



Nantes Université recrute

Pour son laboratoire US2B – Site de la Lombarderie - Nantes

a Post Doctoral Researcher for the molecular modelling of BAK/Bcl-xL interaction

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

These organisations are combining their strengths **to develop the excellence of Nantes'research** and offer **new training opportunities** in all areas of knowledge.

Sustainable and open to the World, Nantes University ensures the quality of the study and working conditions offered to its students and staff, in order to encourage their development on all its campuses in Nantes, Saint-Nazaire and La Roche-sur-Yon.

Work context

The Biological Sciences and Biotechnologies unit (US2B) is an academic laboratory developing basic research in **biochemistry** and **biology** resulting from the merger of two laboratories with, on the one hand, the 5 teams of the UFIP (Functionality and Protein Engineering Unit, UMR CNRS 6286) and on the other hand, the LBPV host team (Laboratory of Plant Biology and Pathology, EA 1157).

Through in-vitro, in-vivo and in-silico approaches, the laboratory conducts research centered on the themes of the regulation of protein functions and the bioregulation of biological activities. In particular, the research will aim to respond to fundamental and applied issues in the fields of structural biology (understanding of the sequence-structure-function relationship), molecular engineering, glycosciences, control of the integrity of genomes, epigenetic regulations of genome expression (from chromatin to translation), biological interactions (microalgae-bacteria, plant-bacteria, plant-plant, etc.) and biological adaptation to the environment (see team projects).

The unit is under the supervision of INSB, CNRS and Nantes University.

Assignments

The post-doctorate candidate will be involved in the WRINXL project supported by an ANR grant. The candidate will model BAX/Bcl-XL interaction alone or in complex in a membranous context. This in silico modelling will be important (i) to understand how these proteins interact and influence each other, (ii) to isolate and optimize chemical entities able to enhance or disrupt the complex, and (iii) to determine at the atomistic level how the complex is involved in apoptosis pathway.

Main activities

The candidate will need to possess or learn the following know-how and knowledge:

- Pattern identification using sequence alignments,
- Model of both proteins isolated, in complex, and in membraneous context
- Study using molecular modelling the protein interface and its stability
- Identify potential small chemical entities using virtual screening for modulating the protein-protein interface strength
- Keep up to date with publications in the domain, but also possess excellent scientific writing skills.

Applicant's profile

- Versant: Fonction publique d'Etat
- Type of recruitment : Post-doctoral Contract, 18 months
- Scientific integrity, autonomy and rigor
- Workplace : Nantes
- Formation/ qualification : PhD, with a demonstrated knowledge of molecular modelling and/or virtual

Required skills and knowledge

General, theoretical or disciplinary knowledge:

The candidate shall possess an initial training in bioinformatics and/or chemoinformatics with a particular focus on protein modelling and analysis. Partial profile will be considered, training shall be provided if required.

Operational skills:

Writing scientific articles
Molecular Modelling and Molecular Dynamics Modelling
Virtual screening protocols and analysis
Effective GNU/Linux knowledge
Shell and Python programming
Knowledge of AMBER modelling suite is a plus

Know-how :

Scientific rigor and integrity
Team work
Scientific curiosity

screening

Our strengths

- *45 days of annual vacation*
- *Working time 37h15*

Tips for Candidates:

Please consult the laboratory web site and our publications prior sending us full resumé, recommandations and applications. Do not hesitate to contact us prior to full application, by mail.

Deadline for applications: 1/17 /2023

Date of the recrutement committee: 1/20 /2023

Starting date: 2/1/2023

Contact : all applications must be sent to: stephane.teletchea@univ-nantes.fr and pole-st-recrutement@univ-nantes.fr in CC and must include a resume, a cover letter and recommendation if available.