A three year post-doctoral position is available at the *Laboratory of Plant-Microbe Interactions* in Toulouse (France) (http://www2.toulouse.inra.fr/centre/lipm). This position is funded by the Agence National de la Recherche (ANR) and is available from October 2011.

Type III effector proteins from bacterial pathogens are injected into host cells where they can manipulate components of host immunity to suppress defence responses and promote pathogen development. In plants, host proteins targeted by some effectors called avirulence proteins are surveyed by plant disease resistance proteins referred to as "guards". The *Ralstonia solanacearum* effector protein PopP2 triggers immunity in Arabidopsis following its perception by the RRS1-R resistance protein. PopP2 is a YopJ-like effector that has been recently described as displaying an autoacetyl-transferase activity (Tasset et al., 2010). Our data strongly suggest that functionality of RRS1-R, leading to the activation of the resistance response, requires not only its interaction with PopP2 but also the perception of its enzymatic function. The first goal of this project is to identify Arabidopsis proteins targeted by PopP2 acetyltransferase activity and whose manipulation might be guarded by RRS1-R. The functional characterization of these PopP2 substrates that may participate in the elaboration of an active RRS1-R/PopP2 complex represents the second goal of this research project. Identification and characterization of host proteins targeted by PopP2 activity will contribute to the understanding of the molecular role(s) played by protein acetylation during plant innate immunity.

A multidisciplinary approach, using a combination of proteomic, biochemical, genetic, molecular, cell biology and plant pathology methodologies will be developed. Eligible candidates should have a PhD with a solid basis in molecular biology and plant physiology (or plant pathology). The recruited post-doc will design and execute experiments leading to the proteomic analysis of acetylated PopP2 targets in collaboration with the EDyp Proteomics Facility (Grenoble, France). Therefore, applicants with sound experience in protein biochemistry, as well as with the model plant *Arabidopsis thaliana*, will be preferred. The selected candidate is expected to be able to work autonomously in the project.

Interested applicants should contact Laurent Deslandes (Laurent.Deslandes@toulouse.inra.fr) for more information on the project and send a CV, brief summary of research experience, and names and e-mail addresses of (2 or 3) persons from whom confidential references may be sought.