

Regular Wednesday IMG seminar



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“Understanding the mechanochemical transitions that underlie early embryo development”

During embryogenesis a single fertilized oocyte develops into an adult organism via tightly controlled patterns of cell division, cell polarization and cell movements. These mechanical processes depend on the actomyosin cortex, a thin 2D layer that resides underneath the plasma membrane. Importantly, for normal development the actomyosin cortex in rapidly dividing embryonic cells needs to transition between contractile and non-contractile phases. Surprisingly little is known about how these mechanical transitions are regulated in a developing embryo. To understand mechanical transitions during embryogenesis, I use *C. elegans* early embryos as a model, and perform quantitative live imaging of the actomyosin cortex as it transitions between contractile and non-contractile phases. In the IMG seminar I will present my recent results in which we demonstrate how two major signaling cascades, Cdc42 and RhoA, affect distinct mechanical phases and the transitions between them.

The seminar will be held

on Wednesday 5th June 2024 at 15:00

in the Milan Hašek Auditorium at IMG

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