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Prions and Prion-Like Mechanisms in Disease and Biological Function

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Message from the Guest Editors

Research into prions has vastly expanded our knowledge and understanding of an infectious pathogen. Prions are replication-competent assemblies of a host-encoded protein. Recent data suggest that prion transmission can be dissociated from toxicity, raising the question of why some prion and prion-like amyloid aggregates are toxic while others are not, and how self-replication, infectivity, and toxicity are linked at the structural and mechanistic level. These key questions of fundamental importance will be highlighted in this Special Issue. They are by their nature multidisciplinary, and we thus strongly welcome approaches that merge structural, cellular, and molecular biology, biochemistry, biophysics, imaging and computational techniques on topics including, but not limited to the following:

Structural properties of prions and amyloid

Prion-like mechanisms in neurodegenerative disease, in systemic diseases, and in biological functions

Structure–toxicity and structure–infectivity relationships

Structural and dynamic basis of prion strains

Functional role of disease-associated mutations

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Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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