# Commensal to Pathogen Transition of *Candida albicans.*

Niemiec MJ, Kapitan M, Polke M, Jacobsen ID (2017) Commensal to Pathogen Transition of *Candida albicans.* In: Elsevier (ed.) Reference Module in Life Sciences 2017 Elsevier. ISBN: 9780128096338. (Review)

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## Abstract

The yeast *Candida albicans* is an archetypical opportunistic pathogen. This fungus commonly occurs as a commensal on mucosal surfaces of humans but causes infections under certain circumstances. Namely, if epithelial barriers are disturbed or the immune system is impaired. Infections can be superficial, affecting only the mucosal tissue, or life-threatening if the fungus disseminates. The main reservoir of *C. albicans* is the gut, where it has to adapt to changes in pH, oxygen, and nutrient availability, and competes with other microbes. For the transition from commensalism to pathogenesis, the fungus uses distinct mechanisms that facilitate adherence to and invasion of host cells. Following dissemination, the environmental conditions change and additionally, *C. albicans* has to avoid elimination by humoral and cellular components of the immune system. Fungal factors and signaling networks mediate the adaptation to these different situations. While some are specific for either commensalism or disseminated disease, other attributes contribute to both the commensal and pathogenic lifestyle of this fungus. In this reference module we summarize the current knowledge on the features that contribute to *C. albicans* being a successful and harmless colonizer of the human gut and on the transition to a pathogen.

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## Identifier

**doi:** 10.1016/B978-0-12-809633-8.12077-1