

Special Issue

Myosin: Structure, Function and Evolution

Message from the Guest Editors

In eukaryotic cells, proteins, nucleic acids, and cytoplasmic organelles are transported by molecular motors on microtubules or actin filament tracks. Kinesin and dynein motors drive microtubule-based transport, whereas myosin motors are responsible for movement along actin filaments. Myosins can be divided broadly into the “conventional” or Type II class, members, which form bipolar filaments via tail-tail interactions, and the more than thirty “unconventional” classes, which do not form filaments but can interact with cargo via their tail domains. In this Special Issue entitled “Myosin: Structure, Function and Evolution”, we are seeking original research or review articles that focus on the roles and regulatory mechanisms of all myosin classes in intracellular membrane trafficking. Topics may include, for example, myosin-dependent translocation of secretory and endocytic organelles, mRNAs, lipid rafts, and biomolecular condensates, as well as the implications of dysfunctional myosin activity in pathogenesis. Articles highlighting structural and enzymatic features of myosins and myosin adaptors are also welcome.

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