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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

Toxinology is an incredibly diverse area of study, ranging from field surveys of environmental toxins to the study of toxin action at the molecular level. The editorial board and staff of *Toxins* are dedicated to providing a timely, peer-reviewed outlet for exciting, innovative primary research articles and concise, informative reviews from investigators in the myriad of disciplines contributing to our knowledge on toxins. We are committed to meeting the needs of the toxin research community by offering useful and timely reviews of all manuscripts submitted. Please consider *Toxins* when submitting your work for publication.

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