Toulouse Biotechnology Institute
Bio & Chemical Engineering

A Post-doctoral position in
Molecular Modelling and Design of enzymes @TBI, Toulouse, France

A Post-doctoral position is available at the **Toulouse Biotechnology Institute** (TBI) located on the grounds of the INSA-Toulouse (France). The laboratory is affiliated to the French National Centre for Scientific Research (CNRS, UMR INSA-CNRS 5504) and the French National Institute for Agricultural Research (INRAE, UMR INSA-INRAE 792).

Job description

The successful candidate will be part of an ambitious research project called **DRAGONFLY**, funded by the **French Environment & Energy Management Agency (ADEME)**, carried out in collaboration with TWB and involving several partners, both academics and industrials. The project aims at developing new enzyme-based technologies to produce biosourced molecules to replace petro-based chemicals widely used in industry.

He/She will be in charge of conducting molecular modelling studies to get a better understanding of molecular determinants involved in function and substrate recognition of several enzymes involved in the targeted synthetic routes. The objective will then be to apply molecular modelling and state-of-the-art computational enzyme design tools to redesign these enzymes to achieve the desired catalytic properties and drive experimental construction and evaluation of enzyme mutant libraries. This work will be carried out in tight interaction with other Post-doc fellows and Engineers in charge of enzyme engineering tasks.

We are looking for a highly motivated scientist who has research background and expertise in a number of areas of Computational Biology, including protein modelling, molecular docking, molecular dynamics simulations and experience in computational protein design would be a great plus.
A biology background and a sound understanding of protein modelling and protein-ligand interactions are required. Familiarity with UNIX and Linux is expected.

The candidate will be a key player in the project as He/She will ensure the tight interaction between the different academic and industrial partners. He/She will be based at TBI, Toulouse (31).

Qualifications

- PhD in Molecular Modelling, Structural biology, Biophysics or related field.
- Experience in AI-based structure prediction methods and computational protein design would be a plus
- Strong communication and organizational skills and enjoy working in a team-oriented environment.
- Good English skills are required and notions of French would be a plus.

The position is available starting **early 2027 and for a duration of 24 months.**

Applicants should send as soon as possible CV, summary of previous research and contact addresses of two references to:

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