

CALL FOR APPLICATION

INSERM CHAIR Recruitment

Epitranscriptomics and Cancer Adaptation

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.

Application on EVA: <https://eva3-accueil.inserm.fr/sites/eva/chaieres/2024/Pages/default.aspx>



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:	Montpellier
Location/ Site concerned:	Inserm U1194 - Institut de recherche en Cancérologie de Montpellier (IRCM) https://www.ircm.fr/
Partner institutions:	Université de Montpellier, Isite MUSE.
Research contact:	Nathalie BONNEFOY: nathalie.bonnefoy@inserm.fr
Administrative contact:	chaieres-professeur-junior@inserm.fr
Research fields EURAXESS :	Cancer research - Medical sciences
Keywords:	epitranscriptomics, RNA chemistry, cancer, gene expression, machine learning,

Job title to be filled:	Chaire - Epitranscriptomics and Cancer Adaptation
Body after tenure:	Research Director
Anticipated duration of the contract:	4 years
Scientific domains/fields:	cancerology, biochemistry, bioinformatics
Corresponding specialized scientific commissions (CSS):	CSS 2 - Oncology, genetic diseases CSS 1 - Cellular, molecular and structural biology

Project name:

Epitranscriptomics and Cancer Adaptation

Remuneration package

3 500€ - 5 000€ according to research experience

Quota

Full Time

Strategy of the host institution:

The epitranscriptome is an emerging field with strong clinical potential. Over the last years, chemical modifications of RNA have been identified as a new epigenetic variable, involved in major biological functions and in a large panel of human pathologies including cancers.

Preserving its international visibility in oncology is among the priorities of INSERM and recruiting candidates with high potential in close coordination with its Research Institutes and universities enables to precisely define the priorities of future renewals, site by site.

The INSERM chair on epitranscriptomics at the IRCM (Institute under joint supervision of INSERM, Université de Montpellier and ICM, Institut du Cancer de Montpellier) will strengthen the leadership of the Montpellier campus in the field of oncology. The recruited researcher will develop a very innovative fundamental project with clear clinical perspectives in the field of cancer epitranscriptomics. This project will rely on original platforms and clinical collaborations in which significant financial resources have been invested. The recruited researcher will have the ambition to propose diagnostic, prognostic and therapeutic innovations for the benefit of patients. She/he will also likely bring numerous developments and collaborations with the industrial world.

Finally, support from INSERM for this project will converge with that provided by the Université de Montpellier (through I-Site Muse) and the ICM (SIRIC Montpellier Cancer) and will reinforce their successful joint supervision of the IRCM.

Strategy of the host laboratory:

In barely 20 years, the Institut de Recherche en Cancérologie de Montpellier (IRCM, www.ircm.fr, INSERM, Université de Montpellier, ICM) has succeeded in raising its research to the highest international level in the field of fundamental and applied cancer research, carried out in close collaboration with the clinical departments of the Montpellier Cancer Center ([ICM: l'Institut du Cancer de Montpellier](#)), and industrial partners. Under the joint supervision of Inserm, ICM and University of Montpellier, the IRCM brings together more than 250 people, researchers, clinicians, technicians and students, organized in 17 research teams that rely on high-performance technical platforms and competent support services. Facing a highly competitive and rapidly evolving field of research, the IRCM promotes technology development, innovation and tight collaborations between clinicians and researchers in order to accelerate clinical breakthroughs transfer to the patient. Over the last decade, the IRCM has launched several international calls to recruit junior emerging teams.

As an INSERM chair, IRCM wishes to recruit a future leader in cancer epitranscriptomics. This recruitment will benefit and reinforce the strong involvement of IRCM in the field: in Montpellier, with the "SMART" consortium, a pluridisciplinary research consortium on epitranscriptomics, the [SIRIC ENERGY](#), FHU EVOCAN 2 and IHU « IMMUN4CURE », programs dedicated to translational research in cancer and in autoimmune diseases, resp.; at the national level, with the GDR "[ARN thérapeutique](#)" and at the European level, the COST Action [TRANSLACORE](#) (Translational Control in Cancer).

Summary of the scientific project:

To date, more than 100 RNA modifications have been identified. This complex and dynamic combinatorial process regulates all aspects of RNA metabolism and shapes cell phenotype in real time. An increasing number of these chemical modifications are associated with human pathologies and enzymes regulating these pathways show mutations in neurological, developmental, metabolic, cardiovascular diseases and cancers. Then the growing interest in RNAs is not limited to their functional role, but also to the prospects they offer for personalized medicine: disease diagnosis and therapeutic management. Scientific and technical issues remain to be addressed to identify novel RNA modifications, understand their regulations and elucidate their biological functions. This knowledge is needed for the development of innovative diagnostic, pronostic or therapeutic strategies that specifically target these processes.

The recruited researcher will address these issues, aiming at identifying and characterizing RNA marks associated with cancer progression and adaptation. She/he will benefit on multidisciplinary scientific expertise and cutting-edge equipments and approaches available within the IRCM, and on high-level biobanks and clinical services at the ICM and Montpellier University Hospital, allowing access to state-of-art mass spectrometry analysis of patient samples (targeted proteomics and epitranscriptomics) associated with bioinformatics and machine learning developments. In addition, the "SMART" consortium involving chemists represents a unique opportunity to rapidly develop tailored inhibitors for therapeutic targets.

Summary of the teaching project:

The University of Montpellier supports the implementation of a scientific project in the field of cancer epitranscriptomics at the IRCM through a "starting grant" (junior chair) from its I-Site MUSE. This position comes with a small teaching load (28h of lectures) within the Biology and Health Master's program, more specifically within the "Cancer Biology" course in English followed by students from the faculties of Science, Pharmacy and Medicine, offering training in biology and bioinformatics and covering from the basics of molecular biology of cancer to new anti-tumor therapy.

National Research Agency package:

200k€ + one research engineer and one laboratory technician already available for 4-year term.

Other package:

Co-funding (e-SITE MUSE): 50-100k€

Scientific communication and dissemination, Science and society:

Scientific communication and dissemination

The project should result in several publications in oncology and presentations at international conferences, and when appropriate will be associated with a communication towards patient associations and the public. The project will also have to overcome technological bottlenecks through the development of new tools, both analytical and bioinformatic ones. These tools will lead to various collaborations, as well as to valorization

(patent, industrial collaboration). At the European level, this project will be connected to the recently born [TRANSLACORE Cost Action](#), which aims at promoting and structuring the field of translational control in Europe, helping at large and prestigious dissemination.

Open Science

Data (mass spectrometry data, transcriptomics, genomics,) will be findable through web-based searched of publicly accessible repositories. The implementation of new tools will be shared within the local, national and international scientific community. Production of reusable bioinformatic pipelines and programs will be posted on GitHub and distributed widely through the ATGC bioinformatic platform located in Montpellier. Publications will be posted on HAL and bioRxiv. Regulation of gene expression and cell fate through RNA modifications is a field of rising interest that will certainly enable us to publish preferably in open access format.

Science and society

Communications on a regular basis with the general public (articles in newspapers, internet, podcasts, etc.) will be considered, including during meetings with patient associations or patient families.

Indicators:

Teaching

Integration in the animal physiology teaching team
Proposal of new courses incl. innovative approaches
Student follow up

Research

Quantity and quality of publications
Obtention of research grants
Adequacy between the research carried out by the recruited researcher and I2MC scientific policy

Knowledge transfer

Collaborative research with public findings
Participation in national and international scientific meetings

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...

Application instruction:

Applications can be submitted online at [EVA](#).

Deadline application: first quarter 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.