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Recent Advances in Supramolecular Motility Machinery of Microorganisms

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Message from the Guest Editors

Microorganisms use their own motility machinery to move in a variety of environments, and their locomotion is regulated by complex sensory signal transduction pathways that allow microorganisms to migrate towards more favorable environments and away from less favorable environments for survival. The motility apparatus is a supramolecular protein complex containing motor proteins that convert electrochemical or chemical energy to mechanical works for locomotion. Furthermore, the motor proteins can autonomously adjust their mechanical functions in response to changes in the environment.

Because locomotion is one of the most fascinating aspects of live organisms, supramolecular motility machines continue to fascinate many researchers. This Special Issue on Biomolecules is dedicated to covering recent understanding and perspectives of supramolecular motility machinery derived from bacteria, archaea, and other microorganisms. Our aim is to compile articles describing recent advances in the structure, assembly, and function of various motor protein complexes including bacterial flagella, type IV pili, archaella, and adhesion-based gliding machinery.













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