



Solvay Colloquium

“PHYSIOLOGICAL RELEVANCE OF MOLECULAR MOTORS”

Professor Jacques Prost

ESPCI and Curie Institute (Paris)

Abstract

“Much of the cell mechanics, morphology and motility is determined by the dynamical properties of an actin network moving under the action of molecular motors and by a continuous process of polymerization/depolymerization called treadmilling. The actin network constitutes a physical gel the cross-links of which are both temporary and mobile. It is more complex than a physical gel in that it has a macroscopic polarity due to the microscopic polarity of actin filaments and in that the cross-links are dynamically redistributed by molecular motors. This requires an energy input, which implies that this system is intrinsically out of equilibrium. I will show how one can write down a set of phenomenological equations, which can describe this situation. I will illustrate the usefulness of this approach by considering lamellipodium motion and cell oscillatory instabilities, mitosis and synapse formation.”

Tuesday 27 November 2007 at 16h00

COFFEE AND TEA WILL BE SERVED AT 15H45 IN FRONT OF THE SOLVAY ROOM

« SALLE SOLVAY » - SOLVAY ROOM

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CAMPUS PLAINE

BOULEVARD DU TRIOMPHE – ACCESS 2

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