

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

Cheng SC, Chai LY, Joosten LA, Vecchiarelli A, Hube B, Van Der Meer JW, Kullberg BJ, Netea MG (2010) *Candida albicans* releases soluble factors that potentiate cytokine production by human cells through a protease-activated receptor 1- and 2-independent pathway. *Infect Immun* 78(1), 393-399.

[Details](#)



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*.

Beteiligte Forschungseinheiten

[Mikrobielle Pathogenitätsmechanismen](#) [Bernhard Hube](#) [Mehr erfahren](#)

Leibniz-HKI-Autor*innen



Bernhard Hube

[Details](#)

Identifier

doi: 10.1128/IAI.01041-09

PMID: 19858310