

## Post-doc position in Cardiac Physiology and pharmacology

### Job Profile

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#### Offer description

Candidate will join the group of Pr Benjamin Lauzier in the research team II, "Ion Channels & Cardiopathies" (team leader Michel De Waard & Flavien Charpentier) at l'institut du thorax (the ITX) in Nantes, France (<https://umr1087.univ-nantes.fr/research/research-teams/cardiac-physiology-and-pharmacology-1>). The ITX (INSERM, CNRS & Nantes University) is a public expert center devoted to patient care, translational research and training in cardiovascular, respiratory and metabolic diseases.

The laboratory supports strong teamwork as well as individual career development.

We are looking for a well-trained and highly motivated candidate to work on an ANR/ASMA project (hErOiSmE<sup>2</sup>) on a new therapeutic strategy for hemorrhagic shock.

The consortium we propose for this project builds on a long-standing collaboration between the group of B. Lauzier (researcher, cardiac physiology) and A. Tessier (researcher, synthetic chemistry). Their expertise has been reinforced for a few years by the group of N Prat (physician, IRBA researcher) who brings his knowledge of the pathophysiology of war trauma and large mammal (pig) models. This association of 3 academic research groups is completed by two companies: the company Crossject which is specialized in the development of solutions for intramuscular injection without needle. Finally, the company IDD, specialized since 2003 in a wide range of services such as regulatory assistance and assistance for MA applications as well as medical device certifications. A well-established partner of the French Army, IDD will bring its expertise in project management and strategic development (CMC, non-clinical, clinical) as well as in regulatory strategy. In conclusion, the hErOiSmE<sup>2</sup> project should allow to reach a TRL 6 maturity level (validation in a representative environment of a representative model or a prototype system) - validation of the ZENEO<sup>®</sup> device and basic pharmacology in a large mammalian animal model.

Candidate will ensure part of the project management, relation with the different member of the consortium as well as all the biochemical and physiological experiment (validation of the drug candidate). Candidate will also have to present results and work during team meeting, international congress and within the consortium.

#### Researcher profiles

- First-Stage Researcher (*PhD candidate*)
- Recognized Researcher (*with less than 4 years research experience after PhD*)
- Established Researcher (*with more than 4 years research experience*)
- Leading Researcher

**Research Fields  
(2 max.)**

- Biological Sciences
- Chemistry
- Computer Science
- Engineering
- Environmental Science
- Ethics in Health Sciences
- Medical Sciences
- Neurosciences
- Pharmacological Sciences
- Physics
- Technology
- Other (specify):

**Main Activities**

- The candidate will develop model based on small animal surgery (rats and mice) and evaluate physiological parameters (catheterism, PV loop, echocardiography...)
- He/She should have strong knowledge in pharmacological development of molecular compound  
The post-doctoral fellow will be involved in project aimed at developing a new treatment solution for emergency care. This ANR project is built in collaboration with 2 pharmaceutical company, 1 research team in chemistry and 1 team from l'IRBA.
- The position and the associated research project are funded by the French National Research Agency (Agence Nationale de la Recherche) and the French Defense Agency (Direction Générale de l'Armement).
- Our lab seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

**Associated Activities**

- Participate actively in the supervision of students (L3, master and PhD) and young researchers.

**Specific Requirements or Constraints**

NA

**Skills/Qualifications**

- Competences in cardiac physiology and animal testing certification are a prerequisite
- Experience in molecular biology, physiology, Biochemistry (qPCR, western, pulldown...) and proteomic
- Good communication and interpersonal skills are critical, as well as the willingness to work within an interdisciplinary team.
- The ideal candidate will have a track record of scientific productivity, as evidenced by first-authored publications in peer-reviewed scientific journals.

**Required Experience**

- 0 to 2 years
  - 2 to 4 years
  - 4 to 10 years
  - >10 years
- Fields: cardiac physiology, pharmacology, shock, metabolic pathway**

**Required Education Level or Diploma**

- To qualify to this postdoctoral position the applicant should hold a PhD.

**Required Languages**

- French / english

**Hosting Unit****Code**

UMR 1087

**Name**

The research unit of l'institut du thorax

**Director**

Richard Redon

**Composition**

195 people

<b>Address</b>	8 quai moncouso, 44000 Nantes, France
<b>Website</b>	<a href="https://umr1087.univ-nantes.fr/">https://umr1087.univ-nantes.fr/</a>
<b>Contract</b>	
<b>Type</b>	Fixed term contract
<b>Duration</b>	18 months
<b>Salary</b>	Salary dependent on qualifications in accordance with Inserm standards
<b>Envisaged Start Date</b>	September 2023

## Application

Applicants must send a CV and a cover letter to: Benjamin Lauzier

Contact for further information (name, telephone/mail): Benjamin Lauzier, [Benjamin.lauzier@univ-nantes.fr](mailto:Benjamin.lauzier@univ-nantes.fr), +33 228 080 157

Deadline for application: 01/07/2023