

Integrity under stress: Host membrane remodelling and damage by fungal pathogens.

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Abstract

Membrane bilayers of eukaryotic cells are an amalgam of lipids and proteins that distinguish organelles and compartmentalise cellular functions. The mammalian cell has evolved mechanisms to sense membrane tension or damage and respond as needed. In the case of the plasma membrane and phagosomal membrane, these bilayers act as a barrier to microorganisms and are a conduit by which the host interacts with pathogens, including fungi such as *Candida*, *Cryptococcus*, *Aspergillus*, or *Histoplasma* species. Due to their size, morphological flexibility, ability to produce long filaments, secrete pathogenicity factors, and their potential to replicate within the phagosome, fungi can assault host membranes in a variety of physical and biochemical ways. In addition, the recent discovery of a fungal pore-forming peptide toxin further highlights the importance of membrane biology in the outcomes between host and fungal cells. In this review, we discuss the apparent

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