



Novel Aspects of Bacterial AB5-Toxins

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Message from the Guest Editors

Current important members of the bacterial AB5 toxin family are cholera toxin (Ctx) of *Vibrio cholerae*, pertussis toxin (Ptx) of *Bordetella pertussis*, Shiga toxin (Stx), subtilase cytotoxin (SubAB), and heat-labile Enterotoxin (Lt) of pathogenic *Escherichia coli*. AB5 toxins share a similar architecture as hexamers, consisting of an enzymatic A-subunit and five receptor-binding B-subunits that form a pentamer. Whereas the enzymatic A-subunits execute the toxic effects to their eukaryotic target cells, the B-subunit pentamer guide the holotoxin to the target cells by specific receptor-binding and finally deliver the A-subunits into the cytosol where they meet their substrate molecules. Binding, uptake and intracellular transport of AB5 toxins follow similar rules but are toxin-specific, and already well-described in the literature.

This special issue aims at interesting new aspects of AB5 toxins concerning subunit structures, assembly, binding, uptake, function, and distribution. Moreover, original and review articles dealing with attractive novel approaches to specifically inhibit toxin uptake and thereby intoxication of cells are welcome.





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Message from the Editor-in-Chief

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