Post-doc offer at l'I2BC for the rational design of anti-cancer compounds acting on epigenetics

Title: **Therapeutic targeting and chemical biology of histone chaperone using rationally designed medium-size inhibitors**

Laboratory: Institut de Biologie Intégrative de la cellule (I2BC), Institut de sciences du vivant Frederic Joliot (CEA). Equipe Assemblage Moléculaire et Intégrité du génome (https://www.i2bc.paris-saclay.fr/molecular-assemblies-and-genome-integrity/)

Supervisor: F. Ochsenbein. The post-doctoral researcher will benefit from the unique environment of the I2BC platforms (supported by the national programs FRISBI and Infranalytics), and several institutes of Ile de France (CEA, Pasteur, Curie).

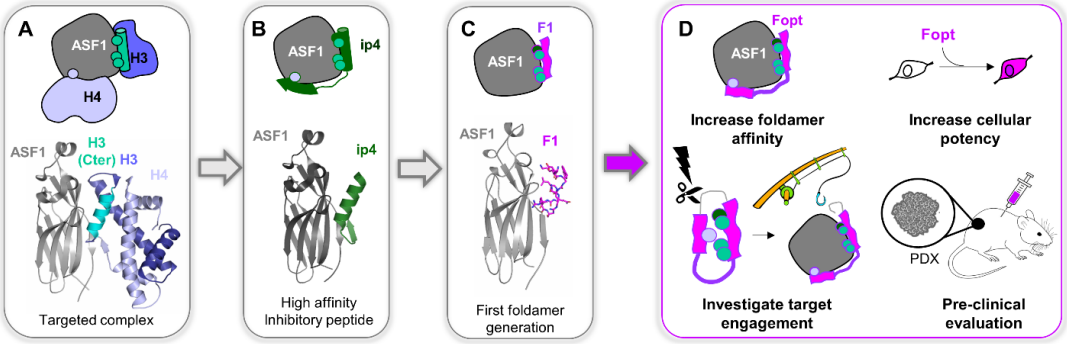
Keewords : *Epigenetics, peptide-mimetics, protein-protein interaction inhibitors, cancer, cellular biochemistry*

Candidate profile: Student holding a PhD since less than 2 years interested by the development of drug development. Skills in biochemistry, cell biology, and knowledge in the field of structural biology and/or epigenetics will be a plus for the success of the project. Theoretical and practical training will be possible throughout the contract.

Application : send CV, motivation and recommendation letters to Francoise Ochsenbein : francoise.ochsenbein@cea.fr. Dead line: 30 june 2022.

Funding : ANR Thera HCI

Histone chaperones regulate the dynamics of histones within chromatin and the establishment of many epigenetic markers. Their dysfunction is associated with the development of multiple pathologies. The histone chaperone ASF1 (Anti-silencing function 1) is involved in nucleosome assembly/disassembly and regulation of gene expression. Overexpression of ASF1 promotes tumour cell proliferation and is a powerful marker of poor prognosis in breast cancer. It is also involved in cell ageing and is required for the cycling of certain pathogenic viruses. These properties make ASF1 a new therapeutic target and have motivated the design of inhibitors by F. Ochsenbein's team. This thesis project aims to develop peptidomimetic inhibitors with improved pharmacological properties and molecular probes to explore the effect of ASF1 inhibition *in cells* and *in vivo* and to demonstrate its therapeutic potential. The techniques used during the thesis will include biochemistry, structural biology, structural bioinformatics and cell biology and biochemistry.



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