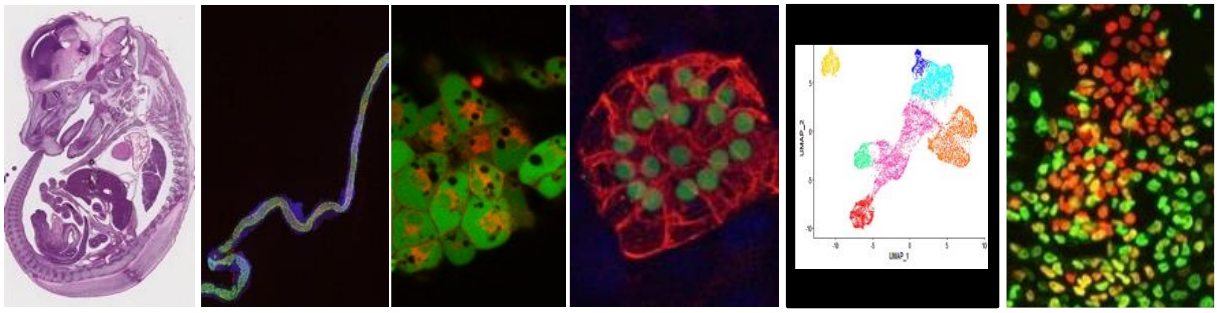
Call for Postdoc position in Nantes, FRANCE



A postdoctoral position (24 months) is available at INSERM UMR 1229-RMeS "Regenerative Medicine and Skeleton" lab, Nantes university, in France, f**rom November 2023**.

Closing Date: 15 January 2024

The project: **Molecular and functional aspects of developmental disorders related to the signaling role of the notochord**

Funded by the French Research Agency (ANR), the collaborative research project DISPHPE focuses on the notochord, a signalling structure, that plays a key role in the dorso-ventral regionalisation of the central nervous system and in the development of the spine. The secretion of the protein Sonic Hedgehog (SHH) by the notochord is essential for the coordination of cell fates of surrounding embryonic tissues and in particular of the ventral midline structures in the head. Genetics is the main component of forebrain midline defects, with alterations leading to a decrease in the SHH pathway. The inaccessibility of the affected tissues, i.e., neuroectoderm and notochord, is a major obstacle to in-depth knowledge of pathophysiological mechanisms and improved molecular diagnosis in humans. Our work aims to recapitulate the developmental characteristics and function of tissues in order to model diseases related to a defect arising early during embryogenesis. To succeed tissues affected in brain midline defects, will be modelled using human induced pluripotent stem cells (hiPSCs) differentiated *in vitro*. HH signaling pathway alterations will be recapitulated by modulating SHH activity *in vitro* by exogenous treatment and by using genome editing technology. The overall experimental design (pluripotent stem cell differentiation in 2D and 3D culture, quantitative expression analysis, high-throughput transcriptomic analysis, single cell technology, immunofluorescence, confocal imaging) will reveal key molecular and functional aspects of developmental disorders related to the signaling role of the notochord.

We are looking for a highly motivated applicants with **solid background and experimental skills in stem cell biology and /or developmental biology**. to join the « Stem Cells and Axial Skeleton Development » group, https://rmes.univ-nantes.fr/research-teams/rejoint at the UMR 1229-RMeS lab, in Nantes. Postdoctoral candidates must have a Ph.D. degree and at least one first-author publication in a relevant field. Good written and oral communication skills are essential, along with excellent teamwork skills.

To apply: Interested candidates are invited to submit a single PDF with a brief statement of research interests, past scientific experiences and achievements, what you would bring to the position, a CV with skills and complete list of publications, and contact details for at least two references to Anne.Camus[at]univ-nantes.fr
Please contact us for informal enquiries to discuss the position.