

Fungi as part of the microbiota and interactions with intestinal bacteria.

Kapitan M, Niemiec MJ, Steimle A, Frick JS, Jacobsen ID (2018) Fungi as part of the microbiota and interactions with intestinal bacteria. In: Curr Top Microbiol Immunol (ed.) Current Topics in Microbiology and Immunology 422, pp. 265-301. Springer, Berlin, Heidelberg. (Review)

[Details](#)



Abstract

The human microbiota consists of bacteria, archaea, viruses, and fungi that build a highly complex network of interactions between each other and the host. While there are many examples for commensal bacterial influence on host health and immune modulation, little is known about the role of commensal fungi inside the gut community. Up until now, fungal research was concentrating on opportunistic diseases caused by fungal species, leaving the possible role of fungi as part of the microbiota largely unclear. Interestingly, fungal and bacterial abundance in the gut appear to be negatively correlated and disruption of the bacterial microbiota is a prerequisite for fungal overgrowth. The mechanisms behind bacterial colonization resistance are likely diverse, including direct antagonism as well as bacterial stimulation of host defense mechanisms. In this work, we will review the current knowledge of the development of the intestinal bacterial and fungal community, the influence of the microbiota on human health and disease, and the role of the opportunistic yeast *C. albicans*. We will furthermore discuss the possible benefits of commensal fungal colonization. Finally, we will summarize the recent findings on bacterial-fungal interactions.

Beteiligte Forschungseinheiten

[Mikrobielle Immunologie Ilse Jacobsen](#) [Mehr erfahren](#)

Leibniz-HKI-Autor*innen



Ilse Denise Jacobsen

[Details](#)



Mario Kapitan

[Details](#)



Maria Joanna Niemiec

[Details](#)

Themenfelder

[Gastrointestinale Kolonisierung und Translokation](#)

Identifizier

doi: 10.1007/82_2018_117

PMID: 30062595