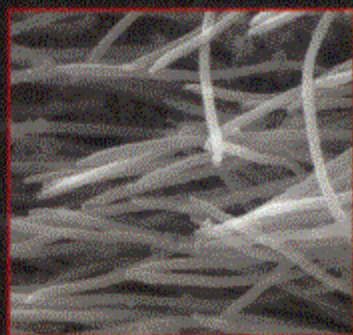


CILIA: STRUCTURE AND MOTILITY



Edited by

Stephen King

Department of Molecular, Microbial and Structural Biology, University of Connecticut Health Center, Farmington, CT, USA

Gregory Pazour

Program in Molecular Medicine, University of Massachusetts Medical School, Worcester, MA, USA

Cilia are highly conserved organelles that serve motile and/or sensory functions. These organelles power cell movement, generate fluid flow in various organs, act as sensors of the extracellular environment and have been modified for various specialized tasks such as light reception and smell. Defects in these ubiquitous organelles lead to a broad array of human genetic disorders that range from polycystic kidney disease, retinal degeneration, epilepsy and infertility to developmental defects such as situs inversus and polydactyly. This volume is the first in a three-part series on cilia that focuses on methods to investigate the high resolution structure and motile behavior of this organelle.

KEY FEATURES

- Electron microscopic approaches to ciliary structure
- Light microscopy of ciliary components
- Biochemical analysis of ciliary substructures
- High resolution approaches to analysis of ciliary motility

Cover image: Scanning electron micrograph of the motile cilia that line the entire ventral surface of the planarian flatworm *Schmidtea mediterranea*. Each cilium is ~10 μm in length and beat at ~20 Hz. These motile organelles generate the propulsive force required for gliding motility across surfaces. This micrograph was prepared by Panteleimon Rempolas (University of Connecticut Health Center) and John Follit (University of Massachusetts Medical School).

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