

Inserm - JUNIOR PROFESSOR position

Institute Blood and Brain @ Caen-Normandie (BB@C)

UMR-S U1237 « Physiopathology and Imaging of Neurological Disorders” (PHIND)

Contact:



BB@C
BLOOD & BRAIN @ CAEN NORMANDIE
INSERM/ CAEN NORMANDIE UNIVERSITY AND HOSPITAL

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The junior professorships (Decree n° 2021-1710 of December 17, 2021) constitute a new way of recruitment on research and teaching project allowing at its term, between 3 and 6 years, and after evaluation of the scientific value and the professional aptitude of the agent by a tenure commission, to access a tenured job in the corps of Inserm Research Directors.

The Junior Professor Chairs (CPJ) are intended for researchers with strong potential for supervising and leading research teams, as well as the ability to participate in national, European or international grants.

The "Blood and Brain @ Caen-Normandie" Institute (BB@C) founded by Inserm, the University of Caen Normandy, the CHU of Caen Normandy and the Regional Council of Normandy (bb-c.fr), wishes in its policy of seeking excellence and attractiveness to recruit a junior researcher (teacher-researcher) with a view to creating an independent junior research team to take part in its ambitious research programme. The BB@C institute hosts the UMR-S U1237 PhIND “Physiopathology and Imaging of Neurological Disorders”.

BB@C's goal is to host unique and competitive research programs - junior teams to optimize and enhance innovations in the field of blood-brain interactions, with a particular focus on neurovascular disorders, neuroinflammation, brain aging and mental disorders.

BB@C (bb-c.fr) is hosted at the CYCERON imaging platform (www.cyceron.fr); it promotes interactions between academic research laboratories (phind.fr; cermn.fr), technical platforms (cyceron.fr; esrp.fr) and hospital services (chu-caen.fr), as well as 6 start-ups.

The scientific strategy of BB@C is part of the strategy of Inserm and the University of Caen Normandy in terms of research and teaching through research.

The brain develops and functions in a controlled environment which results from the coordinated action of different cellular interfaces located between the blood and the cerebral parenchyma. This is also true between the blood and the spinal cord. Neurovascular diseases, such as cerebrovascular accidents, neuroimmune diseases, including multiple sclerosis (MS) and age-related brain disorders, certain psychiatric disorders are the causes and/or consequences of disturbances in the homeostasis between blood and nervous tissue. Thus, understanding the interfaces between the blood and the brain is a challenge for the coming decades to improve our knowledge of neurological and psychiatric disorders and identify ways to better diagnose and cure these diseases. These studies are carried out from molecular scales to the most integrated approaches, aided by exceptional brain imaging tools from the Caen site.

The team conducts innovative research in the neurovascular field with pioneering work on tPA signaling and molecular neuroimaging, paving the way for the development of new diagnostic and therapeutic strategies for the acute phase of stroke. The large cohorts of patients followed at the CHU (University Hospital) with complete phenotyping and biobanks, and the significant valorization activity aim to strengthen neurovascular translational research encompassing all aspects of stroke.

The general objective of the project is to understand the neurobiological mechanisms of blood and brain interactions which are the basis of both cognitive processes such as learning or memory as well as their alterations involved in neurovascular diseases. The project will more particularly aim to specify, at different levels of analysis, the physiological and/or pathological neurovascular mechanisms as well as the links between these different levels. The objective is to determine, through a transdisciplinary approach, how different neurobiological systems can lead to the emergence of normal and/or pathological brain functions. The latter will then be as many diagnostic, prognostic and/or therapeutic targets for these pathologies.

Candidates must propose an independent research project in the fields of activity of BB@C mentioned above (these may be molecular, cellular, physiological, imaging or clinical programs, epidemiology).

Objectives in terms of educational content and supervision: For few hours of teaching per year (during the first 3 years period), the recruited professor will join the teaching teams of Neurosciences, at the Bachelor's (Life Sciences) and Master's level (M1 and M2 course of the Neuroscience master's).

Pedagogical and administrative responsibilities: The teacher must have recognized teaching experience in Neurosciences with responsibilities for leading teaching team(s) and a broad knowledge of the discipline, from the cellular and molecular aspects of fundamental neurosciences to to the most integrative aspects. The recruited professor will have to develop new tools for educational innovation, to enable or improve online and/or distance learning, strengthen interactive teaching materials, and develop the practice of flipped classrooms. The general idea would be to set up lessons related to the themes of BB@C with a "Master School" type vision.

Financial summary: using the attached financial form, describe the financial needs and their distribution to carry out the scientific project (doctoral student, post-doctoral student, IT, equipment, etc.)

ANR funding package	200 000 €
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