



CeNT-25-2021

**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:	Chemical Sciences, Physical Sciences, Pharmaceutical Sciences
Keywords:	structural biology, enzymes, single force spectroscopy, protein degradation, NMR , X-ray
Job type (employment contract/stipend):	stipend
Part-time/full-time:	Part-time or full time, to be agreed with a candidate
Number of job offers:	1
Remuneration/stipend amount/month:	2000-4500 PLN gross gross
Position starts on:	1.10.2021
Maximum period of contract/stipend agreement:	12 months, with the possibility of extension up to 36 months
Institution:	Centre of New Technologies, University of Warsaw
Project leader:	Professor Joanna Sułkowska
Project title:	Double-knotted proteins - limits of topological complexity of proteins
Competition type:	OPUS 16
Financing institution:	NCN
Project description:	<p>The goal of this project is to uncover of the biological activity of selected members of methyltransferase proteins from SPOUT family based on broad spectrum of structural biology and single molecules methods.</p> <p>Address the question of whether its fusion with other members has a biological activity. General aim is a better understanding of the influence of non-trivial topology on fundamental biological mechanisms such as evolution, function and degradation. The project is interdisciplinary and involves aspects of computer simulations, biophysics, and both in vivo and in silico studies. The role of the applicant will be to conduct experimental</p>



	<p>investigation. In consequence, though, the use of multiscale computational, machine learning methods and in vivo results we will investigate on one hand the function of protein with non-trivial topology, and on the other hand, we will use state-of-the-art methods to design biomolecules.</p>
Key responsibilities include:	<p>The successful candidate will have the MSc. degree in chemistry or biology/pharmacy. The candidate should have strong background in protein biochemistry/biophysics/molecular microbiology (should have experience with a protein expression from an E. coli bacteria, chromatographic methods of their purification, kinetics study) or previous experience in investigation of proteins on the single molecule level. Experience in conducting computer simulations, knowledge of Python, scientific computing libraries, and Linux environment will be an advantage.</p>
Profile of candidates/requirements:	<p>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 16 grant.</p> <p>The successful PhD candidate will have a MSc degree or equivalent in chemistry/biology/pharmacy or physics . The MSc degree or equivalent should be obtained before the date of employment in the project – by 30.09.2021 at the latest;</p> <p>- Confirmed status of a PhD student on the day of starting the work in the project (01.10.2021)</p> <p>To receive the stipend, the successful candidate needs to have a PhD student status at a Polish university either in a PhD programme or in a Doctoral School of Exact and Natural Sciences (e.g., at University of Warsaw registration deadline is 28.06.2021, <a href="https://szkolydoktorskie.uw.edu.pl/en/">https://szkolydoktorskie.uw.edu.pl/en/</a>), according to standing procedures.</p> <p>Good experience either in structural biology, purification of proteins, NMR techniques. Experience with numerical simulations, knowledge of c++ or Python and scientific computing libraries and Linux environment, good understanding of soft condense matter physics, statistical physics would be welcome,</p>
Required documents:	<ol style="list-style-type: none"><li>1. Cover letter;</li><li>2. Current curriculum vitae;</li><li>3. Copy of MSc certificate (or, if the MSc certificate has not been obtained yet, a certificate/document about the date of MSc defense);</li><li>4. Two letters of recommendation;</li></ol>
We offer:	<p>An opportunity to participate in a multidisciplinary project in one of the best scientific institutions in Poland. Stimulating, young and friendly work environment. Access to high quality structural biology laboratory, as well as, high-end computing equipment (CPU clusters). Opportunity to participate in EUTOPIA COST network and various practical EMBO workshops.</p>
Please submit the following documents to:	<p><a href="mailto:j.sulkowska@cent.uw.edu.pl">j.sulkowska@cent.uw.edu.pl</a></p>



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Application deadline:	30.06.2021
Date of announcing the results:	20.07.2021
Method of notification about the results:	e-mail

To allow us to process your data, please include in your application the signed information on the personal data processing, available at: <http://bsp.adm.uw.edu.pl/bsp/druki-i-formularze/>