

Postdoctoral Fellowship in Developmental Biology

Transcriptomic approaches to identify novel genes and miRNAs expressed downstream of Nodal and BMP signaling in the sea urchin embryo

A two-year postdoctoral position supported by the French Foundation for Medical Research (FRM) is available starting September 1st 2018 to work in the group Gene regulatory networks, axis specification and morphogenesis of the sea urchin embryo at the Institute of Biology Valrose.

The area of research will concern the dissection of the Gene regulatory network regulating dorsal-ventral patterning of the sea urchin embryo (see Lapraz F, Haillot E, and Lepage, T – 2015 - A deuterostome origin of the Spemann organiser suggested by Nodal and ADMPs functions in Echinoderms; [Nature communications](#) and Haillot E, Molina MD, Lapraz F, and Lepage, T (2015) The Maternal Maverick/GDF15-like TGF- β Ligand Panda Directs Dorsal-Ventral Axis Formation by Restricting Nodal Expression in the Sea Urchin Embryo. - 2015 - [PLoS Biology](#)).

Our laboratory has recently performed, for the first time in the sea urchin, large-scale transcriptomic screens to identify novel genes and small RNAs expressed downstream of Nodal signalling and downstream of BMP2/4 signalling. In addition, we have recently obtained high-quality developmental transcriptomes and a high-quality genome assembly for the Mediterranean sea urchin *Paracentrotus lividus*. The postdoctoral project will aim at integrating the results of these transcriptomic screens in the analysis of the dorsal ventral gene regulatory network. In particular, the project will aim at characterizing the function and expression of the novel genes and of the miRNAs identified in these screens.

Candidates should have obtained recently a PhD degree. Both national and international candidates are encouraged to apply. Interested candidates should send a Curriculum Vitae, a summary of research interests and goals and contact information for two or three referees to:

Dr Thierry Lepage ✉: tlepage@unice.fr
[Research team webpage](#)

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