Dysfunctional chemokine receptor promotes candidiasis

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Candida albicans is one of the leading causes of hospital-acquired infections in immune compromised patients. The risk of both developing candidiasis and the clinical outcome of infection is variable among patients, and the host-dependent factors that contribute to patient susceptibility to *C. albicans* infection are poorly understood.

In this issue of the *Journal of Clinical Investigation*, Michail Lionakis and colleagues at the National Institute of Allergy and Infectious Diseases demonstrated that the chemokine receptor CX_3CR1 is required for the interaction of *C. albicans* and macrophages in the kidney. Mice lacking this receptor were prone to *C. albicans*-induced kidney failure; however, these mice did not have increased fungal burden in other organs. Furthermore, the authors found that patients with a mutation in the gene encoding CX_3CR1 were at higher risk of candidiasis.

This study identifies an important role for the interaction of *C. albicans* and macrophages in disease progression and outcome.

More information: CX3CR1-dependent renal macrophage survival promotes Candida control and host survival, *J Clin Invest*. DOI: 10.1172/JCI71307

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