Postdoctoral Position in Genomics (M/F)

The hosting structure

Institut Curie Research Center
Institut Curie is a major player in the research and fight against cancer. It consists of a Hospital group and a Research Center of more than 1000 employees with a strong international representativeness. The objective of the Research Center is to develop basic research and to use the knowledge produced to improve the diagnosis, prognosis, and therapeutics of cancers as part of the continuum between basic research and innovation serving the patient.

Context

Laboratory
We are looking for two motivated and productive junior post-doctoral fellows in bioinformatics to join our team “Replication Program and Genome Instability” (https://institut-curie.org/team/chen) at the Institut Curie, Paris, France. The team focuses on using cutting-edge high-throughput genomic approaches and genome-wide data analyses to study the spatio-temporal replication program of the human genome and how replication stress impacts on genome stability in normal and cancer cells, in population as well as at single molecule/cell level.

The project
It is well known that DNA replication is a vital process in all organisms. At each cell division, the activation of over 30,000 replication origins in a coordinated manner is essential to ensure the duplication of >6 billion base pairs of the human genome. During differentiation and development, this program must adapt to changes in chromatin organization and gene transcription. Its deregulation can challenge genome stability, which is a leading cause of many diseases including cancer and neurological disorders. To move the field forward, novel approaches to investigate DNA replication at the single molecule/cell level are required. Leveraging on our expertise in high-throughput single molecule/cell data analysis, our ImpulsScience project of the Fondation Bettencourt Schueller (https://www.fondationbs.org/en/life-sciences/impulsciences/discover-2022s-laureates) aims to develop original interdisciplinary methodologies by combining cutting edge high-throughput single molecule/cell imaging/sequencing, mathematical/computational modelling and bioinformatics analyses. With these, we will study the replication program in mammalian cell lines and in developmental model organisms under normal and pathological conditions. This project will finally be able to decipher, at an unprecedented depth, how the replication program links with genome instability in cancer and during neurogenesis. We also have an ANR project using single-molecule sequencing/imaging to study DNA recombination and DNA repair and genome instability at the single-molecule level.

Bibliographical references

Constraints and risks
- Short periods of travel
- Long periods working in front of computers.

Candidate Profile

Training and Skills required
- Training: Applicant should hold, or be in the process of completing, a PhD degree (less than 6 years after obtaining a PhD) in bioinformatics or related areas
- Scientific skills: should have solid computational/statistical skills, and a strong interest in genome biology
- Professional experience desirable: experience with single-molecular sequencing, single-cell omics, linear tracing analysis, high-throughput imaging analysis, or neurogenesis is a plus
- Language skills: very good English level and communication skills.

Abilities
- Ability to work independently, managerial abilities, aptitude for working in a team
- The candidate should be highly motivated, curious, and enthusiastic to work in a collaborative team.

All our opportunities are open to people with disabilities.

Contract information

Type of contract: Fixed-term contract
Starting date: As soon as possible
Duration: 1 year (renewable contract)
Working time: Full time
Remuneration: According to the current grids
Benefits: Collective catering, reimbursement of transportation fees up to 70%, supplementary health insurance
Location of the position: Paris
Reference: 2023-10-UMR3244-POSTDOC01

Contact

Please send your CV, letter of motivation, and 3 references, to C.L. Chen (chunlong.chen@curie.fr).

Publication date: October 5th, 2023
Deadline for application: December 31st, 2023

Institut Curie is an inclusive, equal opportunity employer and is dedicated to the highest standards of research integrity.