



Postdoctoral Fellow Molecular Biology

UMR9187-U1196, Institut Curie – Orsay

Dr. Daniela Verga (<https://science.curie.fr/members/daniela-verga/>), working in the research group “Probes and Drugs of Nucleic acids Secondary Structures” (<https://science.curie.fr/recherche/biologie-et-chimie-des-radiations-cellulaires-et-cancer/cmhc/>), belonging to the research unit “Chemistry and Modelling for the Biology of Cancer (CMBC)”, invites applications for a two-year post-doctoral position to begin December 2020. The prospective postdoctoral fellow will work under the direction of Dr. Daniela Verga (CNRS researcher) as part of the young researcher project supported by the Agence National de la Recherche (JJC ANR) grant. This position seeks a dynamic and enthusiastic candidate who is interested in developing and applying techniques that overcome the current limitations for mapping G-quadruplex (G4) secondary structures in cells and to identify loci-specific G4 at the genome-wide level. This project will allow to develop techniques that couple potent small synthetic molecules (G4-ligands) with high-throughput DNA sequencing to directly and globally map G4 structures in cells and reveal their functional and regulatory roles in mammalian cells. These objectives will be achieved by employing in-house specifically tagged G4-selective molecules that will enable systematic genome-wide identification of G4 ligand binding sites and, as a consequence, identification of domains that are likely to fold into G4 in living cells. Our original tagged-ligands will allow the development of an unprecedented chemical-immunoprecipitation-sequencing methodology (Chem-IP-Seq) to map G4 ligand binding site at single-base resolution.

The prospective postdoctoral fellow will be on charge of the development of the project. He/she will perform several cellular assays, including cell imaging and ChiP-sequencing, and biochemical assays for *in vitro* evaluations of the aforementioned compounds. He/she must master the associated literature, must be able to communicate his/her results to the team. He/she must be able to work independently as well as interact with other team members. The postdoctoral fellow will also have ample opportunities to collaborate with internationally recognized biologists and chemists at the Institut Curie.

The applicant should have a Ph.D. degree in cell and molecular biology, biochemistry, or genetics and should be proficient in modern molecular and cellular biology procedures and have an excellent knowledge in nucleic acids. Experience with ChiP-sequencing is a significant plus. A track record (as evidenced by publications in peer-viewed journals) in relevant fields is required. Applicants must be able to fluently communicate in English (oral and written skills).

The laboratory is located at the Institut Curie research center at the university campus of Orsay (Paris-Saclay University- south of Paris, France) and offers a highly competitive scientific infrastructure. Institut Curie is constituted of a hospital and a world-class multidisciplinary research center combining research in cell biology, genetics, epigenetics, immunology, organic and medicinal chemistry. The institute facilities include advanced imaging, high throughput sequencing, bioinformatics, reverse phase protein array, proteomics and mass spectrometry, antibody technologies, cytometry, and animal housing.

General information:

Contract duration: 24 months

Expected date of employment: February 2021

Remuneration: gross monthly salary around 2700 €

Applications and inquires: Interested candidates please send a CV, a cover letter stating research interests, qualification, and 2-4 recommendation letters and references to Dr. Daniela Verga: daniela.verga@curie.fr by December 20th 2020. Interviews will be held by beginning of January via Skype.

