularly interested in the detection of RNA populations in host extracellular vesicles that are produced in response to an infection and that can serve as possible diagnostic markers. In addition, we are working to advance our understanding of fungal non-coding RNAs and RNA-binding proteins to facilitate the advancement of new targets for RNA-based therapeutics.

The recent development of RNA-based therapeutic agents for the treatment of genetic disorders, viral infections, and plant fungal infections all provide convincing examples of the potential of RNA-based therapeutic agents against human fungal infections. New approaches for the diagnosis and treatment of fungal infections will ultimately improve our understanding of fungal pathogenesis, open up new ways of treatment and diagnosis, and benefit society directly.

The junior research group introduces itself