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New Frontiers in Pore-Forming Toxins and Related Proteins: Molecular Mechanisms, Functions and Applications

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Deadline for manuscript submissions:
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Message from the Guest Editors

Pore-forming proteins (PFPs) are a large and structurally heterogeneous group of proteins that have the common ability to punch holes in the membrane. Amongst them, pore-forming toxins (PFTs) use this function to attack their host and represent some of the most potent virulence factors found in nature. PFTs share structural and mechanistic similarities with small host defense peptides (or antimicrobial peptides, AMPs) and other large endogenous PFPs that permeabilize membranes as part of host defense mechanisms against microorganisms or as components of regulatory signaling pathways in plants and animals. The general mode of action of these proteins and peptides involves membrane binding and insertion, oligomerization and eventually pore formation. Pore opening is usually lethal for the cell. However, despite these similarities, the sequence of events and detailed mechanisms how oligomeric structures assemble and form pores is highly variable from protein to protein and still obscure in several aspects. Welcome both reviews and research articles.

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Message from the Editor-in-Chief

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