



Bionanoscience and Biochemistry Laboratory

PhD Student Position Available in Synthetic Biology

Bionanoscience and Biochemistry Laboratory Malopolska Centre of Biotechnology, Krakow, Poland

We are now recruiting a PhD student to join a newly funded project to design and develop highly programmable DNA origami structure for delivery of therapeutic protein. 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 globe including Japan and UK where we have an official collaboration with RIKEN Center for Life Science Technologies, Japan.

You will join the Heddle lab (www.heddlelab.org), a newly established, innovative lab carrying out ambitious research aimed at designing and building artificial nanomachines using DNA and protein. 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 newly funded FNP "HOMING" project that aims to design highly programmable DNA nano-robots for therapeutic protein delivery. The project is in collaboration with Dr Hideki Shigematsu at the RIKEN Center for Life Science Technologies, Japan. Your contribution to the team will be: **1.** Designing of novel DNA origami nanomachines in silico. **2.** Structural assessment of designed DNA origami nanomachines using AFM and, TEM and cryo EM (in collaboration with our cryo EM expert from Japan). **3.** Study interaction of DNA nanomachines with specific protein cage ferritin. **4.** *In-vitro* delivery of DNA-origami/protein cage complex to cancer cell.

Requirements

1. A Masters degree in synthetic biology, structural biology, molecular biology, biochemistry or related discipline
2. Experience in molecular biology methods including purifying and handling of DNA
3. Experience in DNA nanotechnology would be advantageous
4. Familiarity with structural biology, particularly cryo EM will be advantageous but not obligatory
5. Have good written and oral communication skills in English

Important Dates

- Application Deadline: August 5th 2017
- Start Date: November 1st 2017

Our Offer

- PhD position with internationally competitive stipend payment
- Position for two years with possible extension after the project ends
- 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, cryo-EM structure analysis, cell Biology.
- State-of-the-art research centre with access to the full suite of equipment necessary for bionanoscience, biochemistry and structural biology research and a network of international collaborators in Europe and beyond. Including a chance to interact with renowned Cryo-EM specialists Dr. Hideki Shigematsu.

How to Apply

Send applications to soumyabiochem@gmail.com applications should be marked "HOMING-PhD" and include the following:

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

