

# Special Issue

## Botulinum Toxins in Migraine: From Novel Toxins, Mechanisms and Biomarkers to AI-Enhanced Innovations

### Message from the Guest Editors

This Special Issue, "Botulinum Toxins in Migraine: From Novel Toxins, Mechanisms and Biomarkers to AI-Enhanced Innovations", aims to advance the current understanding of botulinum toxin as a therapeutic tool across the migraine spectrum. Although onabotulinumtoxinA remains the only approved toxin for chronic migraine, recent research has expanded our knowledge on alternative serotypes, engineered molecules, and next-generation formulations with distinct pharmacological profiles. However, key mechanistic questions remain unresolved, including the relative contributions of peripheral sensory modulation, neuroimmune interactions, and central network plasticity. In parallel, the clinical application of botulinum toxin is evolving toward precision medicine, yet major gaps persist with regard to patient stratification, biomarkers of response, long-term effectiveness, and integration with emerging preventive therapies (including anti-CGRP drugs).

### Guest Editors

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# Toxins

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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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### Editor-in-Chief

Prof. Dr. Jay Fox

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