

Lipids as structural elements in pore formation

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Pore-forming toxins (PFT) bind to cell membranes where they oligomerize and form a transmembrane pore. Reshaping of the protein into a final pore is governed by the interplay between the toxin and the physico-chemical landscape of the membrane. For example, in actinoporins (PFT from sea anemones) the presence of both sphingomyelin and cholesterol exert specific effects on the protein. Protein restructuring and lipid redistribution during the formation of the pore often lead to pores with distinct architectures. Herein we study the interaction of fragaceatoxin C (an actinoporin) with membranes and how these associate to build a pore mainly composed of protein but where lipids also play an important role as structural cofactors.

References

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