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## Plasma Membrane Lipids and Their Role in Fungal Virulence

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### Abstract

There has been considerable evidence in recent years suggesting that plasma membrane lipids are important regulators of fungal pathogenicity. Various glycolipids have been shown to impart virulent properties in several fungal species, while others have been shown to play a role in host defense. In addition to their role as virulence factors, lipids also contribute to other virulence mechanisms such as drug resistance, biofilm formation, and release of extracellular vesicles. In addition, lipids also affect the mechanical properties of the plasma membrane through the formation of packed microdomains composed mainly of sphingolipids and sterols. Changes in the composition of lipid microdomains has been shown to disrupt the localization of virulence factors and affect fungal pathogenicity. This review gathers evidence on the various roles of plasma membrane lipids in fungal virulence and how lipids might contribute to the different processes that occur during infection and treatment. Insight into the role of lipids in fungal virulence can lead to an improved understanding of the process of fungal pathogenesis and the development of new lipid-mediated therapeutic strategies.

**Keywords:** glycolipid, yeast genetics, fungal virulence, lipid raft, membrane microdomains.

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