Job description
Tenure track 2024 (chaire de professeur junior)

Faculté de Santé

Department: Centre de Recherche en Myologie – UMRS 974
Partner institutions/organizations: Institut national de la santé et de la recherche médicale (Inserm)
Location: Sorbonne Université, Hôpital La Pitié Salpêtrière, 105 boulevard de l'hôpital 75013 Paris

Job Identification

Discipline: Stem cell biology - biotherapies
Corresponding CNU sections:
CNU 65 – Biologie cellulaire
CNU 66 - Physiologie

Job title: Junior Professor Chair (CPJ)
Duration of the contract: 3 years
Quotity: 100%
The minimum monthly remuneration is fixed by decree at 3,443.50 euros gross
Etat du poste: open

Profil
Stem cell biology - biotherapies

Job Profile
Lecturer-researcher

Education

Summary of the teaching project:
The teaching will concern on one hand stem cell biology as part of training in fundamental biology, and on the other hand, an introduction to innovative biotherapies, using neuromuscular diseases as an example, with the possibility of extending this to other conditions. It could also include the teaching of basic knowledge on tissue repair dysfunction, for example in undergraduate courses. However, this project will have to be coordinated with the teaching needs of the Biology Department or the Faculty of Medicine, depending on the profile of the successful candidate.

Use of financial requirements:
- ANR package: €200,000
- Total: €200,000

Use of ANR package:
- Post-doctoral researcher: €110,000
- Operating costs (missions, conferences, etc.): €90,000

Research

ERC scientific theme: Biology and Health

Strategy of the University:
This CPJ reinforces the themes in which Sorbonne University has demonstrated its leadership and which are at the heart of its institutional project and in particular of the axis "global approach for health" of the Excellences SOUND project (PIA 2012). The training and research activities associated with this CPJ are oriented in the light of the contributions that can be made to respond collectively to the challenges of society.

The Centre de Recherche en Myologie (CRM) is a multi-disciplinary research center focusing on muscle and its pathologies. The CRM benefits from a privileged partnership with the Association Institut de Myologie (AIM). Located at the heart of the Pitié-Salpêtrière Hospital Group and the Faculty of Health Sciences, the CRM benefits from a privileged scientific and medical environment. The Research Centre focuses on the development of innovative approaches to cell, gene or pharmaco-gene therapy, based on an understanding of the molecular pathophysiology of a given disease, and therefore tailored to it. The CRM has developed
Strategic cooperation within the framework of a joint international laboratory with Brazil (INSERM, SU, Fiocruz, Federal University of Rio de Janeiro), with the aim of creating synergies between the expertise of the French teams in muscle and neuromuscular pathologies and that of the Brazilian teams in immunology and inflammation.

The CRM is proposing a CPJ in collaboration with the team working on cellular and molecular orchestration in muscle regeneration, ageing and pathologies. The project, carried out on human material using innovative approaches (single cell technologies, imaging mass cytomtery, tissue engineering), aims to determine what regulates cellular equilibrium and to seek therapeutic approaches to prevent or correct fibrosis. This CPJ fits in with both the Sorbonne University project’s research priorities and its strategic partnerships.

**Strategy of the hosting laboratory:**
UMRS 974 works on ageing and neuromuscular pathologies, to develop innovative therapeutic strategies, whether genetic, cellular or pharmacological. Fibrosis, defined as the abnormal accumulation of extracellular matrix, results from an abnormal behavior of progenitors involved in muscle homeostasis and represents a physical barrier that greatly reduces the effectiveness of these strategies. The initial hypothesis is that the intercellular dialogue that regulates each cell population is disrupted. The analysis of cellular deregulations will make it possible to determine which mechanisms are involved in the establishment of fibrosis, and to test corrective approaches on original in vitro and in vivo models developed in the Unit. These anti-fibrotic approaches could also be tested on other tissues, as fibrosis represents a major dysfunction in tissue repair in many organs.

**Summary of the scientific project:**
The project aims to determine the dysfunction of intercellular dialogues during tissue repair, following trauma or surgery or neuromuscular diseases. It is the deregulation of these interactions that leads to fibrosis. Although the cell populations involved have been identified in mice, little is still known about them in humans. The host laboratory has access to a large number of human samples, which will be essential for defining innovative anti-fibrotic strategies that will ensure the success of pharmacological, gene or cell therapies currently being developed for these diseases, for which the development of fibrosis represents a major obstacle. These strategies can then be tested on other tissues where fibrosis is responsible for tissue repair dysfunctions.

**Strategy in terms of international attractivity:**
The Unit initiated international cooperation with FIOCRUZ in Brazil on neuromuscular diseases and innovative therapies. This cooperation led to the establishment of two successive international laboratories, followed by strategic cooperation involving FIOCRUZ, INSERM and Sorbonne University. This cooperation, initially in the field of research, has led to numerous exchanges of students and young researchers with Brazil, and has recently been extended to include an international agreement between the partners in the field of doctoral studies (signed in 2023).

In addition, the Unit has established strategic cooperation with the Tokyo Neurological Institute (NCNP), with whom joint meetings are organized every two years, with exchanges of doctoral students and researchers. The recent development of strategic cooperation between the University of Tokyo and Sorbonne Université should also be noted. The project submitted as part of the CPJ will be integrated into future EU networks that we are planning to set up or integrate on stem cells and fibrosis. Finally, the Unit is also developing scientific interactions with other Institutes of Myology (eg Gainsville, USA or Padue, Italy) concerning muscle physiology and innovative therapies for neuromuscular diseases.

**Scientific dissemination:**
As with all research subjects, the results obtained in the context of the CPJ will be published in international journals and presented at international conferences and congress. No knowledge transfer activities other than publications, patents or scientific mediation are envisaged. In terms of research, the CPJ laureate will have the opportunity to interact with researchers at the CRM and in neighboring and partner laboratories. The laureate will raise the profile of the discipline, the laboratory and the University by taking part in international conferences and workshops to present his/her scientific results.

In terms of supervision, he/she will have the opportunity to recruit 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 CPJ laureate will be involved in communication towards the general public.
Science and society:
The Unit regularly takes part in communication activities aimed at the general public, such as the « Fête de la science », Family days of patients suffering from neuromuscular pathologies, and activities linked to the AFM-Telethon. The Unit's researchers and teacher-researchers are also involved in disseminating knowledge to schools (Operation « 1000 chercheurs dans les écoles », Operation Declic). Finally, they take part in radio and television programmes dedicated to muscle, training and ageing. These activities will of course be stepped up as part of the 2024 Olympic Games.

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<th>Laboratory</th>
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<td>Centre de Recherche en Myologie</td>
<td>UMRS</td>
<td>974</td>
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Application procedure

Applications are open from June 11th 2024 10:00 am (Paris time) to July 11th - 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 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, according to a timetable and procedures that will be communicated shortly.

Professional simulation:
Operating methods:
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.

Contacts
Research: capucine.trollet@sorbonne-universite.fr
Education: alain.carrie@aphp.fr