UNIWERSYTET JAGIELLOŃSKI W KRAKOWIE

Bionanoscience and Biochemistry Laboratory

Rector of the Jagiellonian University announces a contest for the positions of **Postdoctoral Researcher in Biological Nanoscience**

Bionanoscience and Biochemistry Laboratory (Heddle Lab) Malopolska Centre of Biotechnology, Krakow, Poland

We are now recruiting a postdoctoral scientist to join our team to design and build DNA-membrane protein nanomachines for use in artificial cells. The project offers the opportunity to gain experience in a new area of synthetic biology, which will become increasingly important in the future. It also offers the chance to work in a dynamic, international team working closely with partners across the world and the successful applicant will have the opportunity to spend some time at the lab of Ilia Platzman (https://www.is.mpg.de/spatz/platzman) at the Max Planck Institute of Medical Research in Heidelberg, Germany.

You will be part of the Heddle lab (www.heddlelab.org), a newly established, innovative lab carrying out ambitious research aimed at designing and building artificial biological nanomachines using DNA, protein and lipid building blocks. We are located in a state-of-the-art laboratory, based at the new Malopolska Centre of Biotechnology, in the beautiful city of Krakow, Poland

Details of Project: The successful candidate will join a FNP "TEAM" project that aims to design and build novel DNA-based nanomachines able to interact with specific proteins and help construct artificial cells. Your contribution will be: **1.** Contributing to protein and lipid novel nanostructure design. **2.** Structural studies of designed membrane protein complexes (using cryo-EM and AFM with expert collaborators and X-ray crystallography if applicable). **3.** Working with other members of the team to interact DNA devices with proteins and lipids**. 4.** Production and purification of proteins and liposomes and other lipid structures including **s**eparation and purification of modified GUVs and their downstream analyses **5.** Optimization of a microfluidics, GUV production system for interaction with DNA origami and designed proteins (with collaborator). **6.** Time-dependent measurement of the function of designed DNA/protein based nanomachines inside GUVs. **7.** Working with other members of the team to interact DNA devices with proteins and lipids**.**

Requirements

1. Should have a PhD in chemical engineering, structural biology, molecular biology, biochemistry, biophysics or related discipline
2. Must be less than 5 years since awarding of PhD (not including allowed career breaks)
3. Experience working with lipids/membrane proteins/DNA nanostructures would be advantageous but not obligatory as these skills can be learned in-house
4. Experience in structural biology, particularly cryo EM will be advantageous but not obligatory
5. Should have general molecular biology skills such as cloning and protein production/purification
6. Have good skills of work management and experimental record keeping
7. Should be able to work well in a multidisciplinary team
8. Have good written and oral communication skills in English

Important Dates

- Application Deadline: Noon (CET) on May 12th 2018 Start Date: June1st 2018 or as soon as possible thereafter

Our Offer

- Postdoctoral research position with generous, *internationally competitive* remuneration (gross salary of 14000 PLN per month)
- Discounted membership of sports facilities ("Multisport", https://www.benefitsystems.pl/en/for-you/multisport/)
- Subsidised social events (theatre tickets, hotels etc)
- Excellent training: In our diverse group you will be able to network with international researchers, experience and learn new skills including in DNA origami design, enzyme biochemistry, structural biology, protein design etc.

How to Apply

Send applications to jonathan.heddle@uj.edu.pl applications should be marked "FNPostdoc3" and include the following:

1. Copy of PhD certificate
2. Contact details of a minimum of two referees including a former academic supervisor
3. Motivation Letter
4. CV

5. Your application must include the following statement: “I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Personal Data Protection Act as of 29 August 1997, consolidated text: Journal of Laws 2016, item 922 as amended.”

The best candidates may be interviewed shortly after the application deadline.

The project “*Merging Programmable DNA Nanorobots and Microfluidics for Orientationally Controlled Delivery of Membrane Proteins to Protocells”* is carried out within the TEAM Programme, being a Grant Project of the Foundation for Polish Science funded by the European Regional Development Fund within the framework of Smart Growth Operational Programme 2014-2020 (SG OP), Axis IV: Increasing the research potential, Measure 4.4: Increasing the human potential in R&D Sector.”