

## CALL FOR APPLICATION

### INSERM CHAIR Recruitment

### Vertebrate regeneration: quantitative approaches

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>



<b>Supporting institution:</b>	Inserm : Institut national de la Santé et de la recherche médicale
<b>Name of the head of the institution:</b>	Pr. Didier Samuel
<b>Academic region:</b>	Région Sud Provence Cote d'azur
<b>Location/ Site concerned:</b>	IBV – U1091 - Université Côte d'Azur (UCA)
<b>Partner institutions:</b>	Inserm, UCA, CNRS (INSB)
<b>Research contact:</b>	Florence BESSE : <a href="mailto:Florence.BESSE@univ-cotedazur.fr">Florence.BESSE@univ-cotedazur.fr</a> <a href="mailto:ibv.direction@univ-cotedazur.fr">ibv.direction@univ-cotedazur.fr</a>
<b>Administrative contact:</b>	<a href="mailto:chaires-professeur-junior@inserm.fr">chaires-professeur-junior@inserm.fr</a>
<b>Research fields EURAXESS :</b>	Medical sciences
<b>Keywords:</b>	régénération; modélisation; signalisation; approches quantitatives

<b>Job title to be filled:</b>	Chair: Regeneration in Vertebrates: quantitative approaches
<b>Body after tenure:</b>	Research Director
<b>Anticipated duration of the contract:</b>	5 years
<b>Scientific domains/fields:</b>	Developmental Biology
<b>Corresponding specialized scientific commissions (CSS):</b>	CSS 1 - Cellular, molecular and structural biology

**Project name:**

Vertebrate regeneration: quantitative approaches

**Remuneration package**

3 500€ - 5 000€ according to research experience

**Quota**

Full Time

**Strategy of the host institution:**

The Inserm has been cooperating with the University Côte d'Azur (UniCA) in a close and dynamic manner for several years, particularly since the obtention of the IdEx JEDI label, in the definition and implementation of its site strategy related to biology and health. In this context, Inserm and UniCA consider that junior professor chair positions are a real opportunity to boost key local projects by attracting talents with atypical profiles, with the potential to promote transdisciplinarity and breakthrough research. The dynamic and well-structured community of life sciences which has developed within the UniCA integrates forces located throughout its territory, and is particularly at the forefront in developmental biology, pharmacology, transmembrane transport and signaling, which has significant implications for public health (cancer, mental pathologies, cardiovascular and respiratory diseases, metabolic and anti-inflammatory disorders). Priority will be given to the development of a research subject in biology that integrates into the "well-being and aging" axis of the UniCA and relies on a broad range of disciplines including mathematics, physics, imaging. Teaching will be carried out within the EURs (Graduate schools) set up at the UniCA. This chair project is also in line with the INSERM strategic plan, which aims at promoting breakthrough research at the interfaces between disciplines.

**Strategy of the host laboratory:**

The Valrose Institute of Biology (iBV) is recognized internationally for its work on signaling during development and in several pathologies (cancer, pathologies of the nervous, bone, adipose, cardiac, renal, reproductive systems). The iBV studies these questions using several major genetic biological models including mouse, zebrafish, *Drosophila*, nematode.

The recruitment has two main objectives:

1. Develop a development/pathologies/regeneration transverse project. The regeneration of organs and tissues is an essential repair process, whose underlying mechanisms are still poorly understood. Regeneration links normal development and pathologies (both studied at the iBV) by activating fundamental developmental mechanisms in response to injuries/pathologies. This major theme is under-represented at the local level and needs to be strengthened at the national level.
2. Strengthen the development of quantitative approaches necessary for the study of living organisms, in order to extract some of its major concepts and model its mechanisms. Creating high-level research and training in biology is essential to attract and recruit young talents with

multidisciplinary expertise. The project on “*quantitative study of regeneration processes*”, at the interface between the developmental biology and physiopathology fields, fits perfectly with the scientific strategy of the iBV.

#### Summary of the scientific project:

The regeneration of organs and tissues is an essential repair process, yet its underlying cellular mechanisms and signaling processes are still poorly understood. Remarkably, the capacity of living organisms to regenerate is very variable, and mammals (including humans) have only reduced capacities. Understanding how regenerative programs are activated to improve regenerative capacities therefore represents a major objective in life and health sciences. Current study designs are often limited by the accessibility of the tissues studied and the tools available. This research project will study tissue/organ regeneration on a whole organism scale using a biological model adapted to quantitative and modeling approaches, coupled with imaging and functional genetics approaches. The project should provide a better understanding of how cellular signaling pathways (strong theme of iBV) are established and regulated during regeneration.

#### Summary of the teaching project:

A major objective of the project is the development of attractive and dedicated training programs, from the Master to the PhD level, on transdisciplinary themes and methodologies: physics, biology, imaging methods, quantitative approaches, modeling, developmental biology, pathologies and regeneration. These programs will be complementary to the activities of the EUR LIFE (Graduate school of Life and Health Sciences of the UniCA). It will also be integrated to the Ulysseus “European university” network gathering 6 other European universities, UniCA being the node dedicated to the “well-being and aging” axis. The Ulysseus framework will promote the development of this project through support for student mobility, organization of seminars and scientific exchanges.

#### National Research Agency package and other funds:

200 k€

### Scientific communication and dissemination, Science and society:

#### Scientific communication and dissemination:

This original project at the crossroads of disciplines will generate innovative results, concepts and hypotheses, which will be the subject of several publications (originals and reviews) in leading specialty and general journals (rank A). The results will be presented in the form of oral communications at international congresses/conferences/workshops.

#### Open Science:

All publications and communications resulting from the project will be posted on the HAL-Inserm platform. The recruited candidate will be supported in the implementation of the principles aimed at making data "FAIR" ("Findable, Accessible, Interoperable, Reusable").

#### Science and society:

The research topic (regenerative capacities of tissues/organs, quantitative approaches and modeling, interdisciplinarity, etc.) is perfectly adapted to communication with a wide audience. In general, the Valrose Institute of Biology has participated for years and very actively in communication with the general public (regular participation in Brain Week, Nice; Sciences pour tous Conference, Grasse; Natural History Museum, Conference on time; GEMLUC, Monaco; Pint of Science, Nice; Heritage Day - MAMAC Art and Sciences Exhibition, Nice. In addition, school events through awareness-raising for high school and middle school students are organized annually with researchers from the institute (Inserm Festival, MEDITES Network, DECLIC Intervention etc.)

### Indicators:

The following milestones will be used to assess the integration of the recruited person but also its contribution to the quality of research within UniCA:

1. number of articles published in indexed international journals
2. number of supervised masters, theses and post-doc trainees
3. local organization of high-level international conferences/workshops
4. funding obtained (national and European)
5. establishment of new collaborations (national/international) or integration into networks.
6. number of actions to disseminate scientific culture (general public seminars, participation to outreach events, actions towards high school students, etc.)

### Selection of candidates:

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

The committee carries out an initial evaluation 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 pre-selected by the committee on the basis of the written applications will be invited to interview.

The interviews are followed by a discussion during which the selection committee 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.