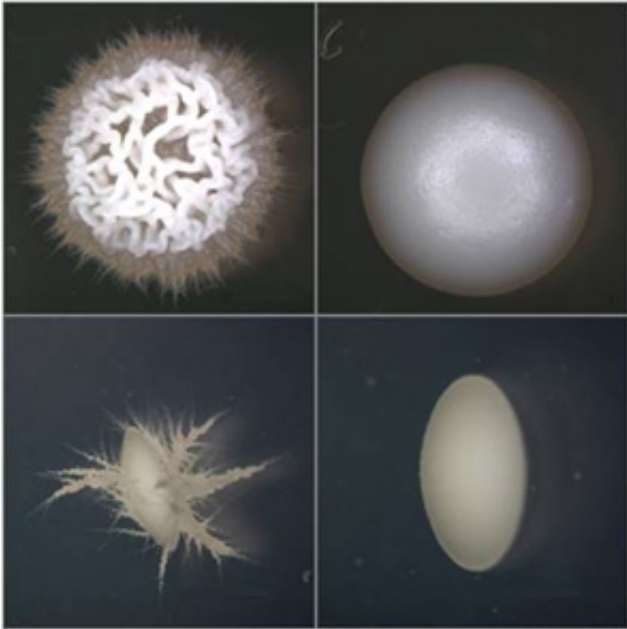


The role of morphology for fungal pathogenesis



C. albicans colonies displaying different degrees of filamentation.

The transition from the spherical yeast to the filamentous hyphal growth form is of major importance for the virulence of the pathogenic fungus *Candida albicans*.

Eed1 is a regulatory factor of filamentation in *C. albicans* and especially important for the maintenance of hyphal development and growth. Though the phenotype of strains lacking EED1 has been described extensively, the molecular function of the Eed1 protein within *Candida albicans* is still unknown. We aim to elucidate the function of Eed1, especially the protein localization, interaction partners and target sequences, to gain new insights into the role of Eed1 protein within the regulatory network of filamentation.

Furthermore, we aim to elucidate the contribution of morphology to the pathogenesis of candidiasis. The main question to answer is the role of filamentation per se to tissue damage, the interaction with host cells and the host response in the different types of *Candida* infection. Therefore, we analyze conditional knock-out or overexpression mutants of different yeast-to-hypha regulatory factors in regard to gene expression, phenotype and virulence characteristics in vitro and in vivo. A detailed description and comparison of the mutant strains among each other and with parental cells will lead to new insights, when and under which circumstances each morphological growth form is of importance during infection.