



Jagiellonian University in Kraków promotes cooperation and cares for a good atmosphere based on mutual trust. It implements the strategy resulting from The Human Resources Strategy for Researchers, creating stable conditions for employment as well as the development of academic career, which resulted in the award of the HR Excellence in Research by the European Commission

## **INFORMATION ON SELECTION PROCEDURE**

Date of selection procedure announcement	Krakow, 18.06.2024
Selection procedure information number given by the Centre for Human Resources	1227.1101.186.2024
Dean of the faculty of /Director of a non-faculty, inter-faculty or common unit	Dr Danuta Earnshaw Mossakowska, prof. UJ Director of the Malopolska Centre of Biotechnology
Address	Gronostajowa 7A, 30-387 Kraków

## **RECTOR**

of the Jagiellonian University
announces a selection procedure for the position of an

ASSISTANT PROFESSOR

Group of employees	Research staff
JU organisational unit (place of work performance)	Malopolska Centre of Biotechnology
Field of science	Natural sciences
Discipline	Biological Sciences
Scope	Molecular and structural biology, biotechnology
Number of posts	1
Type of employment	Fixed-term employment contract
Working time	Full- time
Planned duration of employment	3 years











## Expected date of employment commencement

The third quarter of 2024.

#### Remuneration

according to the <u>Rules for Remunerating Jagiellonian University</u> <u>Employees</u>

#### Requirements

The selection procedure is open for all individuals, who meet the requirements set out in Articles 113 and 116.2.3) of the Act of 20 July 2018 – Law on Higher Education and Science, and who meet the following eligibility criteria according to § 165 of the Statute of the Jagiellonian University:

- holding at least a doctoral degree;
- having relevant scientific achievements;
- taking active part in scientific life.

#### Additional requirements and expectations

- 1. PhD degree in biophysics, computational biology, chemistry, bioinformatics, or a related field.
- 2. Experience in performing molecular dynamics simulations / Monte Carlo simulations / docking simulations, as well as experience in constructing models of large biomolecular complexes.
- 3. familiarity with Unix and programming experience (python, bash) are essential.
- 4. Knowledge of cell biology and experience in large-scale simulations are welcome.
- 5. 5. Excellent communication skills and fluency in English.

## Project Title

"Dioscuri Centre for Modelling of Posttranslational Modifications"

#### Project description

We are currently seeking applications for a 3-year Postdoctoral position to explore the interactions between glycoproteins and the extracellular matrix (ECM) components. The ECM is a multifaceted web of proteins and carbohydrates that constitutes the structural underpinning of biological tissues. ECM interacts with membrane proteins and affects how they diffuse in cellular membranes. Glycans, the carbohydrate moieties that decorate majority of membrane proteins, are generally expected to shield intermolecular interactions. Therefore, glycosylation status is expected to alter how membrane proteins move in ECM and affect their physiological functions. These effects are expected to be profound in cases where lateral clustering defines protein function, e.g. in immune cells or neuronal synapses. Preliminary results from our experimental collaborators have indicated that the lateral mobility of neurotransmitter receptors in neuronal membranes is affected by ECM, and varies depending on receptor glycosylation status (i.e., differs among distinct glycoforms), with potential profound functional consequences. Interestingly, glycan types are frequently altered in conditions ranging from neurological diseases to congenital disorders of glycosylation, but the role of glycans in modulating receptor dynamics and function remain poorly understood.

In this Project, together with experimental and computational partners we plan to address this gap.

## Objectives:

ECM models: Using results from super-resolution microscopy as well as mesoscopic simulations performed by our collaborators, develop and validate atomistic and coarse-grained (Martini) model of fragments of neuronal ECM.

Glycoprotein diffusion: By performing large-scale molecular dynamics simulations, investigate how glycans influence the diffusion properties of neurotransmitters within the ECM.

Experimental-Computational Synergy: Work closely with











glyconeurobiology experts to cross-validate our computational findings with single-protein tracking experiments.

Disease Relevance and Translation: Uncover how altered glycanprotein and glycan-glycan interactions contribute to neurological diseases. Our work aims to shed light on the glycan-dependent mechanics of neurotransmitter receptors and synaptic transmission, offering routes for novel therapeutic strategies.

Through this project, we wish to offer insights into the role glycans play in protein-ECM interactions in neurons and cells in general, thereby creating a ripple effect across neurobiology, pharmacology, and medical research.

The successful candidate will be a part of the Dioscuri Centre for Modelling of Posttranslational Modifications, which is an integral part of the Dioscuri Program, a Max Planck Society initiative, co-funded by the German and Polish Ministries of Science.

The Malopolska Centre of Biotechnology and the Dioscuri Centre strive to ensure a workplace with equal opportunities. We celebrate diversity and are committed to creating an inclusive environment for all members irrespective of gender, nationality or disabilities.

#### Scope of duties

according to the <u>Work Regulations of the Jagiellonian University</u> Annex 1 to the Work Regulations of the Jagiellonian University – Model scopes of responsibilities and duties of academic teachers.

#### We offer

- stable employment based on an employment contract at a renowned university,
- cooperation with the interdisciplinary academic community represented by established experts in the field,
- scientific support as well as the possibility of qualification improvement and professional development,
- access to research infrastructure,
- competitive salary,
- close interactions with the dept. of Theoretical Biophysics at the Max Planck Institute of Biophysics in Frankfurt am Main led by Gerhard Hummer, partner of the Dioscuri Centre,
- benefits in the form of sports activities multisport card, medical packages, group insurance,
- opportunity to enjoy additional social benefits.

## Required application documents

- 1. resume,
- 2. personal questionnaire filled in by the candidate,
- 3. copy of the Doctoral diploma and, if applicable, of the candidate's Habilitation diploma,
- 4. information on the candidate's scientific, teaching and organizational achievements,
- 5. declaration of the candidate, confirming that the Jagiellonian University will be their primary place of work, should they be selected in the selection procedure,
- 6. statement under Article 113 of the Law on higher education and science,
- 7. statement on acknowledging and accepting the rules and regulations concerning intellectual property management and commercialization in force at the Jagiellonian University.

Declaration forms (no. 5-7) and personal questionnaire template (no. 2) can be obtained at:

https://cso.uj.edu.pl/en GB/dokumkandyd

#### Additional application documents

# list of publications (along with respective publishers and page numbers), Electronic versions for non-open access publications

#### The course of selection procedure

The first stage of the selection procedure is the formal assessment of the submitted documents. Applications which meet all formal requirements are the subject of substantive assessment, during which











	an interview with the Candidate may be conducted (directly or via electronic communication channels), upon settling the date of the interview with the Candidate. The Candidate has the right to appeal against the negative assessment by the selection board within 7 days from receiving the information about the results of the assessment. The selection procedure is conducted in accordance with <a href="The Policy of Open, Transparent and Merit-Based Recruitment Process at the Jagiellonian University">The Policy of Open, Transparent and Merit-Based Recruitment Process at the Jagiellonian University</a> .
Form of submission	by e-mail to the address: <a href="mailto:job.mcb@uj.edu.pl">job.mcb@uj.edu.pl</a> , title: "Assistant
	Professor (Post-doc) - Dioscuri"
Deadline for submission of applications	19.07.2024
Expected date of the selection procedure settlement	09.08.2024
Method of communicating of the results of the selection procedure	by e-mail
Questions	For further information please contact dr. Mateusz Sikora, e-mail address:mateusz.sikora@uj.edu.pl, job.mcb@uj.edu.pl

In the selection procedure, the Jagiellonian University follows the principles of the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers. Jagiellonian University does not provide housing.

On behalf of the Rector of the Jagiellonian University

Director of the Malopolska Centre of Biotechnology Dr Danuta Earnshaw Mossakowska, prof. UJ











## Personal data processing information for job applicants

According to Article 13 of the Regulation (EU) 2016/679 of the European Parliament and of the Council 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 Regulation – hereinafter GDPR), the Jagiellonian University informs that:

- 1. The Administrator of your personal data is the Jagiellonian University with its registered office in Gołębia 24, 31-007 Kraków, represented by the Rector of UJ.
- 2. The Jagiellonian University appointed the Data Protection Officer www.iod.uj.edu.pl, Gołębia 24, 30-007 Kraków. The Officer can be contacted by email: <a href="mailto:iod@uj.edu.pl">iod@uj.edu.pl</a> or at the telephone number 12 663 12 25.
- 3. Your personal data will be processed in order to:
  a. conduct recruitment process for the position specified in the above advertisement as part of the legal obligation of the Administrator pursuant to Art. 6 (1) lit c of the GDPR in connection with the Polish Labour Code;
  - b. conduct recruitment process for the position specified in the advertisement based on your consent pursuant to Art. 6 (1) lit a of the GDPR your consent is granted by the clear action of submitting your CV with the Administrator. The consent to the processing of personal data concerns data that you voluntarily provide as part of your CV, which do not result from Polish Labour Code.
- 4. The obligation to provide your personal data results from the law (it applies to personal data processed under Article 6 (1) lit c of the GDPR). Failure to provide you personal data will result in your inability to take part in the recruitment process. Submission of personal data processed on the basis of consent (Article 6 (1) lit a of the GDPR) is voluntary.
- 5. Your data will be processed during the recruitment period. In the event of not concluding the contract with you, your data will be deleted after the recruitment process.
- 6. You have the right of access to the content of your personal data, as well as the right to correct, delete, restrict processing, transfer, object to processing on the terms and conditions set out in the GDPR.
- 7. If the processing is based on consent, you have the right to withdraw the consent at any time, which shall not affect the lawfulness of processing based on the consent given before the withdrawal. Withdrawal of consent to the processing of personal data can be sent by e-mail to: mcb@uj.edu.pl or by post to the following address:
  - Małopolskie Centrum Biotechnologii, Uniwersytet Jagielloński, ul. Gronostajowa 7A, 30-387 Kraków, or you can withdraw your consent in person at Małopolskie Centrum Biotechnologii, Uniwersytet Jagielloński, ul. Gronostajowa 7A, 30-387 Kraków.
- 8. Your personal data will not be subject to automated decision making or profiling.
- 9. You have the right to lodge a complaint with the Inspector General for the Protection of Personal Data, if you feel that the processing of your personal data violates the GDPR regulations.









