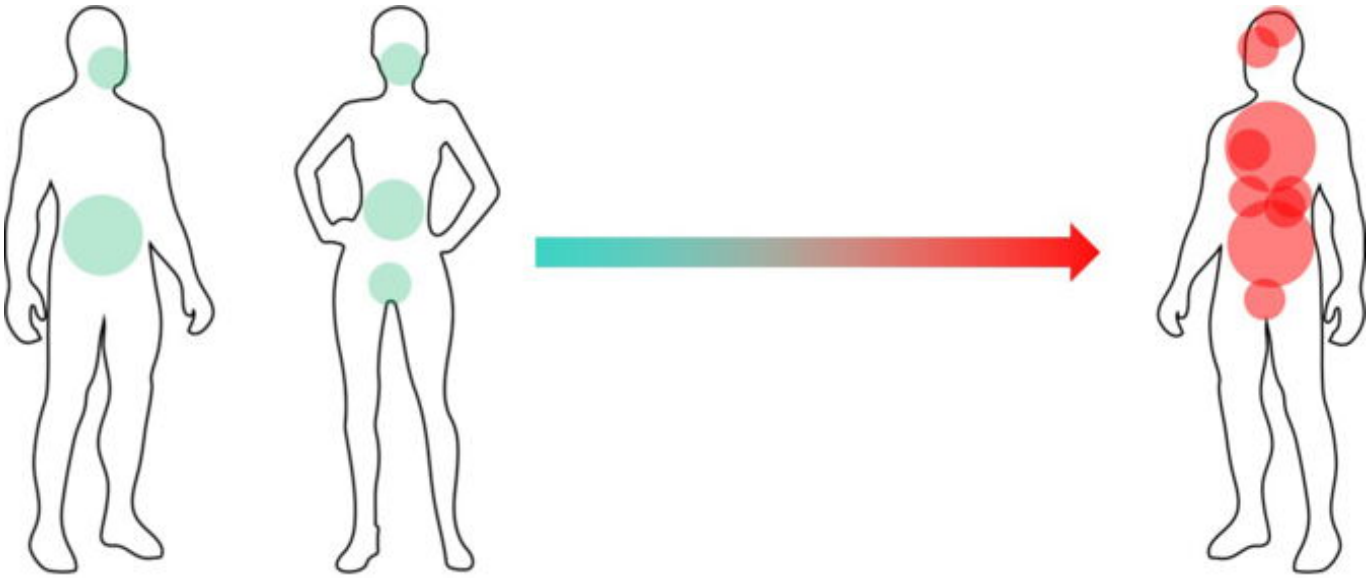
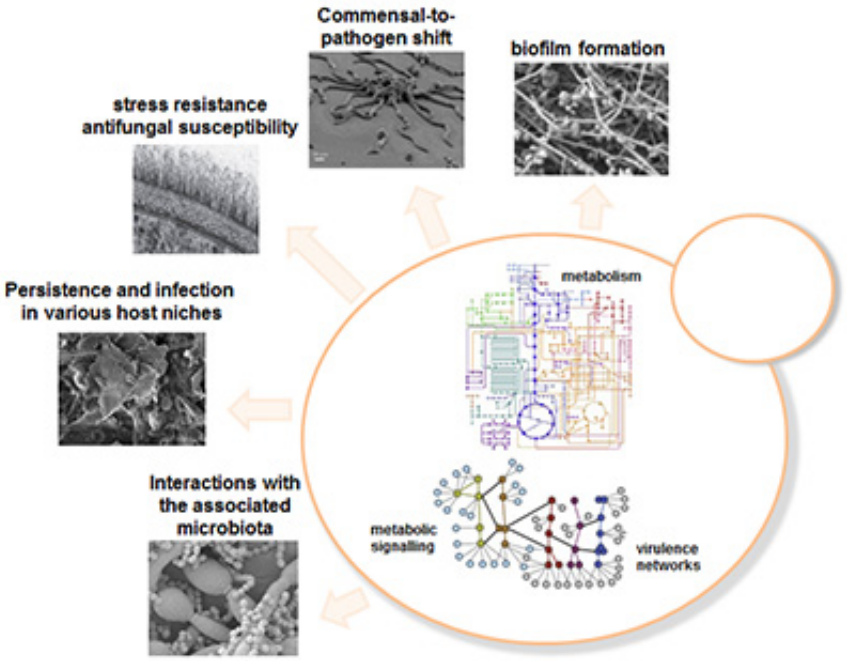
Until 2022



C. albicans is an opportunistic pathogen. The fungus can turn from a harmless colonizer into a pathogen, causing a range of infections: from mild superficial infections of mucosal surfaces and skin to severe disseminated candidiasis.

The fungus *Candida albicans* is a commensal microorganism in humans mainly associated with mucosal surfaces, i.e. the oral cavity, the gastrointestinal and the urogenital tract, and the skin. Under certain circumstances, such as immune suppression or disruptions of the associated microbiota, it can become pathogenic and cause a range of infections: from mild inflammation of the skin or mucosal surfaces to severe invasive infections and sepsis.



In order to survive and proliferate in the human host, this opportunistic fungal pathogen has acquired a remarkable repertoire of adaptation strategies to circumvent the host immune response and to cope with the limited nutrient supply and environmental alterations of pH, oxygen and osmolarity. Importantly, the tight association with humans, both as a commensal and a pathogen, has driven the evolution of mechanisms that permit rapid metabolic adaptations to the changing environments within the host, where the availability of nutrients is often limited. Previous work by our lab and others shows in fact that such metabolic plasticity plays an important role in pathogenicity. Therefore, we investigate the mechanistic links that connect metabolic adaptations and alterations to the commensal-to-pathogen shift, stress resistance, expression of virulence determinants, and drug susceptibility.