Message from the Guest Editors

Membrane remodeling proteins are involved in numerous cellular processes including cell division and intra- and extracellular communication via vesicle carriers. In such processes, regulated bending, fission, and fusion of biological membranes in different topologies and at different rates is essential. The basic principles by which membrane remodeling proteins execute their function are still not fully resolved. Recent technological advances in high-resolution microscopy techniques combined with in vitro reconstitution of protein-mediated membrane remodeling and computational modeling greatly promote our mechanical understanding of how these unique, evolutionary conserved protein machines carry out their function. This Special Issue aims to present recent work in the field of protein-mediated membrane remodeling with a focus on mechanistic properties, evolutionary functional conservation, and cell division.