

***Candida albicans* releases soluble factors that potentiate cytokine production by human cells through a protease-activated receptor 1- and 2-independent pathway.**

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Abstract

The innate immune system recognizes pathogen-associated molecular patterns (PAMPs) through pattern recognition receptors (PRR) and transduces downstream signaling to activate the host defense. Here we report that in addition to direct PAMP-PRR interactions, live *Candida albicans* cells can release soluble factors to actively potentiate interleukin-6 (IL-6) and IL-8 production induced in human mononuclear cells by the fungi. Although protease-activated receptor 1 (PAR1) and PAR2 ligation can moderately upregulate Toll-like receptor 4 (TLR4)-mediated IL-8 production, no effect on the *C. albicans*-induced cytokine was apparent. Similarly, the blockade of PAR signaling did not reverse the potentiation of cytokine production induced by soluble factors released by *C. albicans*. In conclusion, *C. albicans* releases soluble factors that potentiate cytokine release in a PAR1/2-independent manner. Thus, human PAR1 and PAR2 have a redundant role in the activation of human cells by *C. albicans*.

Involved units

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