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Post-Doctoral position in phosphate homeostasis and calcification at IRIM, Montpellier, France

A post-doctoral position funded by the French National Agency of research (ANR) is open for a talented and highly motivated post-doc fellow to study cellular phosphate homeostasis and its misregulation leading to vascular calcification. Phosphate is an important mineral for the synthesis of membranes and nucleic acids, for energy production and signal transduction, and its concentration is tightly regulated by phosphate transporters. Little is known about how human and other metazoan cells sense phosphate to regulate phosphate homeostasis and metabolism. We are particularly interested in XPR1, a retroviral receptor that we found to mediate phosphate efflux and to be associated with a rare disease called primary familial brain calcification (PFBC). The objective of the post-doctoral project is to understand how XPR1 is integrated in this regulated sensing process and why mutations in the *XPR1* gene can lead to phosphate-associated disorders like calcification. The successful applicant will use a broad range of techniques, in particular genome modifications and genetic screens, solute transport assays, as well as calcification assays in *in vitro* and *in vivo* models.

1- Giovannini D., Touhami J., Charnet P., Sitbon M.*, **Battini JL.*** 2013. Inorganic phosphate export by the retrovirus receptor XPR1 in metazoans. 2013. *Cell Reports* 3: 1866-73.

2- Legati A., Giovannini D., ..., Geschwind DH., **Battini JL.***, Coppola G*. 2015. Mutations in *XPR1* cause primary familial brain calcification associated with altered phosphate export. *Nature Genetics* 47: 579–581.

Context: The candidate will be part of the CALCIPHOS ANR project, organized as an interdisciplinary research program between the Labs of Jean-Luc Battini/Laurence Briant (IRIM, CNRS UMR9004, Montpellier), Marc Sitbon (IGMM, CNRS UMR5535, Montpellier) and Gaël Nicolas/Dominique Champion (INSERM U1245, Rouen). She/he will benefit from a highly dynamic and collaborative environment at the « route de Mende » CNRS campus of Montpellier and from state-of-the-art technological platforms.

Profil: Candidates are expected to be autonomous, enthusiastic, and able to work in a collaborative team. Experience in cell and molecular biology, biochemistry and imaging is required as well as good communication skills in english. An expertise in animal studies and histology as well as a background in calcification/mineralization would be appreciated. The position is funded for 2 years and salary will be based on experience.

Applicants must hold a PhD degree in biology and should send a letter of scientific achievements and of their interest in this project, a CV with list of publications, and contact informations of 2 referees to jean-luc.battini@irim.cnrs.fr

Deadline: December 2017

Starting: January /February 2018