Special Issue

Botulinum Toxin: From Poison to Possible Treatment for Spasticity and Movement Disorder

Message from the Guest Editors

Botulinum Toxin (BoNT), produced by the bacterium clostridium botulinum, is a powerful inhibitor of pee-synaptic transmission of acetylcholine at the neuromuscular junctions (NMJ). Poisoning with BoNT can lead to a rare but serious systemic problem, i.e., botulism. Symptoms of botulism are weakness of muscles that control the limbs, trunk, throat, mouth, and eyes. Botulinum can weaken the muscles involved in breathing, leading to difficulty breathing, and even death. However, when a small dose of BoNT is precisely injected into a muscle, a locally confined and long-lasting neuromuscular block develops, leading to targeted muscle paralysis. As such, poisonous BoNT can be turned into therapeutic purposes. BoNT has a broad spectrum of clinical applications, including, but not limited to, management of limb spasticity, cervical dystonia, strabismus, bladder overactivity, chronic pelvic pain. This Issue is focused on but not limited to novel and advanced NMJ-target injection technique development and application; advanced understanding of BoNT effects on the nervous system and neuromuscular system; and exploration of new therapeutic and nontherapeutic applications of BoNT.

Guest Editors

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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.

Editor-in-Chief

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