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Candida tropicalis biofilm is highly influenced by the environmental human pH

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In the last decades, the increase of candidiasis has been accompanied by an intensification of infections caused by *Candida tropicalis*. Indeed, *C. tropicalis* has been described as able to colonize and infect several anatomically distinct sites, including the skin, gastrointestinal, genitourinary and respiratory tracts. Adaptation to diverse pH that exists in each human niche has been shown to be critical for virulence in many commensal pathogens, but there are no reports concerning *C. tropicalis*. Biofilm formation ability is one of the most important virulence factors that have important clinical repercussions due to its increased resistance to antifungal therapy. Thus, the aim of the current study was to characterize the influence of pH on *C. tropicalis* biofilm formation, structure and composition. The effect of pH (3, 4, 7 and 8) on *C. tropicalis* biofilms was evaluated by enumeration of culturable cells, total biomass quantification and matrix composition. Biofilm structure and the morphology of its cells were analysed through scanning electron microscopic and confocal laser microscopy. The results revealed an intensification of *C. tropicalis* capacity to form biofilm at neutral and alkaline conditions, with an increased number of culturable cells and total biomass and in its structural complexity, comparatively to acid conditions. For the first time, we have demonstrated that *C. tropicalis* biofilm formation is highly influenced by the environmental human pH, which has an important clinical impact, which may partly explain the increase incidence of candidiasis.