



Fiche proposition de stage - *Internship offers*

Offre pour / Offer for (you can make offers for both level, if the subjects are different, please use a new form)

Master 1

Parcours concerné(s) : EpiGenBio

Intitulé du stage <i>Title</i>	Characterization of micro-TADs with super-resolution imaging
Laboratoire d'accueil <i>Host laboratory</i>	Institut de Génétique Humaine
Nom du responsable <i>Name of the PI</i>	Dr. Giacomo Cavalli
Nom d'encadrant <i>Supervisor</i>	Dr. Davide Normanno and Dr. Frédéric Bantignies
Description (3 phrases) <i>Description</i> (3 sentences)	Genome structural organization is involved in many DNA transactions and is characterized by several layers, from entire chromosomes to local chromatin loops. Using ultra-deep Micro-C maps of mouse embryonic stem cells (mESC), we recently identified a new organizational layer, that we dubbed “micro-TADs”, which correspond to 10-20 kb structures aligning closely with genes and which are sensitive to the histone acetylation status. The project aims at visualizing these structures using a new super-resolution microscopy technology called DNA-PAINT¹ (DNA points accumulation for imaging in nanoscale topography), which should allow the characterization of micro-TADs in single cells. 1. https://doi.org/10.1038/s41592-024-02374-8
Durée prévue (2 à 6 mois) <i>Duration</i> (2 to 6 months)	6 months
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