



**Post-doctoral position available:**

## **Intracellular dynamics and functions of HIR proteins from plasma membrane nanodomains in *Arabidopsis***

**CNRS/INRA, Montpellier, France**

A position is open to work on the function of membrane nanodomains in plants, in the frame of an ANR project named NUTRIR. This work will be carried out in the AQUA team, within the Biochemistry and Plant Molecular Physiology (BPMP) laboratory in Montpellier, France, under the supervision of Dr Enric Zelazny. The laboratory and the host team have worldwide recognition in the field of membrane protein dynamics and transport physiology in plants (<https://www1.montpellier.inra.fr/wp-inra/bpmp/>) (Martinière and Zelazny 2021, Plant Physiol doi.org/10.1093/plphys/kiab312; Martin-Barranco et al. 2020, Plant Physiol doi: 10.1104/pp.20.00234; Dubeaux et al. 2018, Mol Cell 69: 953; Martinière A. et al. 2019, Plant Physiol 179: 1581; Prado et al., 2019, Plant Cell, 31: 417).

The aim of our research project is to better understand the role of "Hypersensitive Induced Reaction proteins" (HIR), specific to plants and located in membrane nanodomains in *Arabidopsis thaliana*. Although the role of HIR proteins remains largely unknown, recent data suggest their involvement in various biological processes. The candidate will study the intracellular dynamics of HIR proteins using advanced microscopy techniques and will shed light on new biological functions regulated by these proteins by combining various molecular physiology approaches. First, she/he will determine how HIR proteins, that do not contain transmembrane domains, are addressed and maintained in plasma membrane nanodomains. The role of post-translational modifications and of certain domains of HIR proteins will be analyzed. To discover new biological functions regulated by the HIR2 protein (nutrition, signaling, etc.), an HIR2 interactome is currently generated. Second, the candidate will carry out the molecular and phenotypic characterizations necessary to understand the importance of some of these protein-protein interactions.

The position is open for 1 year to citizens from all nationalities. Gross salary is between 2 487€ and 2 667€ monthly according to experience. Candidates must hold a doctorate and proven research skills evidenced by high quality publications. We are seeking a highly motivated and independent scientist with experience in: confocal microscopy, spinning-disk, even TIRF microscopy ; plant physiology ; protein biochemistry. The candidate should ideally have knowledge in the field of intracellular dynamics of membrane proteins.

Applications including a CV, a description of previous research experience and names and addresses of three possible referees should be submitted before January 24<sup>th</sup> 2022, through the CNRS web portal at:

<https://emploi.cnrs.fr/Offres/CDD/UMR5004-CECABA-033/Default.aspx?lang=EN>