Special Issue

Actin and Its Associates: Biophysical Aspects in Functional Roles

Message from the Guest Editors

Actin, is vital to a multitude of cell functions relying on force generation and transduction. Within the cohesive structure of the actin cytoskeleton, helical polymers assembled from actin monomers self-organize into higher-order networks with diverse structural, dynamic, and mechanical properties fine-tuned by an inventory of actin-binding proteins. These distinct assemblies serve specialized roles in cell response and behavior. Significant advances have been made to unravel how the functional polymorphism of the actin cytoskeleton emerges from actin's intrinsic physicochemical features. However, challenges remain in the understanding of the mechanisms coupling the molecular pattern of actin networks with their biomechanical and functional behavior. In this Special Issue, original research publications are invited that cover the recent advances related to the biophysical principles governing the architecture, dynamics, and function of actin polymers and networks. The Special Issue is also for review articles summarizing the existing knowledge on the mechanical aspects and regulation of actin homeostasis in health and disease.

Guest Editors

Prof. Dr. Hans Georg Mannherz
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Deadline for manuscript submissions

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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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