

Zelante T, Iannitti RG, De Luca A, Arroyo J, Blanco N, Servillo G, Sanglard D, Reichard U, Palmer GE, Latgè JP, Puccetti P and Romani L. (2012). Sensing of mammalian IL-17A regulates fungal adaptation and virulence. *Nat Commun.* 3:683.

Infections by opportunistic fungi have traditionally been viewed as the gross result of a pathogenic automatism, which makes a weakened host more vulnerable to microbial insults. However, fungal sensing of a host's immune environment might render this process more elaborate than previously appreciated. Here we show that interleukin (IL)-17A binds fungal cells, thus tackling both sides of the host–pathogen interaction in experimental settings of host colonization and/or chronic infection. Global transcriptional profiling reveals that IL-17A induces artificial nutrient starvation conditions in *Candida albicans*, resulting in a downregulation of the target of rapamycin signalling pathway and in an increase in autophagic responses and intracellular cAMP. The augmented adhesion and filamentous growth, also observed with *Aspergillus fumigatus*, eventually translates into enhanced biofilm formation and resistance to local antifungal defenses. This might exemplify a mechanism whereby fungi have evolved a means of sensing host immunity to ensure their own persistence in an immunologically dynamic environment.