



Post-doc position at the DNA repair and Uveal Melanoma team Institut Curie, Paris, France.

The DNA Repair and Uveal Melanoma (D.R.U.M.) team, Inserm U830 at the Institut Curie, Paris, is seeking a post-doc to develop research on a novel genomic instability pathway found in uveal melanoma. The position is immediately available.

Environment

The Institut Curie offers a unique scientific environment including internationally recognized departments in immunology, cell biology, genetics, biophysics and chemistry as well as a dedicated cancer hospital. It gives access to state-of-the-art core facilities (next generation sequencing including 10X Genomics, genomics, microscopy, mass spectrometry, animal facility, automated-imaging cell-based screening facility, synthetic lethality screen...) as well as large clinical databases and sample collections. The Institut Curie benefits from an attractive location in Paris downtown, in close vicinity to other major Parisian research centers.

Research project

Uveal melanoma (UM) is the most common eye cancer in adults. Despite improved treatment of the primary tumor, there is no effective treatment of metastatic disease and approximately half of patients die within one year following metastases detection (1).

Our team mainly works on the genetics and genomics of primary and metastatic UM and, in the past years, we have identified SF3B1 as a novel driver in UM, showed the low tumor burden and absence of UV mutation signature, and unraveled the role of mutant SF3B1 on aberrant splicing (2-6).

More recently, we identified MBD4 as an important actor in UM. MBD4 deficient UM display an atypical signature with a high tumor burden and are responsive to immune checkpoint inhibitors. Germline mutations of MBD4 explain genetic predisposition to UM (2,7,8).

Although the role of MBD4 in UM is now established, its molecular function and dysfunction in diseases remain poorly characterized. The post-doc project will aim to characterize the function of MBD4, the consequences of its inactivation in tumors, and to improve the treatments of MBD4-inactivated tumors. For this, we have access to one of the largest biobank world-wide for UM primary and metastatic samples, a collection of UM patient-derived xenografts (PDXs) and UM cell lines, including MBD4 proficient and deficient tumors and isogenic cell lines.

This research project is part of a translational research project in collaboration with the Institut Curie hospital, the and the Institut du Cerveau et de la Moelle (ICM, hospital Pitié-Salpêtrière) and is financed by the Institut National du Cancer (INCa).

Profile

The applicant should hold a PhD in biology and be trained in cellular and molecular techniques with a good publication record in related fields. Knowledge in cancer biology and in DNA repair will be highly appreciated. Bioinformatics training is not mandatory. The salary will be set according to past experience.

Application

The application that includes a CV, motivation letter and recommendation letters should be sent to Marc-Henri Stern, Inserm U830 (marc-henri.stern@curie.fr) to whom all inquiries have to be made.

References

- (1) Jager *et al.* Nat Rev Dis Primers **2020**;6:24; (2) Rodrigues *et al.* Clin Cancer Res **2019**;25:5513;
- (3) Alsafadi *et al.* Nat Commun **2016**;7:10615; (4) Mobuchon *et al.* NPJ Genom Med **2017**;2(1);
- (5) Furney *et al.* Cancer Discov **2013**;3:1122; (6) Robertson *et al.* Cancer Cell **2017**;32:204;
- (7) Derrien *et al.* J Natl Cancer Inst **2020**; (8) Rodrigues *et al.* Nat Commun **2018**;9:1866