Postdoctoral Position in digital pathology (F/M) (F/H)

POSTE À POURVOIRle 01/09/2026 LOCALISATION DU POSTE 75005 PARIS, ÎLE-DE-FRANCE 75005
ÉTABLISSEMENT Institut Curie

ENVIRONNEMENT ET CONTEXTE DE TRAVAIL

Notre établissement fait partie de l'Université PSL. Située au cœur de Paris, celle-ci fait dialoguer tous les domaines du savoir, de l'innovation et de la création. Classée parmi les 50 premières universités mondiales, elle forme au plus près de la recherche des chercheurs, artistes, ingénieurs, entrepreneurs ou dirigeants conscients de leur responsabilité sociale, individuelle et collective.

STRUCTURE D'ACCUEIL

The Curie Institute Research Center

The Institut Curie is a major player in the research and fight against cancer. It consists of a hospital and a Research Center of more than 1000 employees with a strong international representativeness.

The objective of the Curie Institute 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.

MISSION D'ENSEIGNEMENT

Laboratory

The postdoctoral position will be shared between the team of Pierre Bost (https://curie.fr/equipe/bost) and of Manuel Rodrigues (https://curie.fr/equipe/rodrigues). The Bost team has a longstanding expertise in the field of biological spatial data analysis, especially in the development of new computational methods to analyze spatial transcriptomic and spatial proteomic data. The Rodrigues team has strong expertise in translational oncology, with a particular focus on tumor genomics and DNA repair mechanisms in uveal melanoma. The team develops advanced experimental models to investigate early tumorigenesis, tumor microenvironment dynamics and therapeutic resistance strategies

The postdoctoral fellow will interact with both teams and will benefit from a joint supervision from both teams PI.

The project

The aim of this project is to develop new computational methods to perform large-scale spatial analysis of tumor architecture and to test whether or not tumor spatial organization can serve as a predictive biomarker of patient survival and treatment response. As a proof of concept, the postdoctoral fellow will work on uveal melanoma liver metastases, a rare and poorly understood disease characterized by poor survival outcomes and limited therapeutic options from which a large collection of histology, spatial transcriptomic and single-cell RNA-seq data were generated by the Rodrigues lab. He/She will combine the histology and spatial transcriptomic data through the use of histology foundation models in order to develop a neural network able to predict cell type from histology data only. This neural network will then be applied to a large scale clinical cohort, allowing to obtain the spatial distribution of each cell type across samples, before using computational tools developed in the Bost team to extract spatial features of these patterns and use them to predict patient survival and genetic profile.

Bibliographical references

[1] F. Mangane et al., "Exploiting pair correlation function to describe biological tissue structure," Dec. 22, 2025, bioRxiv. doi: 10.64898/2025.12.19.695425.

[2] P. Bost et al., "Statistical modeling and analysis of cell counts from multiplexed imaging data," Cell Systems, vol. 16, no. 6, p. 101296, Jun. 2025, doi: 10.1016/j.cels.2025.101296.

[3] F. Hörst et al., "CellViT: Vision Transformers for precise cell segmentation and classification," Medical Image Analysis, vol. 94, p. 103143, May 2024, doi: 10.1016/j.media.2024.103143.

[4]Le Ven A et al, Prevalence of the Predisposing Gene MBD4 for Uveal Melanoma. JAMA Ophthalmol. 2026 Apr 30:e261071. doi: 10.1001/jamaophthalmol.2026.1071

[5] Rodrigues et al, Prospective assessment of circulating tumor DNA in patients with metastatic uveal melanoma treated with tebentafusp, Nat Commun. 2024 Oct 14;15(1):8851. doi: 10.1038/s41467-024-53145-0.

[6] Silveira AB et al, Base-excision repair pathway shapes 5-methylcytosine deamination signatures in pan-cancer genomes, Nat Commun. 2024 Nov 14;15(1):9864. doi: 10.1038/s41467-024-54223-z.

MISSION DE RECHERCHE

COMPÉTENCES ATTENDUES

Training and Skills required

Core Requirements

➡ PhD in computer vision, digital pathology or data analysis.

➡ Practical expertise in deep-learning (Tensorflow or Pytorch).

➡ Basic knowledge in biology and oncology.

➡ Proficiency in english.

Nice-to-Haves

➡ Expertise in histology and anatomical pathology.

➡ Knowledge in spatial statistics, especially of Point pattern analysis.

Abilities

- Ability work on highly-interdisciplinary environment combining histology, oncology and spatial statistics.

- Ability to quickly learn new topics and fields.

All our opportunities are open to people with disabilities

Contract information

Type of contract: Fixed term contrac*.*

Starting date: *September 2026*

Duration: 18 months renewable

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

Contact

Please send your CV, letter of motivation and 2 references:

Publication date: 01/06/2026

Deadline for application: once filled

Institut Curie is an inclusive, equal opportunity employer

and is dedicated to the highest standards of research integrity.

https://euraxess.ec.europa.eu/sites/default/files/brochures/eur_21620_en-fr.pdf

NON DISCRIMINATION, OUVERTURE ET TRANSPARENCE

Notre établissement, comme l'ensemble de l'Université PSL, s'engage à soutenir et promouvoir l'égalité, la diversité et l'inclusion au sein de ses communautés. Nous encourageons les candidatures issues de profils variés, que nous veillerons à sélectionner via un processus de recrutement ouvert et transparent.

CONTACT

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AUTRES INFORMATIONS

Recherche principal : **Sciences biologiques** Recherche secondaire : **Biologie**
Durée du contrat18 mois

Expérience souhaitée
1 à 4 années d'expérience (R2) an

Référence
zg17o52ert

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