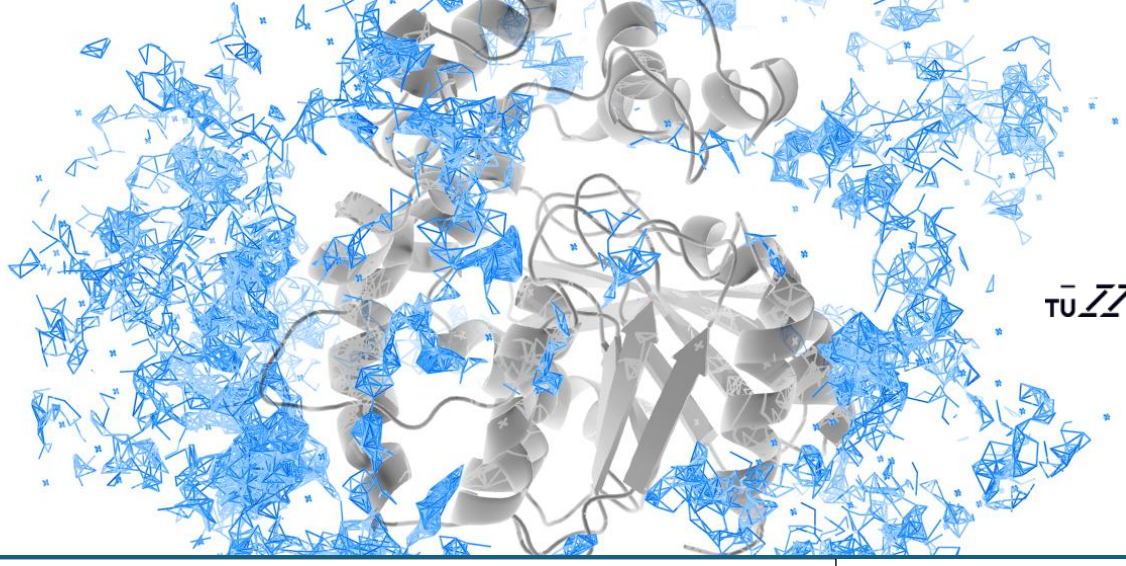

STIPEND IN COMPUTATIONAL CHEMISTRY/MOLECULAR MODELING

JOB DESCRIPTION

The main goal of this project is to develop a pipeline for engineering enzymes that operate at phase boundaries and to validate it with enzymes designed to perform polyurethanes decomposition. Boost of computational tools and high-throughput methods opened a wide avenue for not only enzyme improvement, re-design, but also de novo design. However, the majority of cases involved enzymes acting on small substrates. Unfortunately, the extensive set of established tools for enzyme engineering proves insufficient when designing enzymes to target large substrates with molecular weights comparable to or even exceeding that of the enzyme itself.

The main task of successful candidate will be: development of scripts and software dedicated to project, development of ML and AI based approaches, running of MD simulations, assisting in big data analysis, manuscript preparations.

The offered position is funded by NCN OPUS grant received by dr hab. Artur Góra

REQUIREMENTS:

We are looking for a highly motivated, open-minded, and creative person who enjoys challenges.

- Master's, engineering or bachelor's degree in chemistry / physics / bioinformatics / biotechnology or related discipline,
- Fluency in English,
- Good knowledge of enzymology, biochemistry, bioinformatics,
- Knowledge of Python programming at a minimum basic level,
- Possession of a scientific publication is appreciated,
- Experience in previous projects is appreciated.

OFFER:

We provide international, young and interdisciplinary environment merging computational chemistry with molecular biology, enzymology, medicinal chemistry, entomology and biotechnology.

- stipend up to 4 years according to NCN rules (PLN 5,000 per month)
- Performance bonuses are available from the University
- Flexible working hours
- Working in young and international team
- Participation in an ambitious interdisciplinary project
- Opportunity to gain unique professional experience

LOCATION:

Silesian University of Technology,
Biotechnology Center Gliwice,
Tunneling Group
Poland

WORKING HOURS:

Flexible hours

CONTRACT TYPE:

Stipend according to NCN rules

APPLICATION DEADLINE:

30th July 2025

STARTING DATE:

September/October 2025

APPLICATION SUBMISSION:

a.gora@tunnelinggroup.pl

FUNDED BY:

NATIONAL SCIENCE CENTRE POLAND

About the organization:

This project will be performed in the Biotechnology Center at Silesian University of Technology (SUT) in Gliwice. SUT is one of the leading scientific institutions in Poland (ranked within the top 10 Polish research institutions), equipped with state-of-the-art infrastructure. The Biotechnology Center gathers specialists from computer and environmental science, chemistry, and biology to work together on innovative projects in the field of bioinformatics, medical, environmental, and industrial biotechnology.

About TUNNELING GROUP:

The Tunneling Group was established in June 2014 as an independent research group. The main activity of the group lies on the border of molecular biology and computational chemistry. We are using an advanced theoretical approach to investigate properties of various enzymes, design biologically active compounds, and help experimentalists in interpretation of their results.
More information: www.tunnelinggroup.pl

About recruitment

Recruitment is a two-stage process and includes:
1. formal verification of submitted documents and substantive evaluation of formally correct offers
2. interview (face-to-face or via electronic communication channels) with selected candidates by appointment.
Deadline for settlement of the competition: until August 20, 2025.
Required application documents:
- Cover letter and CV
- List of publications
- Reference contacts
- Copies/scans of documents confirming qualifications (if applicable).

Please send your documentation only by e-mail to: a.gora@tunnelinggroup.pl, title “NCN Postdoc Competition”.

The Committee reserves the right to interview selected candidates who have been rated the highest on the basis of the information contained in the submitted documents (selected candidates will be informed of the date of the possible interview by phone/email) and the possibility of not resolving the competition. In addition, in the absence of satisfactory offers, the competition may be extended. The decision of the commission is not subject to appeal.

Informative clause:

According to art. 13 of the Regulation on Personal Data Protection of 27 April 2016, please be informed:
1) The controller of your personal data is the Silesian University of Technology with its registered office at Akademicka 2A St, 44-100 Gliwice,
2) The Silesian University of Technology has appointed the Data Protection Officer who can be contacted via the email address: iod@polsl.pl,
3) Your personal data will be processed in order to carry out the recruitment process for work at the Silesian University of Technology,
4) the basis for the processing of your personal data is art. 221 of the Labour Code and, if you agree to use your CV in future recruitments at the Silesian University of Technology, art. 6 clause 1 point a of the GDPR Regulation shall apply,
5) only employees authorized to process personal data to the necessary extent will have access to your personal data within the organizational structure of the Silesian University of Technology,
6) Your personal data shall not be disclosed to other entities, except in cases provided for by law,
7) Your personal data shall be stored for the period necessary to carry out the recruitment process or for the next 9 months from the end of the recruitment process, if you authorize the processing of personal data in future recruitment processes.