Job ID: #JOB 6/2023

Job Description

Job Title: postdoctoral researcher in computational biophysics

Job Summary:

The postdoctoral researcher will join the Division of Theoretical Physics at the Institute of Physics, Polish Academy of Sciences, to participate in the research project on "Biomolecular condensates of galectin-3" supported by the National Science Centre. The postdoctoral researcher will perform molecular dynamics simulations of galectin-3 condensates – both in aqueous solutions and at lipid membranes – using the MARTINI coarse-grained model.

Job Description:

Galectins are proteins involved in many biological functions, including immune responses, cell migration and signaling. The multiple biological functions of galectins stem from their interactions with diverse glycoproteins and glycolipids. In mammals, the galectin family consists of 15 members. Galectin-3 is unique within this protein family because of its peculiar molecular architecture. Galectin-3 has been reported to be involved in numerous intra- and extracellular processes, including endocytosis.

The molecular mechanisms underlying the galectin-3-dependent endocytosis remain elusive. Very recently, however, galectin-3 has been demonstrated to undergo liquid-liquid phase separation (LLPS), which sheds new light on how this protein can perform its biological functions. The objectives of the project are: (i) to explore the intra- and inter-molecular interactions that drive the LLPS of galectin-3, (ii) to give a detailed description of the molecular architecture of galectin-3 condensates in aqueous solutions and at membrane surfaces, and (iii) to explain the molecular mechanisms underlying the membrane bending and endocytic pit formation by the galectin-3 biomolecular condensates. The postdoctoral researcher will contribute towards achieving the objectives of the project using coarse-grained molecular dynamics methods.

Requirements:

- PhD in physics or a related branch of science;
- communicativeness and good command of spoken and written English;
- diligence at work and consistency in achieving results;
- good knowledge of numerical methods in molecular biophysics;
- good knowledge of statistical mechanics;
- experience with molecular dynamics simulations of biological macromolecules;
- experience with coarse-grained methods in computational biophysics;
- experience with the GROMACS package and the MARTINI force field.

Main research field: Physics

Sub Research Field: Theoretical Biophysics

Career Stage: PhD in physics or a related discipline obtained no earlier than in 2017

Research Profile (details)**:** Recognized Researcher (R2)

Type of Contract: Temporary

Appointment: 12 months with a possibility to extend to another 12 months

Status: Full-time

Salary: Approximately 8300 PLN per month (before ~30% taxes), employer costs 10 000 PLN per month

Contact

More information can be obtained from Bartosz Różycki (email: rozycki@ifpan.edu.pl). Please make contact.

Application details

Application deadline: March 31, 2023. Applications after the deadline are not considered.

Required materials:

• PhD diploma or an explanation of when one is expected
• Curriculum Vitae
• List of publications
• Motivation letter
• Contact data (e-mail) to at least two potential referees
• Consent to process your personal data (expressed on the form attached to this announcement).

All materials should be submitted in electronic form to the address: rekrutacja@ifpan.edu.pl with Job ID in the subject.

DATA PROCESSING UNDER CONSENT FOR THE PURPOSES OF RECRUITMENT

Under Art. 13 sections 1 and 2 of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Resolution), EU OJ L 119 of 04.05.2016, page 1, as amended, hereinafter referred to as "GDPR", we hereby inform as follows:

1. The Data Controller of the provided personal data is the Institute of Physics of the Polish Academy of Sciences, Al. Lotników 32/46, 02-668 Warsaw, phone (22) 116-2111, e-mail director@ifpan.edu.pl.
2. Contact details to the Data Protection Officer are as follows: e-mail iodo@ifpan.edu.pl
3. Your personal data shall be processed for the purpose of carrying out the recruitment process for the position of postdoctoral researcher.
4. Processing of your personal data in scope of: full name, date of birth, correspondence address, information about education and course of past employment shall take place under Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code. In the scope in which you sent to us more personal data than indicated above, we process your data under the consent granted by you.
5. Your personal data shall be stored for 1 month from completion of the recruitment process. If you grant consent for processing of personal data for future recruitments, we shall process your data until withdrawal of the consent by you, however, no longer than for the period of 6 months from the day of submittal of the application by you.
6. Provision of the abovementioned data in the scope indicated above is a statutory requirement resulting from Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code, in the remaining scope it is voluntary. Failure to provide the data referred to in Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code precludes consideration of your candidacy for the offered position.
7. You have the right to access your personal data, to rectify them, erase them, restrict their processing.
8. You may submit a complaint to the Inspector General for the Protection of Personal Data.
9. You have the right to withdraw the consent to process your personal data in the scope in which they were provided at any time. Withdrawing the consent does not affect the lawfulness of processing carried out on the basis of consent before its withdrawal.

Consent content:

> ☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents for the purpose of carrying out the recruitment process for the position of postdoctoral researcher .*

If you want us to consider your candidacy also in the future recruitment processes, please grant the additional consent:

> ☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents in future recruitment processes taking place during 6 months from the day of appearance of this job advertisement.*