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Inserm
La science pour la santé
From science to health

HR EXCELLENCE IN RESEARCH

# CALL FOR APPLICATION

# INSERM CHAIR Recruitment

## Development of nano-imaging methods for complex patho-physiological processes monitoring

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


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| **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:** | PARIS |
| **Location/ Site concerned:** | U1182 - Laboratoire d'Optique et Biosciences |
| **Partner institution:** | Ecole polytechnique/ Institut Polytechnique de Paris |
| **Research contact:** | Marie-Claire SCHANNE-KLEIN: marie-claire.schanne-klein@polytechnique.edu |
| **Administrative contact:** | chaires-professeur-junior@inserm.fr |
| **Research fields EURAXESS:** | Diagnostics, Imaging, Engineering (Medical Sciences) |
| **Keywords:** | Nanoimaging, Cell signaling, Spatiotemporal organization, Super-resolution microscopy, Physiopathological processes |

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| **Job title to be filled:** | Chaire - Development of nano-imaging methods for complex patho-physiological processes monitoring |
| **Body after tenure:** | Research Director |
| **Anticipated duration of the contract:** | 4 years |

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| **Scientific domains/fields:** | Biology and Health |
| **Corresponding specialized scientific commissions (CSS):** | Health Technology – CSS7 |
| **Project name:** | Development of nano-imaging methods for complex patho-physiological processes monitoring |

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

**Strategy of the host institution:**

The French National Institute for Health and Medical Research (INSERM) is the primary public institution dedicated to biomedical and health research. Inserm conducts research with a focus on translating research findings into clinical and therapeutic applications that address current public health challenges. Partners include universities, hospitals, and international research organizations.

The “Institut Polytechnique de Paris”, to which École Polytechnique is affiliated, is a leading French institute that is part of the dynamic Saclay scientific hub, combining high-level research, teaching, and innovation at the cutting edge of science and technology. The research conducted covers all modern scientific fields, with the aim of providing answers to today's major societal challenges. Among these fields, the theme of “Biology-Health” has seen significant development in recent years, with the creation of a highly active interdisciplinary center called “Engineering for Health (E4H)”. Supported by the ExcellenceS (France2030) “STEP2” project, the center will be joined by several junior professors. The junior professor recruited in this program will strengthen the Laboratory for Optics and Biosciences, a leading laboratory in the “Biology-Health” theme at the Institut Polytechnique de Paris and participate in this major movement for the Life Sciences.

**Strategy of the host laboratory:**

The junior professor will join the Laboratory for Optics and Biosciences Laboratory (LOB), a joint Inserm-CNRS Physics-École Polytechnique unit. The LOB recently received a very positive evaluation from HCERES and Inserm, and the unit will be renewed in January 2026. The unit is part of a dynamic environment within the interdisciplinary Engineering for Health (E4H) centre, which brings together fundamental, technological, and computational activities for health sciences in the laboratories and facilities of IP Paris. The junior professor will strengthen the “Quantitative Nanoimaging of Biological Systems – Organization and Dynamics” team, which focuses on cell signalling processes and develops original techniques based on tracking single molecules using fluorescent nanoparticles or super-resolution.

**Summary of the scientific project:**

Understanding many complex diseases and designing rational treatments requires research on multiple scales, ranging from molecular events to morphological and functional behaviour at the organ level. The dynamics and spatial organization of signalling pathways can be essential in determining normal or pathological responses in cells and tissues.
This project aims to provide a versatile toolkit for precision imaging at the nanometre scale and with sub-second resolution, compatible with complex systems. This approach will be applied in vitro to study the spatiotemporal organization of fundamental biological functions (division, transcription, trafficking, etc.) in single-celled organisms in various contexts, providing a new test for relevant biomedical questions, such as stress response or antibiotic resistance.

**Summary of the teaching project:**

The junior professor is expected to teach and train students at École Polytechnique/IP Paris, either at the master's level or at the bachelor's level and in the École Polytechnique engineering program. He/she expected to teach biology, biomedical engineering, biophotonics or biophysics for a minimum of 42 hours per year, with the possibility of teaching up to 64 hours per year for an additional salary. He/she will also benefit from an environment conducive to innovation, with the local Drahi-X innovation centre and local initiatives aimed at supporting technology transfer.

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| **National Research Agency package**: | 200k€ |
| **Other package**: | 200k€ |

Co-funding*
Allocation doctorale (IP Paris), 140 000€
Bourse de Master / PhD track (IP Paris – Centre E4H), 20 000€
Soutien du laboratoire (dotations récurrentes), 20 000€
Soutien de l'équipe, 20 000€

*source et montant

**Scientific dissemination/ Open Science:**

**Scientific communication and dissemination**: Participation in scientific conferences organized by IP Paris, École Polytechnique, and the E4H Interdisciplinary Center).
High-level scientific publications.
Seminars.
**Open Science**: Publications submitted to HAL and BioRxiv.
**Science and society**: Participation in science festivals and laboratory visits.

Proposal of articles or interviews in mainstream media (The Conversation, Polytechnique Insights), or scientific podcasts.
We can rely on the communications departments of École Polytechnique and IP Paris to distribute press releases or organize press conferences on significant results.
Possible participation in the equal opportunities center, aimed at high school students or students in preparatory classes.

## Indicators:

- Annual interview and activity report before an evaluation committee comprising representative(s) from Inserm, the unit management, the E4H center, the scientific departments of the School and IP Paris.
- Monitoring of teaching activities by the biology department of École Polytechnique.
- Indicators: publications, internal collaborations, expenditure monitoring, recruitment quality, co-funding applications (ERC, ANR JCJC, foundations), patent filings.

## 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 2, 2026**

*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.