

CALL FOR APPLICATION

INSERM CHAIR Recruitment

Neural regulation of immunity

The Inserm chair recruitments opened to Inserm are intended for researchers with strong potential to manage and lead research teams and participate in national, European or international projects.

This recruitment, based on research and teaching projects, is aimed at researchers with a doctorate or equivalent and a first post-doctoral experience. The position is offered on a fixed-term contract (CDD) with a view to tenure in the Inserm Research Directors personnel at the end of the contract.

How apply: <https://pro.inserm.fr>



Supporting institution:	Inserm : Institut national de la Santé et de la recherche médicale
Name of the head of the institution:	Pr. Didier Samuel
Academic region:	Marseille
Location/ Site concerned:	Aix-Marseille Université - CIML - U1104 Inserm
Partner institution:	Aix-Marseille Université
Research contact Administrative contact	Mme Sophie UGOLINI: ugolini@ciml.univ-mrs.fr chaires-professeur-junior@inserm.fr
Research fields EURAXESS:	Immunology, Neurosciences
Keywords:	Immunology, Neurosciences, Inflammation, Cancer, Immunity, Viral infection, Neuropeptides, Innate immunity, Macrophages, Adaptive immune response

Job title to be filled:	Chaire de professeur- Régulation neuronale de l'immunité
Body after tenure:	Research Director
Anticipated duration of the contract:	5 years
Scientific domains/fields:	Neuroimmunology- CNU 65 and 47-03, CoNRS 27
Corresponding specialized scientific commissions (CSS):	CSS5: Immunologie, Microbiologie, Infection
Project name:	Neural regulation of immunity

Funding :	
ANR package :	200k€
Co-funding AMIDEX	50k€
Total project	250k€

Remuneration package	3 500€ - 5 000€ according to research experience
Quota	Full Time

Strategy of the host institution:

The host institution aims to strengthen the emerging field of Neuroimmunology.

An Inserm Chair position in Neuroimmunology is open at the Centre d'Immunologie de Marseille-Luminy (CIML) in France. This prestigious position offers early or mid-career scientists a unique opportunity to develop ground-breaking research projects and contribute to pioneering work at the interface of Neurobiology and Immunology in a dynamic and supportive environment.

Marseille is a major pole of research in the fields of Immunology and Neuroscience. The aim of this project is to link these disciplines in order to discover unexplored areas at the interface between these biological fields. The research and teaching activities will be developed on the Luminy campus, which brings together the Faculty of Sciences of Aix-Marseille University (AMU), numerous laboratories and research institutes covering major scientific disciplines. The campus includes more than 8000 students, 32 research laboratories (CNRS, INSERM, University, INRA, IRD, CEA), more than 1500 researchers, post-doctoral fellows, engineers..., an incubator and high-tech companies, a training and conference centre and student housing.

The Centre d'Immunologie de Marseille-Luminy (CIML) is a mixed CNRS/INSERM/AMU research center located on the Luminy campus. This laboratory is ideally positioned to develop ambitious multidisciplinary approaches to study the function of the immune system in health and disease. The international reputation of the CIML and the research projects it develops in close collaboration with the APHM (Assistance Publique des Hôpitaux de Marseille), other research institutes, and AMU, are major assets for hosting this Inserm Chair in Neuroimmunology.

This Inserm Chair is intended for researchers who have the potential to lead a research group and participate in national, European, and international projects. The position is offered on a 5-year contract with a fast track to a tenure Research Director position at Inserm upon completion. This position offers a remarkable opportunity for personal and professional growth in a cutting-edge research environment

Strategy of the host laboratory:

CIML's key strengths lie in its comprehensive approach to immunology, covering all aspects of the field from molecular assemblies to complex interactions between the nervous and immune systems. CIML's main assets include its cutting-edge research, state-of-the-art technological platforms, and strong partnerships. The institute is at the forefront of next-generation immunology, leveraging advanced genomics, imaging, and bioengineering techniques to decipher, predict, and manipulate the immune system. It houses 16 research teams and five technological platforms, supporting about 240 staff members from 24 different

nationalities. CIML's research focuses on critical health challenges such as neuroimmunology, cancer immunotherapies, infectious diseases, and systems immunology.

The institute's impact extends beyond basic research. CIML has a strong track record in technology transfer, having founded several successful biotech companies. It maintains extensive collaborations with academic, clinical, and industrial partners worldwide, contributing to the development of Marseille as a national hub for immunology. The institute's excellence is reflected in its impressive publication record, numerous patents, and substantial funding from national and European sources, including 13 European Research Council grants. CIML also plays a crucial role in education, offering renowned masters and doctoral programs in immunology.

Several research teams within the CIML specialize in Neuroimmunology, including the "Neural Regulation of Immunity" team led by Sophie Ugolini, which will host the Inserm Chair. This lab explores the novel interface between immunology and neurobiology. Over recent years, the team has received support from an ERC grant, an Impulscience grant, and additional funding from ANR, FRM, ARC, and La Ligue contre le Cancer. Their research focuses on the regulatory role of the nervous system in immunity, inflammation, infectious diseases, and cancer. By delving into this emerging field, the team has identified critical neuroimmune signaling pathways that play a pivotal role in regulating immune responses to infection and tissue repair.

The establishment of the Inserm Chair in Neuroimmunology associated with this lab will further strengthen this promising field of research within the CIML, the Luminy Campus, and Aix-Marseille University.

Summary of the scientific theme:

The survival of living organisms depends on their ability to develop robust defense mechanisms against environmental challenges such as tissue damage, infections and cancer. These protective functions involve both the immune system and the nervous system, which have traditionally been considered independent entities. However, recent studies have shown that the nervous system plays a crucial role in regulating immune functions.

The aim of the project is to explore the mechanisms by which the nervous and immune systems work together to promote tissue repair and ensure host resistance to disease following pathological challenges.

This groundbreaking project aims to uncover the intricate pathways by which the nervous system orchestrates immune, inflammatory and repair responses from the molecular to the systemic level. We will use a holistic approach based on molecular, transcriptomic and genetic approaches *in vitro* and *in vivo*. In particular, we will study genetically modified mice to explore the consequences of ablation, activation, or inactivation of specific cell types, such as neurons and immune cells, on the host response to pathological conditions including viral infections, tissue injury, and cancer.

This integrative strategy will be underpinned by a synergistic collaboration between the host laboratory and the Inserm Chair, enabling an exhaustive analysis of neuro-immune interactions in both peripheral tissues and the central nervous system. By studying these interactions, this ambitious project aims to significantly advance our understanding of neuroimmune dynamics and their critical impact on health and disease and to propose new therapeutic approaches for the treatment of inflammatory diseases and cancer.

Summary of the teaching project:

Immunology and Neuroscience are among the leading disciplines taught at the Faculty of Science of Aix-Marseille University. The recruited researcher is expected to foster a strong link between these two

disciplines, which will strengthen the pole of neuroimmunology already established on the Marseille-Luminy campus. CIML's team of teacher-researchers is already heavily involved in immunology teaching at Aix Marseille University, including the Master of Immunology, the only Master's degree in France dedicated exclusively to immunology. The recruited chair will strengthen teaching in neuroimmunology, making it possible to link and articulate the Masters programs in immunology and neurobiology. Students will benefit from state-of-the-art knowledge to understand both complex systems. These bridges between disciplines will strengthen a French research network that will provide a favorable ground for new discoveries and make important contributions to this rapidly expanding field. CIML's participation in the creation of Aix Marseille University's Cancer & Immunology Institute and its links with the CenTuri Convergences Institute or the CIVIS European University alliance offer further teaching opportunities within the framework of integrated programs at master's and doctoral level and the development of interdisciplinary research.

National Research Agency package:

200k€

Scientific dissemination/ Open Science:

We expect our articles to be published in peer-reviewed journals that favour open access. All our publications will also be deposited in the HAL open archives system (<https://hal.archives-ouvertes.fr>). The results of this research will be disseminated to the scientific community as well as to the general media. CIML researchers are frequently interviewed by media in France, Europe and the USA, whether by the scientific or general press (France Inter, Europe 1, Le Figaro, Science et Avenir, La Provence, La Recherche...). Dissemination is also done through CNRS and INSERM communication resources, as well as through the CIML Twitter account and website.

Open Science:

All the manuscripts will be included in the national multidisciplinary scientific open archive database HAL (<https://hal.archives-ouvertes.fr>) and will be published in open access journals and preprint servers such as BioRxiv or Research square. The materials published will be available to the scientific community, when necessary through an MTA, and the CIML frequently supplies mouse lines or other materials to groups outside the CIML. The knowledge, data and tools coming from this project will be shared as early as possible in the Research and Innovation (R&I) process, in open collaboration with all relevant knowledge actors, including academia, industry, public authorities, end users, citizens and society at large.

Science and society:

We expect that this interdisciplinary project will reveal new and unexpected neuroimmune pathways involved in the regulation of pathophysiological inflammatory processes that should offer promising therapeutic perspectives.

Selection of candidates:

It is expected the recruited researcher to become rapidly a group leader in the GAD team. So the candidate should demonstrate ability to supervise Ph.D students, post-doctoral fellow and technical support staff. She/he should have the capacity to obtain competitive funding to manage her/his group.

Successful candidates are chosen by a selection commission composed of six to ten members, the majority of whom are specialists in the fields of research concerned.

The commission carries out an initial examination of the applications, focused in particular on candidate experience and skills relative to the research and teaching project presented above. A shortlist of candidates is then selected for interview.

Only candidates selected by the selection committee on the basis of their applications will be invited to interview.

The interviews are followed by a deliberation during which selection commission will discuss the quality, originality and, where appropriate, the interdisciplinarity of the research and teaching projects presented by the candidates, their motivation and their scientific and teaching supervision capacity.

The candidates selected at the end of the selection process will be offered a researcher contract, following approval from the President and CEO of Inserm.

Required profile:

Education Level: **Phd**

Researcher Profile : R3/R4

R3 Established researcher A stage in a researcher's career describing those who have developed a level of independence and can be described as an established researcher

R4 Leading Research A stage in a researcher's career where they can be termed a 'leading researcher'. This would include the team leader of a research group or head of an industry R&D laboratory.

Your application will be evaluated according to the following criteria :

- Relevance and originality of the project related to the research field
- International exposure in research projects
- Your ability to raise funds
- Participation in editorial and reviewing activities
- Your teaching experience
- Your ability to lead a team...

Indicators:

Teaching:

Establishment within the Master of Immunology of Aix-Marseille University of a neuroimmunology module shared with the Neuroscience program.

Research:

We aim at publishing high impact articles in first rank journals.

Application instruction:

Applications can be submitted online at [EVA](#).
Deadline application: **September 10, 2024**

Please complete the scientific file in English.

It is imperative to contact the laboratory corresponding to the Chair you have applied for in order to build the project with them.

Position also open to 'Bénéficiaires de l'Obligation d'Emploi' (disabled persons), as defined in article 27 of law no. 84-16 of January 11, 1984 on statutory provisions for the civil service.