



Functional proteomics of multiciliated cells

The **Kodjabachian** lab at the Institute of Developmental Biology of Marseille (**IBDM**) is seeking a young and talented **postdoctoral** scientist with strong background in **cell** and **developmental biology**, and a keen interest in **integrative quantitative biology** and **interdisciplinary research**. Our lab uses **advanced imaging** techniques (such as confocal videomicroscopy, super-resolution microscopy and 3D electron microscopy) to study the **biology of ciliated epithelia at multiple scales**.

In vertebrate ciliated epithelia, flows of biological fluids are powered by the coordinated beating of myriads of **cilia** harbored by **multiciliated cells (MCC)**. In recent years, the global MCC transcriptome has been decrypted in *Xenopus*, mouse and human. Through this project, funded by ANR, we now wish to elucidate the **functional MCC proteome**. The selected candidate will be in charge of testing the functional importance of candidates selected through proteomic screens currently running in the team. He/she will use *Xenopus* epidermis, **inducible MCC** culture, and **mouse post-natal** brain as models to elucidate the mechanisms underlying vertebrate MCC construction.

IBDM offers a **vibrant, international, and interactive** environment to study the fundamental principles of cell and developmental biology. IBDM is also part of the Turing Center for Living Systems (CENTURI), a large interdisciplinary program allowing rich collaboration with theoreticians, physicists and computer scientists.

The ideal candidate must hold a PhD for less than two years, and have skills in cell culture, cell imaging, molecular biology, and biochemistry. The position is opened for one year renewable up to 3 years starting as early as January 2021. Applicants must email a CV, a statement of interest and contact details for 2-3 references to laurent.kodjabachian@univ-amu.fr.

<http://www.ibdm.univ-mrs.fr/equipe/biology-of-ciliated-epithelia/>

Relevant publications:

- Loiseau et al., 2020. *Nature Physics*
- Boutin and Kodjabachian. 2019. *Current Opinion in Genetics and Development*
- Revinski et al. 2018. *Nature Communications*
- Chevalier et al. 2015. *Nature Communications*
- Cibois et al. 2015. *Development*
- Marcet et al. 2011. *Nature Cell Biology*