



## Postdoctoral position

to study the contribution of chromatin to the repair of DNA damage

Applications are invited for a two-year postdoctoral position in the ATIP/Avenir funded laboratory of Dr. Beatrice Rondinelli at the Genome Integrity and Cancers Unit (UMR 9019, <https://www.gustaveroussy.fr/en/chromatin-function-dna-repair>) at Gustave Roussy Institute, located just outside of Paris city centre.

**Lab interests.** The response to replication fork (RF) damage in human cells is fundamental to repair DNA lesions that are encountered during genome duplication, ultimately maintaining genome stability. We unraveled the contribution of several chromatin components in this process, that act by stabilizing damaged RFs and timely activating DNA repair pathways. We also showed that some cancer-associated alterations in genes encoding for chromatin components impact the response of cancer cells to RF damage, genome stability and ultimately their survival. These works identify chromatin function at damaged RFs as a key cellular process to study, but a comprehensive understanding of the players and pathways involved is missing and requires further investigation.

**The project.** By analysing available pharmacogenomic and proteomic datasets, we identified few, previously uncharacterized chromatin-related enzymes whose levels regulate the sensitivity of human cells to DNA damage and that are present at sites of DNA damage. We show that their siRNA-mediated loss induces aberrant DNA damage and genome instability in human cells, pointing at uninvestigated tumor suppressive functions of these chromatin-related enzymes in the DDR that are crucial for genome integrity and cell survival. We are currently investigating the mechanisms through which the top ranked enzyme does so, by exploiting a recently generated human cell system where we tagged the endogenous gene and by studying its protein complexes/targets under DNA damage.

**What we offer.** The host Genome Integrity and Cancers Unit boasts a stimulating environment and dedicated equipment for research in the DNA repair and replication fields. Gustave Roussy Institute, the Leading Cancer Centre in Europe is the first oncology hospital outside the United States and focuses on the study of cancer biology and treatment. It offers access to state-of-the-art facilities including cell imaging, genomic, animal house and bioinformatics support. Initial funding is offered for a 12-months, renewable contract.

**What we expect.** We invite applications from highly self-motivated and dynamic individuals, able to work independently while being good team players. The candidate is expected to have a PhD in biology and a solid background in cellular and molecular biology. A work experience in the chromatin organization and/or the DNA damage response will be ideal. The candidate must be proficient in English.

**Interested in the position?** Please send your application package in a single PDF file to [beatrice.rondinelli@gustaveroussy.fr](mailto:beatrice.rondinelli@gustaveroussy.fr). This should include a motivation letter outlining your main contributions and research interests, your CV and the contacts of 2-3 referees. Expected start date is August/September 2024, applications will be considered as they are received and until a candidate is selected.