

## CALL FOR APPLICATION

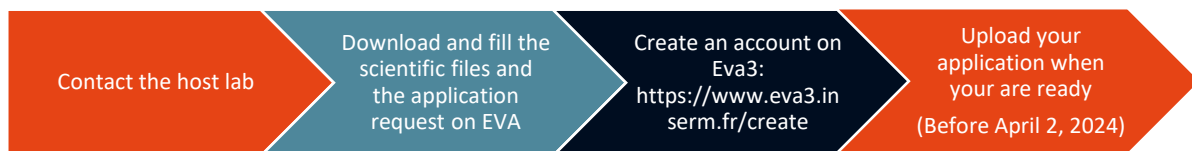
### INSERM CHAIR Recruitment

### Strategy for reducing the risks associated with chronic opioid use

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>



<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>	Paris
<b>Location/ Site concerned:</b>	Inserm U1124 - Toxicité Environnementale, Cibles Thérapeutiques, Signalisation Cellulaire et Biomarqueurs (T3S) <a href="https://t3s-1124.biomedicale.parisdescartes.fr/">https://t3s-1124.biomedicale.parisdescartes.fr/</a>
<b>Partner institutions:</b>	Université Paris Cité
<b>Research contact:</b>	Robert BAROUKI: <a href="mailto:robert.barouki@u-paris.fr">robert.barouki@u-paris.fr</a>
<b>Administrative contact:</b>	<a href="mailto:chaieres-professeur-junior@inserm.fr">chaieres-professeur-junior@inserm.fr</a>
<b>Research fields EURAXESS :</b>	Health science (Medical sciences)
<b>Keywords:</b>	pharmacologie, comportement, addiction, signalisation, mécanismes

<b>Job title to be filled:</b>	Chaire - Strategy for reducing the risks associated with chronic opioid use
<b>Body after tenure:</b>	Research Director
<b>Anticipated duration of the contract:</b>	5 years
<b>Scientific domains/fields:</b>	Addiction
<b>Corresponding specialized scientific commissions (CSS):</b>	CSS6 « Santé publique, santé des populations»

**Project name:**

Strategy for reducing the risks associated with chronic opioid use

**Remuneration package  
Quota**

3 500€ - 5 000€ according to research experience  
Full Time

### Strategy of the host institution:

Addictions are a public health concern, and preventing them is a priority. The development of addictive behavior can have multiple origins, including the misuse and abuse of prescribed medications, exemplified by the opioid crisis in the USA, which began with an increase in prescription opioids. By 2023, over 100,000 opioid overdose deaths are expected in the USA. Risks also exist in France and Europe, with opioid prescriptions steadily increasing in recent years.

Due to its national scope and its position at the research-health interface, Inserm is stepping up its involvement in various fields, including psychiatry and mental illness. Among the pathologies requiring particular attention are addictions. In particular, Inserm is keen to address the current epidemic related to opioid pharmaceuticals, whose usage is currently devastating in terms of public health in the USA and most likely elsewhere. A better understanding of these disorders is essential to accelerate prevention policies and prevent situations that bypass public health policies. Such preventive measures may limit the spread of the epidemic in Europe and in France.

### Summary of the scientific project:

Opioids remain the preferred treatment for chronic pain and continue to be the most effective pain relievers available in clinical practice. However, with chronic use, opioid pain relief is hindered by the development of analgesic tolerance, leading to a reduction in its effectiveness over time. Dose escalation is employed to overcome this reduced analgesia. Unfortunately, it also increases the risk of developing harmful and life-threatening side effects such as sleep disturbances or addiction. One area of focus is the search for an ideal analgesic drug that would be devoid of addiction-promoting side effects and have a low lethality. Unfortunately, to date, no safer alternative to opioids has been discovered because of the complex interplay between  $\mu$ -opioid receptors (their primary target) and the signaling pathways responsible for opioid side effects. Therefore, we will develop a strategy to better identify the molecular mechanisms and circuitry underlying opioid side effects in order to identify targets for improving opioid safety. A growing body of evidence indicates that receptor tyrosine kinases (RTK) may play a key role in the pharmacological responses to opioids, and suggest that RTK inhibitors could constitute a promising strategy to improve opioid safety. We wish to investigate this hypothesis by combining behavioral approaches in rodents (opioid dependence, reward, self-administration) with mechanistic approaches (signaling pathways, crosstalk between receptors), and by characterizing the respective roles of the various RTK subfamilies. Depending on the results, the transition to the clinic could be rapid, given that RTK inhibitors are already the standard treatment for certain cancers.

### Summary of the teaching project:

The teaching project will be integrated into the neuroscience and neurotoxicology teaching offered at bachelor's and master's level.

Within the Science Department of the Université de Paris Cité, there is in particular a master's program in neuroscience in which a significant part of the teaching can be delivered.

We also have a master in Toxicology and teaching on the opioid epidemic and its toxic mechanisms would be of great benefit to our students.

There is also a need to at least some introductory teaching on these issues at the bachelor level.

Furthermore, larger scale teaching to inform citizens will be undertaken for example through public conferences or open online citizen teaching as developed in our university

### National Research Agency package:

200k€

### Other package:

Co-funding: 50 k€

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

#### Open Science :

Inserm is developing a strong policy in favor of open science. Open science aims to make research results "as accessible as possible and as closed as necessary." In this regard, Inserm aims for 100% of the texts of publications resulting from its research units to be made accessible, primarily through deposition in HAL. The produced data should also be made available and reusable, unless there are specific restrictions. Furthermore, the guiding principles of individual evaluation are being revised in accordance with the DORA declaration, becoming more qualitative and taking into account all aspects of the researcher's profession.

#### Science and society :

The science-society relationship is now recognized as an integral dimension of scientific activity. The project will further develop this dimension in synergy with Inserm, Université de Paris Cité and clinical partners. The research work that will result from it will contribute to informing public decision-making. Participatory science initiatives may be initiated with actors from the socio-economic and cultural ecosystem of the project. These links can be established through actions such as Brain Awareness Week, and through links with patient associations.

### Indicators: (teaching, research, knowledge transfer)

The activity will be evaluated, notably based on scientific outcomes, i.e. how much did we learn on the difference between the analgesic and addictive mechanisms allowing a more rational approach to drug development, scientific output (publications, software, patents, etc.), formalized institutional and private partnerships through contracts, international visibility, the dissemination of work to multidisciplinary

scientific communities, innovation and its transfer to society, and the dissemination of scientific knowledge to non-specialist audiences.

### 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: **April 2, 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.