

CALL FOR APPLICATION

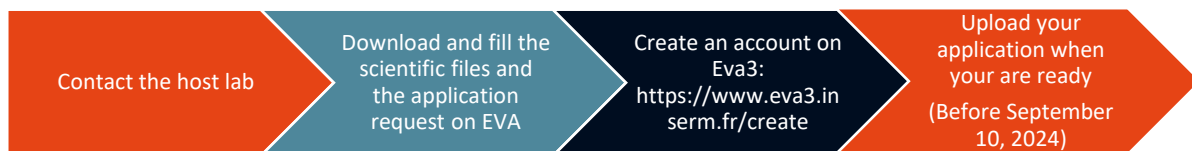
INSERM CHAIR Recruitment

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.

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:	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 Alexandre David : alexandre.david@inserm.fr
Administrative contact:	chaires-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 INSTITUTE - Ideally located near the Cancer Institute of Montpellier, the [IRCM](#) hosts 19 research teams carrying basic and applied research projects who work in close collaboration with clinicians from the ICM, the Montpellier University Hospitals (CHU) and industrial partners. It brings together more than 270 people, researchers, clinicians, technicians and students, organized into 19 teams. Research programs are carried around a central theme, "Dynamic of tumor cells and their ecosystems: from molecular mechanisms to personalized medicine", and three flagship programs, 1/ Radiotherapy, Radiobiology & Genome stability; 2/ Oncoimmunology and Tumor microenvironment and 3/ Oncometabolism & Tumor signaling." Within the research community, IRCM is recognized as a key player in cross-cutting initiatives that boosted cancer research in Montpellier, notably through the SIRIC Montpellier Cancer program, the Laboratories of Excellence (Labex) MablImprove and EpiGenMed, the inter-regional Grand Sud-Ouest (GSO) Canceropole and the i-Site MUSE.

IRCM hosts several core facilities, including molecular interaction, cellular screening, cytometry & microscopy, organoids, metabolomics, spatial biology (proteomics and transcriptomics), histology, animal housing, small animal imaging and experimental irradiation platform. Based on its historical expertise in antibody engineering, IRCM has also developed an innovative platform dedicated to the generation of genetically engineered monoclonal antibodies.

Strategy of the host laboratory:

THE HOST TEAM - Alexandre DAVID's team has renowned expertise in the contribution of post-transcriptional mechanisms to cancer cell adaptation, in particular **RNA epigenetic & translational control**. Following decades of near-dormancy, these fields are experiencing a rebirth, mostly thanks to recent progress in detection techniques such as high throughput sequencing and mass spectrometry, that we both master in the team. As part of the [S.M.A.R.T. consortium](#) and the [TRANSLACORE European network](#), we develop methods and use state-of-the-art tools and techniques to produce innovative research at the crossroads of basic, applied and clinical sciences.

Part of the team work led to the discovery of the role of the m⁶A_m mRNA modification in colorectal cancer progression and response to treatment (*Nat. Comms* 2021). Building on this major discovery, we have developed another line of research focusing on the analysis of tissues and biological fluids from mouse models and patients. We believe that **multivariate analysis of RNA chemical modifications has diagnostic and/or prognostic potential**. It could also highlight the importance of some of them for disease progression and/or treatment resistance, opening up unexplored therapeutic perspectives (*Anal Chem* 2022, *Anal Chem* 2024).

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 candidate will perform **basic and translational research on epitranscriptomics functions in cancer**. The position will aim to strengthen IRCM expertise in the field of "RNA modifications" with complementary skills, **ranging from computational sciences to RNA chemistry**.

Summary of the teaching project:

The position includes 30 hours of teaching and the possibility of participating in the creation of a multidisciplinary Master's degree dedicated to RNA biology. The research and teaching project will be developed within the team « Epitranscriptomics & Cancer Adaptation » led by Alexandre DAVID, on the campus of the Montpellier cancer hospital (ICM) and at the University of Montpellier, respectively. The selected candidate is destined to **become an independent team leader** once he or she has obtained the permanent position.

National Research Agency package:

200k€

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 cancer biology 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: **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.