

Nantes Université hires

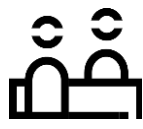
For the Regenerative Medicine and Skeleton (RMeS) laboratory

A junior postdoctoral researcher in immunology and animal experimentation



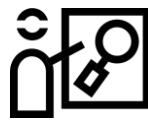
42,500

students, including more than 5,000 international students



2,605

administrative and technical staff



3,147

teachers, teacher-researchers



1,259

doctoral students



42

research structures

Nantes Université is a public institution of higher education and research which proposes **a unique model of university** in France, uniting a university, a university hospital (CHU de Nantes), a technological research institute (IRT Jules Verne), a national research organisation (Inserm) and also Centrale Nantes, Ecole des Beaux-Arts Nantes Saint-Nazaire and Ecole d'Architecture de Nantes.

These players are joining forces to **develop the excellence of Nantes' research** and to offer **new training opportunities** in all fields of knowledge.

Sustainable and **open to the world**, Nantes Université ensures that its students and staff have the best study, research and working conditions for their on-going professional development on all Nantes Université's campuses, in Nantes, Saint-Nazaire and La Roche-sur-Yon.

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| <ul style="list-style-type: none">• Type: State Civil Service• Type of recruitment: 2-years fixed-term contract• Compensation: according to the civil service salary scale for category C and the Nantes Université contractual management charter, and according to the candidate's level of experience. To be defined based on experience | <ul style="list-style-type: none">• Working time: 37h15• Leave: 45 days of annual leave• Work from home according to seniority• Partial reimbursement of home-to-work transport costs (public transport)• Financial assistance for sustainable mobility for home-to-work trips (depending the number of days of eligible transport's use per year)• Access to CROUS restaurants and cafeterias at preferential rates |
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Working environment and context

- **Location: Nantes**

RMeS is a research center affiliated to the French National Institute for Health and Medical Research (INSERM), Nantes Université, Angers University and ONIRIS national veterinary school. RMeS is mainly located in the School of Dental Surgery building, at the Nantes University Hospital

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campus with also additional research spaces in the School of Medicine, the Nantes Veterinary School and the Biomedical Health Institute of the Angers University Hospital.

The RMeS laboratory is composed of 124 people in 2024 (80 full-time equivalent), including 9 permanent senior scientists from Inserm and CNRS (4 DR and 5 CRCN), 12 University/ONIRIS researchers (5 PR, 7 MC), 38 University/Hospital researchers (23 PU-PH, 15 MCU-PH), 8 University/Hospital associated clinicians (8 PH), 29 technical and administrative staffs, 9 postdocs, 19 PhD candidates and about 35 trainees (Master students, engineers, residents). RMeS is structured around 2 independent research teams: REJOINT and REGOS ([see organizational chart](#)). These 2 teams benefit from our 4 open technological platforms: SC3M (electron microscopy, micro-characterization and functional morphohistology- imaging), BIO₃ (biomaterials, biohydrogels and biomechanics), Sc4Bio (Cell biology, molecular biology, biological characterization and bioinformatics), and HiMolA (Molecular Histology).

RMeS aims to reinforce its international positioning as a center of excellence and a leader in skeleton aging and regenerative medicine. Our research goals range from deciphering the mechanisms that govern development, growth and aging of bone and cartilaginous tissues to promote the advance of innovative 4R medicine strategies for the skeleton. Four “R” medicine relies on concepts we recently developed.

The **REJOINT team** is a translational and transdisciplinary team that focuses on the pathophysiology and aging of the joints from their basic aspects (cell fate, tissue modelling, senescence, autophagy, inflammation, immunity) to more translational and clinical aspects (rheumatoid arthritis, osteoarthritis, disc degenerative disease, osteochondral defects, tendinopathies). The REJOINT team studies the fundamental processes of stem cell fate and differentiation during development and growth of cartilage and intervertebral disc. This team also supports the development of (i) bio-inspired hydrogels for drug delivery systems and bioprinting, and (ii) strategies to exploit the properties of extracellular vesicles, mesenchymal or pluripotent stem cells for the regenerative medicine of cartilages and discs. More recently, REJOINT started to support the development of frontier project dealing with the role microbiota in inflammatory joint diseases. To address this ambitious research program REJOINT is organized around 6 groups headed by senior scientists (<https://rmes.univ-nantes.fr/research-teams/rejoint>).

Missions

The proposed position is part of the ANR-funded international project “Novel strategies for Osteoarthritis treatment based on innate LYMPHoid Cells modulation - OLYMPiC2024” led by Marie-Astrid BOUTET. A junior postdoctoral position is funded by this international program to participate in the characterization of the heterogeneity of innate lymphoid cells (ILC) in synovial tissues from patients with osteoarthritis (OA) and in the development of novel therapeutic approaches for this disease. This project is in collaboration with Charité – Universitätsmedizin Berlin.

Main activities

- ➔ Contribute to the establishment of two novel cohorts of human and canine OA patients, and to the collection, storage and histological characterization of the samples collected at Nantes University Hospital and ONIRIS veterinary school.

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- ➔ Analyse the heterogeneity of ILC in public datasets and single-cell RNA sequencing data already obtained in the lab.
- ➔ Characterize the heterogeneity of ILC in human and canine tissue and blood samples using flow cytometry, immunofluorescence, ELISA, and high-throughput approaches, including single-cell RNA sequencing and spatial transcriptomic.
- ➔ Participate to the analysis of metagenomic data from OA canine feces samples.
- ➔ Participate to the development of mouse models of OA that will be performed in Berlin in different full and conditional knock-out strains, and to their histological characterization.
- ➔ Contribute to the training and supervision of master and PhD students.
- ➔ Present the results of the project in lab meetings, national and international congresses.

Profile required

- Education and/or qualification: PhD in immunology, Animal experimentation (French equivalent “Niveau I”), Training in bioinformatic.
- Previous experience welcome for the position: Up to 3 years of postdoctoral experience following the obtention of the PhD.

Position opened to agents likely to take advantage of a legal priority in accordance with the provisions of article 60 of the law of January 11, 1984 on statutory provisions relating to the State civil service (on presentation of proof).

Skills and knowledge required

General, theoretical or disciplinary knowledge:

Good knowledge in:

- immunology,
- lymphocyte biology,
- inflammatory joint diseases,
- high-throughput analyses approaches.

Operational skills:

- Technical expertise in cellular and molecular biology, histology and immunofluorescence, flow cytometry, ELISA (required),
- Experience in managing biocollection of human tissues (required),
- Experience in bioinformatic analyses (R or Python), including single-RNA sequencing (required), spatial transcriptomic (optional) and metagenomic analyses (optional),
- Experience in animal experimentation (required), including the induction of mouse models of joint diseases (optional),
- Excellent oral and written English communication (required),
- Previous experiences of student supervision or teaching (required).

Soft skills:

Teamwork and interpersonal skills.

Application deadline:

22 of December 2024

Date of the commission:

Week 51

Preferred starting date:

1st of February 2025

Contacts:

Contact person for further information on the position: **Marie-Astrid BOUTET** marie-astrid.boutet@univ-nantes.fr

Please send your application (CV + mandatory covering letter) exclusively by e-mail to recrutement-polesante-postdoc@emploi.beetween.com

Link to Euraxes <https://euraxess.ec.europa.eu/jobs/287300>



Advice for the candidates:

... Do not hesitate to consult the website of [BMS](#)

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