



toxins



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Application of Protein Toxins as Cell Biological and Pharmacological Tools

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Message from the Guest Editor

Protein toxins from bacteria and plants are a serious threat to human and animal health. However, because of their intimate interactions with host cells, they have also become valuable tools to molecularly dissect cell biological functions that range from endocytosis and intracellular trafficking to cell signaling and apoptosis. Several characteristics such as ease for biochemical handling and the robustness of phenotypes are responsible for their success as cell biological tools. The in-depth understanding of their activities has, in turn, also attracted attention to their use as pharmacological tools to manipulate cellular processes that malfunction in disease situations or that can be targeted for therapeutic intervention. Cancer immunotherapy by immunotoxins or toxin subunit-based vaccines are only some of the many possibilities for using toxins in biomedical research. In this special issue of *Toxins*, primary research papers and review articles are assembled that address the aspects that are summarized above.



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Special Issue



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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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