A 3-year post-doctoral position in plant molecular and cellular biology (Strasbourg, France)

A post-doctoral position is available, starting October 2018, funded by the International Human Frontiers Program to ME Chabouté (IBMP, CNRS).

Key words: confocal microscopy - live cell imaging (chromatin, cytoskeleton) - live FISH - dynamics of gene transcription

Research project: Using a systems biology approach in the context of an interdisciplinary network, we will investigate how mechanical cues affect cellular shaping and are sensed at the nuclear envelope to drive chromatin remodelling in Arabidopsis. The aim of the international team is to combine micro-mechanical measurements, real-time fluorescence microscopy, biochemical analyses and numerical simulations to give rise to the first integrated model of root hair growth under the combined effect of genetics and constraints generated during growth. At IBMP, we will develop live cell imaging tools linked to cytoskeleton, nuclear envelope and chromatin (heterochromatin, specific loci, gene transcription). We will focus on the dynamics of these markers on root hair development using multi-tracking confocal analyses. Molecular approaches will be conducted in parallel focusing on gene expression and epigenetic landscape based on the characterization of various mutants impaired in the mechanical stress response.

Profile: The candidate should be able to work independently and co-operatively within the HFSP team members [A. Asnacios, physics (Paris) and H. Jönsson, modelling (Cambridge), K. Tamura, proteomics and genetics (Japan)]. An expertise in plant molecular biology, molecular genetics, cell biology and microscopy is strongly requested. The candidate must have published at least as a first author in a top ranking scientific journal. Applicants should have received a PhD within the past 2 years. The salary will follow the CNRS grid.

Documents: Candidates are invited to send a single PDF containing their research experience, a CV, a list of publications and a motivation letter as well as names, email addresses of 3 referees to ME Chabouté (marie-edith.chabouté@ibmp-cnrs.unistra.fr). Review of applications will be until the 1st of September.

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