
Regular Wednesday IMG seminar



Joe Howard

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“How molecular motors drive the motility of cilia and flagella”

Cilia and flagella are thin, rod-like organelles whose snake-like beating patterns drive cells through fluids and move fluids across cellular surfaces. They play essential roles in locomotion, sensory reception, and signaling. The core structure within the cilium, known as the axoneme, consists of nine pairs of doublet microtubules, a central pair of single microtubules, and a myriad of other proteins, including the axonemal dynein motor proteins, which generate the shear forces that slide adjacent doublets. A key question is how dynein activity is coordinated to produce the characteristic sinusoidal beating patterns. We are addressing this question through reconstitution and modeling, leveraging the genetics of the unicellular alga *Chlamydomonas reinhardtii*.

The seminar will be held

on Wednesday 29 April 2026 at 15:00

in the Milan Hašek Auditorium at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)
