

Cheng SC, van de Veerdonk FL, Lenardon M, Stoffels M, Plantinga T, Smeekens S, Rizzetto L, Mukaremera L, Preechasuth K, Cavalieri D, Kanneganti TD, van der Meer JW, Kullberg BJ, Joosten LA, Gow NA, Netea MG. The dectin-1/inflammasome pathway is responsible for the induction of protective T-helper 17 responses that discriminate between yeasts and hyphae of *Candida albicans*. *Journal of Leukocyte Biology* 90: 357-366.

In the mucosa, the immune pathways discriminating between colonizing and invasive *Candida*, thus inducing tolerance or inflammation, are poorly understood. Th17 responses induced by *Candida albicans* hyphae are central for the activation of mucosal antifungal immunity. An essential step for the discrimination between yeasts and hyphae and induction of Th17 responses is the activation of the inflammasome by *C. albicans* hyphae and the subsequent release of active IL-1 β in macrophages. Inflammasome activation in macrophages results from differences in cell-wall architecture between yeasts and hyphae and is partly mediated by the dectin-1/Syk pathway. These results define the dectin-1/inflammasome pathway as the mechanism that enables the host immune system to mount a protective Th17 response and distinguish between colonization and tissue invasion by *C. albicans*.