CeNT-06-2026

Director of Centre of New Technologies of the University of Warsaw, with the Project Leader, announce opening of the competition for the position of PhD Student in the Interdisciplinary Laboratory of Biological Systems Modelling – Centre of New Technologies of the University of Warsaw.

JOB OFFER

Position in the project:	PhD Student
Laboratory:	Interdisciplinary Laboratory of Biological Systems Modelling
Scientific discipline:	Physical and Chemical Sciences
Keywords:	Structural Biology; Biophysics; Molecular Sciences
Job type (employment contract/stipend):	Stipend
Number of job offers:	1
Remuneration/stipend amount/month:	6742 (4242 - doctoral scholarship paid by the Doctoral School + 2000 - by OPUS NCN) PLN/month gross for the first 24 months and 8340,90 (5340,90 + 3000 respectively as above) PLN/month gross for the remaining 24 months.
Position starts on:	1 September 2026 or as soon as possible afterwards
Maximum period of contract/stipend agreement:	36 months with possibility of extension to 48 months
Institution:	Centre of New Technologies, University of Warsaw
Project leader:	Dr Fernando Bruno da Silva
Project title:	The influence of non-trivial topology on protein degradation by ClpXP in the context of degron design.
NCN programme:	OPUS 29
Project description:	This project explores how ATP-dependent proteases, particularly the ClpXP complex from *E. coli*, degrade knotted proteins with complex topologies, including 3_1, 6_3, and 8_3 knotted folds. We will investigate how degron sequences direct substrates toward ClpXP and how knotted conformations influence recognition, unfolding, and translocation. Using biophysical assays, structural biology, and computational modeling, we aim to determine how topology, beyond classical geometric factors, shapes degradation efficiency. A second goal is to design novel degrons using a latent generative landscape (LGL) machine-learning method to optimize substrate targeting.
Key responsibilities include:	The PhD researcher will be responsible for assisting in protein purification and degradation experiments. This will involve tasks such as preparing reagents, running experiments under supervision, collecting data, and data analysis. The student may also be involved in simple computational simulations, such as molecular dynamics simulations.
Profile of candidates/requirements:	The competition is open for persons who meet the conditions specified in the regulations on the allocation of resources for the implementation of

	tasks financed by the National Science Centre for OPUS 29 grant. MSc degree in biology, chemistry, biophysics, biotechnology, or related discipline. The MSc degree should be obtained before the date of employment in the project. - Confirmed status of a PhD student (on the date of starting work in the project at the latest). - Fluency in written and spoken English. - Willingness to work in an interdisciplinary and international team. - Ability to work in a group, curiosity, and motivation to learn. Optional but often appreciated: - Familiarity with programming languages (R or Python); - Basic structural analysis (PyMOL, Chimera, AlphaFold, or VMD); - Experience expressing recombinant proteins in E. coli; - Understanding of protein structure, folding, and enzymatic mechanisms; - Ability to design purification workflows and evaluate purity using SDS-PAGE and UV absorbance profiles; - Experience preparing publication-quality figures.
Required documents:	1. Cover letter; 2. Current curriculum vitae; 3. Copy of MSc certificate (or, if the MSc certificate has not been obtained yet, a certificate/document about the date of MSc defense); 4. Document confirming the status of PhD Student (to be provided before starting work in the project); 5. The successful candidate is expected to be already enrolled or to enroll in the Doctoral School of the University of Warsaw; 6. Signed information on the personal data processing. Before entering the competition, candidates are obliged to familiarise themselves with Internal Reporting Procedure.
We offer:	The opportunity to join an international and multidisciplinary team conducting research at the interface of biology, chemistry, and physics. An open and welcoming work environment with ample opportunities for professional development and global scientific partnerships.
Please submit the following documents to:	f.bruno@cent.uw.edu.pl
Application deadline:	30th of April 2026 Selected candidates will be invited for an interview in person at the Centre for New Technologies, University of Warsaw, or online.
Date of announcing the results:	Not earlier than 24th of August 2026
Method of notification about the results:	Email, CeNT UW web page.