

BioISI Research Seminar

Interactions of the Actin cytoskeleton with plant cell membranes



Patrick Hussey, PhD

Department of Biosciences
Durham University

Host: Rui Malhó (PFG-BioISI)

When: Wednesday January 24 - 12h00

Where: Building C2, Room 2.4.16

Plants do not have the wide variety of adaptor proteins to produce the specialized sites of interaction between actin and membranes that are present in animal cells. However, actin-membrane interactions within plant cells are critical for the positioning of subcellular compartments, for coordinating intercellular communication, and for membrane deformation. Novel factors are therefore likely to provide interfaces at actin-membrane contacts in plants, for example, the plant-specific Networked (NET) superfamily of actin-binding proteins. The coordinated action of other actin binding/regulating proteins may also be involved in the cytoskeleton's interaction with membranes, for example, the actin nucleating complex Arp2/3 and its regulatory network involving the SCAR/WAVE complex. Here, recent developments on the molecular mechanism of the actin cytoskeleton - membrane interaction will be discussed.