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Conotoxins II

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Message from the Guest Editors

Each of the 1000 known species of carnivorous marine cone snails produce an abundant, diverse, and mostly unique armada of peptide toxins for defence and prey capture. These disulphide-rich peptides, called conotoxins, have potent and selective activity at various targets of the nervous system, including ion channels and G-protein-coupled receptors. Several conotoxins have entered clinical trials for their analgesic properties, and one conotoxin (MVIIA (ziconotide)), is used in the clinic to treat intractable chronic pain. Only ca. 200 conotoxins have been functionally characterised out of the ca. 3000 conotoxins that have hitherto been discovered, noting that the total pool of wild-type distinct conotoxins is probably close to 100,000. In recent years, progress in high-resolution electron microscopy techniques has enabled the characterisation of the three-dimensional complexes between conotoxins and their molecular targets, supporting the design of conotoxin variants with improved pharmaceutical properties. Conotoxins are a bustling research field, and this Special Issue of *Marine Drugs* aims to collect articles and focused reviews on the activity and design of conotoxins.



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Special Issue



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Message from the Editor-in-Chief

During the past few decades there has been an ever increasing number of novel compounds discovered in the marine environment. This is exemplified by the robust preclinical and clinical pipeline that currently exists for marine natural products. *Marine Drugs* is inviting contributions on new advances in marine biotechnology, pharmacology, chemical ecology, synthetic biology, and genomics approaches related to the discovery of therapeutically relevant marine natural products. Our goal is to share your contribution in a timely fashion and in a manner that will be valued by the scientific community.

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