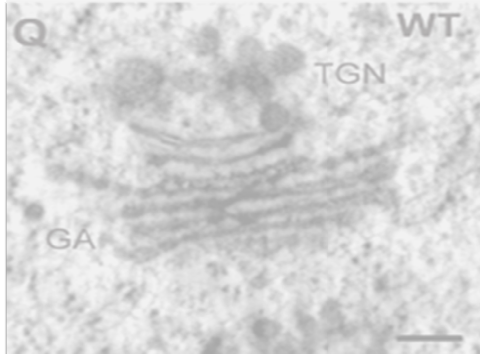


Funded PhD position offer – CNRS Bordeaux (France) – Yohann BOUTTE

Deadline 27th of May



Lipid homeostasis at the **Golgi complex**: molecular mechanisms and involvement in plant morphogenesis.

A funded PhD position is available in my team for a period of 3 years. The successful candidate will work on the following subject.

During evolution, eucaryotic cells acquired the ability to compartmentalize their intracellular content in a complex manner. Multicellular organization largely depends on this compartmentalization and molecular regulations occurring at organelles are means to modulate morphogenesis, particularly in plants for which growth patterns and axes are constantly remodeled in response to stimuli from environment. **In eucaryotic cells, the membrane network located at the *trans* side of the Golgi apparatus, called *trans*-Golgi Network (TGN), is a major sorting station for proteins en route towards polar domains of the plasma membrane.** In animal cells and yeast, auto-segregation of sphingolipids and sterols at TGN induce membrane segregation of these lipids into domains distinct from the rest of the membrane. These domains influence membrane curvature which, when close to the demixing point (phase separation), further induces lipid-sorting and recruitment of proteins involved in vesicle formation and protein sorting through **yet unknown molecular mechanisms**. In the lab, we shown that plant TGN is enriched in sphingolipids and sterols. Goals of the PhD thesis project would be to: a) identify molecular actors which function at TGN depends on sphingolipids/sterols (candidate proteins approach and quantitative proteomics screen), b) characterize by reverse genetics the function of identified proteins in modification of growth patterns after a stimulus from the environment, and c) correlate this modification of growth patterns to lipid homeostasis at TGN and to membrane morphodynamics at TGN.

Prerequisite: Training in Plant Biology / Plant Biochemistry, master diploma or equivalent

How to apply: contact yohann.boutte@u-bordeaux.fr first with a CV, motivation letter and a letter of reference from your supervisor. The PhD position is funded by the French government and handled by the doctorate school in Bordeaux. Hence, PhD candidates will have to register their candidature to the doctorate school (this includes official copy of ranking and grades during the master and a copy of the master report). Moreover, candidates will have to pass a competitive oral exam of 25 min in front of the doctorate school jury.

For complete information on the procedure please go to: <http://www.edsvs.u-bordeaux2.fr/version2/thesesadmissions-eng.php>