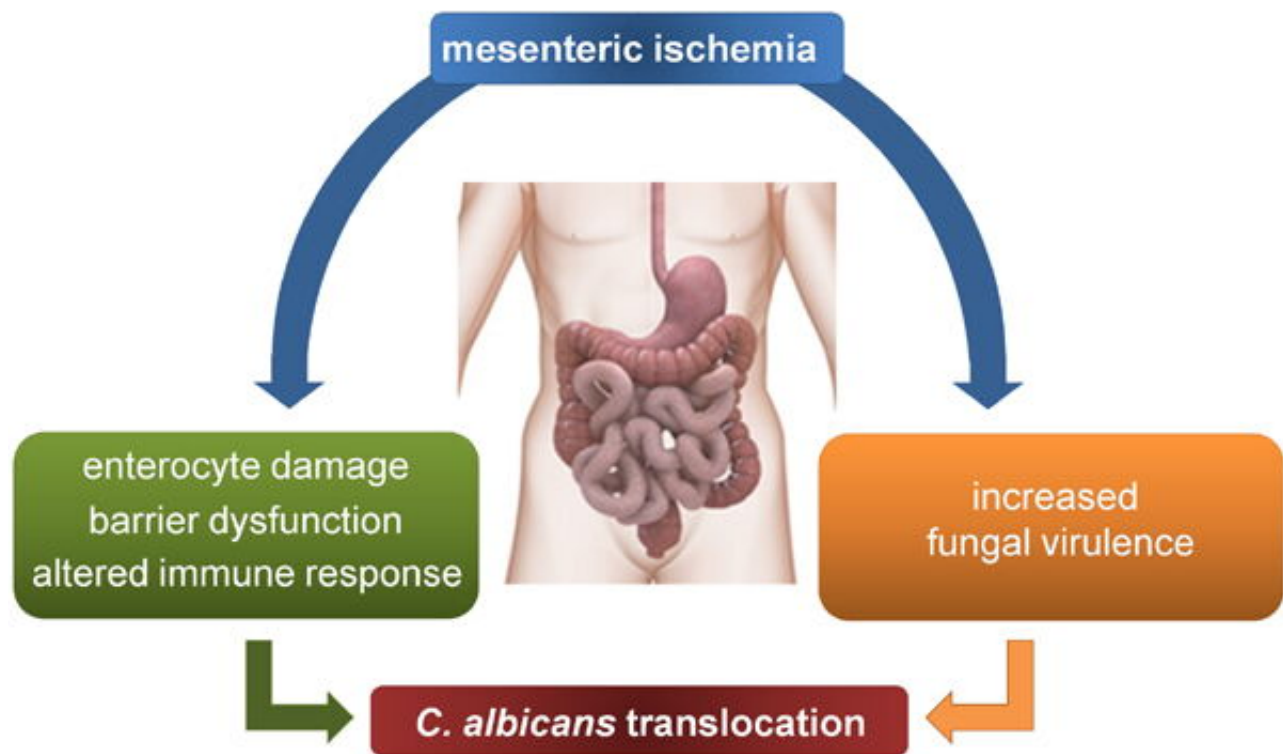


Gastrointestinal colonisation and translocation



Schematic figure showing the possible contribution of hypoxia to *C. albicans* translocation.

The gastrointestinal tract is the main reservoir for *C. albicans* in the human host and the transition of *C. albicans* within the gut from a commensal to an invasive pathogen is of great clinical importance. However, it is largely unknown which host factors trigger the transition and which fungal factors are essential for translocation through the gut. Our research aims at a better understanding of the factors that influence colonisation and translocation. Therefore we use a combination of *in vitro* and *in vivo* infection models.

One aim of this project is to determine at which anatomical sites translocation occurs and which host cells are involved in the translocation process and host response. Furthermore, there is experimental evidence that intestinal ischemia/hypoxia, e.g., during major surgery and shock/sepsis, weakens the intestinal barrier. We therefore investigate whether hypoxia promotes translocation of *C. albicans*. Finally, as a member of the intestinal microbiome *C. albicans* not only interacts with the host but also other microorganisms. In the CanBac project we therefore investigate in collaboration with the Department of Microbial Pathogenicity Mechanisms how interactions between *C. albicans* and bacteria influence colonisation and translocation.