

Candidalysin is a potent trigger of alarmin and antimicrobial peptide release in epithelial cells.

Ho J, Wickramasinghe DN, Nikou SA, Hube B, Richardson JP, Naglik JR (2020) Candidalysin is a potent trigger of alarmin and antimicrobial peptide release in epithelial cells. *Cells* 9(3), 699.

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Abstract

Host released alarmins and antimicrobial peptides (AMPs) are highly effective as antifungal agents and inducers. Whilst some are expressed constitutively at mucosal tissues, the primary site of many infections, others are elicited in response to pathogens. In the context of *Candida albicans*, the fungal factors inducing the release of these innate immune molecules are poorly defined. Herein, we identify candidalysin as a potent trigger of several key alarmins and AMPs known to possess potent anti-*Candida* functions. We also find extracellular ATP to be an important activator of candidalysin-induced epithelial signalling responses, namely epidermal growth factor receptor (EGFR) and MAPK signalling, which mediate downstream innate immunity during oral epithelial infection. The data provide novel mechanistic insight into the induction of multiple key alarmins and AMPs, important for antifungal defences against *C. albicans*.

Involved units

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