



Period: 12 months – Financial support: ANR

Start date: October 1, 2024

Laboratory: CERMN, Centre d'Etudes et de Recherche sur le Médicament de Normandie, UR 4258

An open post-doctoral position in Chemoinformatic and Biostructural team at the CERMN at the University of CAEN (France).

Background and Objectives of the Proposal:

The World Health Organization (WHO) has designated six 'ESKAPE' pathogens as critical targets for drug discovery. These highly virulent and antibiotic-resistant bacterial pathogens are the leading cause of nosocomial infections worldwide. Bacteria have evolved various mechanisms to resist the inhibitory effects of antibiotics. To combat this, we need new classes of antibiotics, especially those targeting new mechanisms.

The current project aims to design new antimicrobial molecules targeting trans-translation in multi-resistant pathogenic bacteria. An *in silico* screening of the CERMN chemolibrary will be conducted by the candidate to identify new promising compounds. To achieve this, the candidate will build a 3D pharmacophore and apply docking strategies. The *in silico* techniques will then be used to guide the pharmacomodulation of the initial hit(s).

Missions:

- 3D structure analysis
- 3D pharmacophore and docking techniques, screening of chemolibraries
- Molecular dynamics
- Preparation/writing of publications, posters, oral communication
- Mentoring and supervising students

Qualification Requirements:

- Experience with molecular modeling strategies: pharmacophore, docking, molecular dynamics
- Good knowledge of R and/or Python

Required Degree and Experience:

- A PhD in biophysics, bioinformatics, or cheminformatics
- Postdoc experience in the molecular modeling domain would be a plus

Deadline for Application: August 23th, 2024

Please send a CV and the names of two references to jana.sopkova@unicaen.fr and patrick.dallemagne@unicaen.fr.