Job description
Tenure track 2024 (chaire de professeur junior)

Department: Centre de Recherche des Cordeliers (CRC)
Partner institutions/organizations: Institut national de la santé et de la recherche médicale (Inserm), UMRS 1138
Location: Sorbonne Université, Campus Cordeliers, 15 rue de l’école de médecine, 75006 PARIS

Discipline: Onco-immunology
Corresponding CNU sections: 65
Job title: Tenure track
Duration of the contract: 3-5 years
Quotity: 100% The minimum monthly remuneration is fixed by decree at 3,443.50 euros
Etat du poste: open

Domaine*: Interconnection between viral microbiome and immune system
Profil: Onco-immunology

* The area is similar to that mentioned in the decree of February 23, 2024, the profile having been expanded in agreement with the ministry.

Summary of teaching project:
Depending on his/her profile, the successful candidate will take part in one or more Sorbonne University courses, for a total of 64 hours eq TD/year: fundamental and emerging teaching in the Molecular and Cellular Biology (BMC) master's degree, Immunology course ("Immunology Genetics and Oncology" (IGO) theme; MUSBM813 "Mouse genetics Pasteur course", MUSBM578 "Data Analysis in Immunology", MUSBM558 "Anti-tumour immunology etc."); the international "From fundamental molecular biosciences to biotherapy" course (including MUSBM534 Translational immunology and biotherapies" and MUSBM537 "Systems immunology") and the bioinformatics modeling (BIM-BMC course) and data analysis (MAD, in collaboration with the Integrative Biology and Physiology master's degree). In the bachelor's program, he/she will be able to teach the courses in Genetics (LU3SV611) and General Immunology (LU3SV619).

ERC scientific theme: Biology and health

Institutional strategy:
This CPJ reinforces the themes in which SU has demonstrated its leadership and which are at the heart of its establishment project, and in particular of the "global approach to health" axis of the ExcellencES SOUND project (PIA 2012). The training and research activities associated with this CPJ are geared to the contributions that can be made to collectively meet society's challenges.

Host laboratory strategy:
The CRC is an internationally renowned multidisciplinary research center of excellence developing research projects in oncology, immunology, bioinformatics and pathophysiology. The scientific projects conducted here form part of a continuum between basic, translational and clinical research. The CRC is looking to recruit a junior professor to strengthen the multidisciplinary and innovative aspects of its current research excellence in onco-immunology.
The tumor microenvironment is a highly complex, heterogeneous and dynamic ecosystem, requiring multi-scale integration to analyze the biological mechanisms involved in the processes of initiation and progression of carcinogenesis, and therapeutic response.
Different approaches will be implemented in biology (immunology, genomics, metabolism, mechanisms of proliferation and cell death, etc.) and/or bioinformatics (development of integrative approaches to data analysis) at several levels: molecular, cellular, at the level of organs and individuals as a whole, with their longitudinal follow-up throughout life.
The person recruited will develop innovative approaches to establish collaborations with CRC research teams, both nationally and internationally, to advance our knowledge in the field of onco-immunology, but also to develop new therapeutic tools and original techniques for integrated analysis of heterogeneous data.
Summary of scientific project:
Understanding the biological mechanisms leading to inter-patient and intra-tumor heterogeneity must take into account the individual as a whole, with his or her genetic baggage (host factors) and environmental exposures (exposome) throughout life (carcinogens, diet, viral infections, radiation, etc.). Several complementary avenues will be explored by the CPJ at CRC to decipher the underlying mechanisms:
- Studying the interaction between individuals' exposure to toxic substances throughout their lives, the effects of which are modulated by genetic polymorphisms and the individual immunological context. To this end, CRC projects benefit from large cohorts of cancer patients (digestive and ORL tracts, lungs, kidneys, etc.) for combined studies of clinical, genetic and exposure variables. The early stages of carcinogenesis are particularly important for understanding the early mechanisms of malignant transformation, and ultimately improving prevention and early detection.
- Cellular-scale study of interactions between tumor cells and those in the microenvironment close to the tumor. With the development of immunotherapy, for which CRC teams have helped to discover the foundations of the concepts, the study of the anti-tumor immune response and how to modulate this response is essential to understanding the mechanisms of sensitivity/resistance, and ultimately to improving these immunomodulatory treatments by taking into account the different molecular subtypes of cancers.
- Integration of all cancer patient data, from a variety of clinical, historical, biological, molecular, genomic, genetic and phenotypic sources (ultra-multiplexed imaging, spatial transcriptomics, etc.) to identify new evolutionary patterns, model them and identify new therapeutic targets.

Strategy in terms of international attractiveness:
The research area associated with CPJ has been very attractive to PhD students in recent years, and there is now a rich pool of bright young researchers, including some from the French system, who are potential candidates. SU has also strengthened its strategic international partnerships and research and training initiatives with the European alliance 4EU+. These partnerships with leading universities provide a pool of students and collaborators for CPJ-related research topics.
As part of COMP 2023-25, 15 post-doctoral fellows labeled "Seal of Excellence" from the Marie Curie Post-doctoral Fellowships program of Horizon Europe will be recruited at SU on topics related to projects supported by AMI-CMA, PEPR, PIA, and other projects relevant to SU's scientific strategy, including CPJ.

Scientific dissemination:
As with all research topics, the results obtained in the context of the CPJ will be published in international journals and presented at international conferences and congresses. As this is fundamental and translational research, the results obtained will be valorized through the publication of patents, in consultation with INSERM Transfert, the CRC coordinator.
In research, the junior professor will have the opportunity to interact with researchers at CRC and in neighboring or partner laboratories. He/she will promote the discipline, the laboratory and the University by taking part in international conferences and workshops to present results.
In terms of supervision, he/she will have the possibility of recruiting a post-doctoral or doctoral student thanks to the "package" provided, and will also be able to co-supervise students and trainees from the research team.
In terms of collective investment, the junior professor will be involved in communicating with the general public.

Science and society:
The recipient of this CPJ will be encouraged to take part in several communication programs aimed at the general public, such as the Fête de la science, or the apprentice researcher program. The junior professor will thus be able to take part in these various initiatives to inform and raise awareness among the general public of the challenges and opportunities of his/her research. He/she will also take part in the many conferences and symposia organized at CRC.

Breakdown of financial support:
- Support from ANR: 200 000€, including support for a PhD student and operating costs (consumables, reagents, missions, conferences, etc.).
Laboratory: Centre de Recherche des Cordeliers (CRC)

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**Application procedure**

Applications are open from June 21\(^{th}\) 2024 10:00 am (Paris time) to September 9\(^{th}\) 2024 4:00 pm (Paris time). **Applications must be** submitted on the Galaxie website. Candidates who do not have access to this Galaxie application (in particular non-French candidates) may exceptionally submit the complete application electronically according to the established schedule and procedures. Send the application files to sciences-drh-gestioncoEC@sorbonne-universite.fr / pascale.bechu@sorbonne-universite.fr with the subject "Candidature CPJ".

The documents to be attached to the application file are set by the decree of February 6, 2023, as amended, concerning the general terms and conditions for the transfer, secondment and recruitment by competition of lecturers, university professors and junior professors (see in particular Title III - articles 24 to 27 and Title IV - articles 28 to 31).

Candidates who do not hold a doctorate must have their university diplomas, qualifications and titles recognized as equivalent to a doctorate, in accordance with one of the procedures provided for in article 5 of decree no. 2021-1710 of December 17, 2021 concerning the junior professorship contract provided for in article L. 952-6-2 of the Education Code and article L. 422-3 of the Research Code. Any incomplete application by the above-mentioned deadline will be declared inadmissible.

Only candidates who have been selected by the selection committee based on their applications will be invited to an interview that will take place in Paris during October/November 2024. The timetable and procedures will be communicated to the candidates.

Professional simulation: NON

The aforementioned decree n° 2021-1710 of December 17, 2021 determines the conditions of renewal of the contract, the modalities of assessment, before the tenure, of the scientific value and the aptitude to carry out the missions of each body, the modalities of appointment of the members of the selection and tenure commissions and the conditions of the commitment to serve.

**Zone à régime restrictif**

**ZRR:**
You are hereby informed that this job may be located in a restricted area within the meaning of article R. 413-5-1 of the French penal code, and that you may not be appointed unless you have been granted access to the area.

**Contacts**

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