

## **Post-doc- Institute of Integrative Cell Biology (I2BC)- CNRS – Gif sur Yvette – France**

Post-doctoral position for two years on the characterization of ion transporters in Arabidopsis.

**Closing date of application: 1<sup>st</sup> of April 2017**

In a collaborative project with the University of Heidelberg, a two year post-doctoral position funded by an ANR-DFG grant is available under the supervision of Sophie Filleur in Sebastien Thomine's group working on anion transporters in plants (<http://www.i2bc.paris-saclay.fr/spip.php?article673>).

The team is part of the department of cell biology at the Institute of Integrative Cell Biology (I2BC) at the CNRS center in Gif sur Yvette, 30 km south of Paris center, France. The institute hosts 80 teams of scientists and 15 technological facilities including plant growth and cell biology facilities (<http://www.i2bc.paris-saclay.fr/?lang=en>).

### **Project description:**

Vacuoles and Trans Golgi/Early Endosome (TGN/EE) are two cellular compartments essential for nutrient absorption and storage, and detoxification of the cytosol during abiotic stress conditions (drought, nutrient and salt stress). The multiple roles of vacuoles and TGN/EE are tightly linked to the activities of transporters present on their membranes. It is assumed that transporters use the energy of the electrochemical gradient generated by proton pumps such as the V-ATPase. In Arabidopsis, the V-ATPases are present on both vacuole and TGN/EE membranes with specific functions in each compartment. This discrepancy is probably linked to the activity of secondary ion transporters such as CLC proteins. The project aims to understand the molecular basis of the functional specification of the interaction between V-ATPase and CLC during different environmental fluctuations (nitrate concentrations, drought, nutrient and NaCl stress). For it, the successful candidate will be in charge of the analysis of the uncharacterized CLCs using different tools such as the patch-clamp technique, confocal microscopy and molecular physiology.

### **Qualifications requirement:**

We are seeking a candidate with experience in electrophysiology (in patch-clamping preferentially) and/or in Plant Molecular Biology in the field of plant transporters, plant nutrition or response of plant to abiotic stress. The candidate should have obtained his/her PhD less than 2 years ago.

CV with a list of publications, motivation letters and the name of two referees should be sent to Sophie Filleur ([sophie.filleur@i2bc.paris-saclay.fr](mailto:sophie.filleur@i2bc.paris-saclay.fr)) and Alexis de Angeli ([alexis.de-angeli@i2bc.paris-saclay.fr](mailto:alexis.de-angeli@i2bc.paris-saclay.fr)).