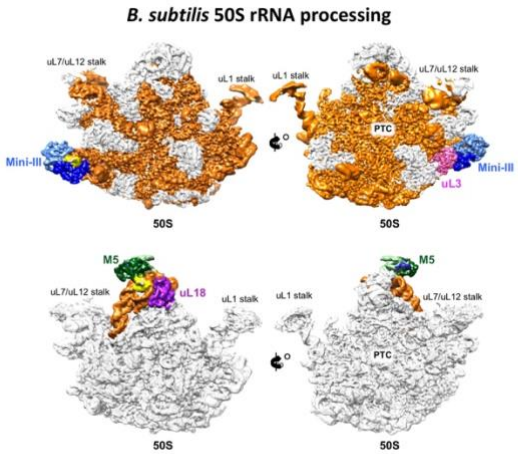
Structural biology of RNA-protein complexes

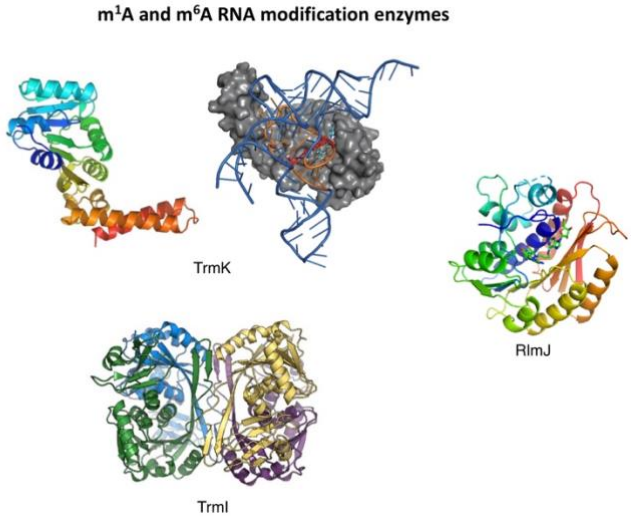
http://labexdynamo.ibpc.fr/fp-dynamo-paris/

Work place: Microbial Gene Expression Laboratory (IBPC, Paris, France)

Contact: Carine Tisné (tisne@ibpc.fr)

A postdoctoral position (2 years, deadline of application **27th March 2022**) is available in the group "RNA biogenesis, architecture and interactions" led by Carine Tisné in the Institute of Physico-chemical Biology (IBPC) in Paris, to work on RNA-mediated gene expression regulation. RNAs are heavily co- or post-transcriptionally modified, with the largest diversity of modifications found in tRNAs. Given the widespread presence of post-transcriptional RNA modifications in all classes of RNAs and in all domains of life and their dynamics, RNA functions must have evolved under the influences of RNA modifications. Many RNA modifications or the respective enzymes are associated with human disease, especially cancer. We want to elucidate how RNA maturation control or influence RNA functions. A multi-disciplinary approach involving biochemical, biophysical and cellular experiments will be used to address these questions of RNA biology. The ultimate goal of the project is to advance our understanding of RNA-based regulation, by means of biochemical reconstitution and structural characterization of protein/RNA complexes. Candidates will hold or about to be awarded a PhD in Biochemistry, Biophysics or Molecular Biology and must have a proven track record of research achievements. Previous experience in the analysis of multi-protein complexes and protein/RNA interactions, as well as familiarity with biophysical techniques such as cryo-electron microscopy and single-particle analysis would be an advantage. This position may lead to a submission to the CNRS national competition for a permanent position.





APPLY

Applicants must not have resided or carried out their main activities (work etc.) for more than 12 months in France in the 3 years immediately prior to recruitment date.

- Oerum S. *et al.* (2021), A comprehensive review of m^6A/m^6Am RNA methyltransferase structures. **Nucleic Acids Res.** 49(13):7239-7255. doi: 10.1093/nar/gkab378
- Oerum S *et al.* (2020), Structures of *B. subtilis* Maturation RNases Captured on 50S Ribosome with Pre-rRNAs. **Mol Cell.** 80(2):227-236. doi: 10.1016/j.molcel.2020.09.008
- C. Dégut *et al.* (2019), Structural characterisation of *B. subtilis* m^1A_{22} tRNA methyltransferase TrmK: Insights into tRNA recognition, **Nucleic Acids Res.** 47, p. 4736-. doi: 10.1093/nar/gkz230
- Barraud P *et al.* (2019), Time-resolved NMR monitoring of tRNA maturation. **Nat Commun.** 10, p. 3373. doi: 10.1038/s41467-019-11356-w