

The **Genomic Imprinting & Development laboratory at the IGMM in Montpellier** seeks to recruit a **PhD Research Fellow**. This position is funded for three years, starting September 2022, and explores the role of (imprinted) long non-coding RNAs (lncRNAs) in gene expression, cell differentiation, and stress response.

Research Theme: Genomic imprinting provides a paradigm to unravel epigenetic regulation in mammals and how this is influenced by the environment. Mechanistic studies on imprinted gene domains have helped understand how specific genetic and epigenetic alterations induce 'imprinting disorders' in humans. This PhD project focuses on the *Dlk1-Dio3* imprinted domain, which is essential for embryonic development and is perturbed in congenital endocrine disorders. This 1.8-Mb domain comprises a large polycistron that transcribes a nuclear long non-coding RNA (lncRNA) called Meg3. Recent studies suggest that crucial RNA structural elements also control non-imprinted genes, particularly in the stress-induced P53 pathway. However, the roles of this lncRNA and its interacting proteins in imprinted gene expression and its relation to the stress response remain unclear. Using diverse approaches and hybrid embryonic stem cell models, this PhD project will unravel these diverse questions.

Experimental Approaches include CRISPR-Cas9 gene editing, RNA expression, chromatin-based studies, light microscopy assays such as RNA/DNA FISH, and RNA-protein interaction studies. This project involves using mouse embryonic stem cells and their differentiation into specific cell lineages. The incoming PhD student is also expected to develop and use bioinformatics approaches.

Required Profile: We welcome highly motivated and dynamic candidates with a strong CV who hold (or will obtain shortly) a Master's degree. Relevant expertise in molecular and/or cellular biology is required, and experience in bioinformatics will be a plus.

Host Laboratory: The *Genomic Imprinting and Development* group (head: Robert Feil) is one of the teams of the Institute of Molecular Genetics of Montpellier (IGMM) in the South of France. It explores epigenetic regulation in mammals -particularly genomic imprinting and the diverse roles of non-coding RNAs- and has a strong interest in how chromosomal domains are structured in living cells (further information: <https://www.igmm.cnrs.fr/en/team/empreinte-genomique-et-developpement/>). The IGMM and its campus are affiliated with the CNRS and the University of Montpellier and provide a dynamic research environment with state-of-the-art technologies and full access to local and Montpellier service platforms.

Interested candidates are invited to send their *curriculum vitae* and a motivation letter to Isabel Chillón ([Isabel.chillon@igmm.cnrs.fr](mailto:Isabel.chillon@igmm.cnrs.fr)) and Robert Feil ([robert.feil@igmm.cnrs.fr](mailto:robert.feil@igmm.cnrs.fr)).