

Membrane lipids play a role in the interactions between bioactive molecules and plasma membranes

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Abstract

Plasma membranes, found in all living cells, are intricate structures that serve as the initial point of contact between bioactive compounds and cells. Understanding the molecular-level mechanisms through which bioactive molecules engage with cell membranes is crucial for understanding their biological activities. While these interactions often suggest the involvement of membrane proteic receptors, certain bioactive molecules, particularly amphiphilic ones, directly engage with the lipid matrix of membranes.

In this presentation, we will discuss an integrative biophysical approach for gaining insights into biomolecule-membrane lipids interactions at a molecular scale. The chosen approach will be exemplified through a study conducted on a cyclic lipopeptide called surfactin, known for its ability to stimulate the plant defense response.