Post-doctoral position available:

Molecular physiology and quantitative genetics
of maize root hydraulics

CNRS/INRA, Montpellier, France

A position is open to work in the frame of an ERC advanced project named “HyArchi: Targeting Root Hydraulic Architecture to Improve Crops under Drought”. Research will be carried out in the group of Dr Christophe Maurel in the Biochemistry and Plant Molecular Physiology department (INRA/CNRS/SupAgro, Montpellier, France). This institute and the host group have world-wide recognized records in transport and stress physiology (http://www1.montpellier.inra.fr/ibip/bpmp/) (Shahzad Z. et al., 2016, Cell 167:87; Rodrigues et al., 2017, PNAS 114: 9200, Tang et al., 2018, Nat. Commun. 9: 3884).

The HyArchi project will focus on maize roots under water stress with the ultimate goal of optimizing water uptake. It will explore novel aspects of their plasticity and provide a multidimensional understanding of their water transport function, by considering the integration of hydraulic, growth and signaling processes within root architecture. The aim of the post-doctoral researcher will be to identify novel genetic components that determine root hydraulic architecture in plants under water deficit. The unique capacities of the host laboratory to perform root hydraulic phenotyping will be used to conduct genome wide association studies. Genome editing using CRISPR-Cas9 will be used to knock down genes of interest. Finally, soil-grown plants with newly identified or engineered genotypes will be evaluated for their response to drought using high resolution phenotyping facilities that are present on-site.

The position is open for up to 4 years to citizens from all nationalities. Gross salary is between € 2,500 and € 3,500 gross monthly according to experience. We are seeking a highly motivated and independent scientist with a strong background in plant genetics and molecular biology techniques. Previous experience in high-throughput phenotyping will be appreciated.

Applications including a CV, a description of previous research experience and names and addresses of three possible referees should be submitted preferentially before January 15, 2019, through the CNRS web portal at: https://emploi.cnrs.fr/Offres/CDD/UMR5004-CECABA-004/Default.aspx?lang=EN

The position will remain open until it is filled. Please contact Dr. Christophe Maurel (christophe.maurel@cnrs.fr) for specific enquiries.