



The Institute of Biochemistry and Biophysics of the Polish Academy of Sciences in Warsaw is looking for a post to implement the OPUS research project entitled "Elongation factors in synthesis of developmentally controlled non-coding RNA" UMO-2022/45/B/NZ2/03058 funded by the National Science Center.

Keywords: non-coding RNA, RNA polymerase, epigenetics

Institution: Institute of Biochemistry and Biophysics of the Polish Academy of Sciences; Laboratory of Non-coding RNA and Genome Rearrangements

Type of post: post-doc / assistant

Domain: molecular biology

Type of contract: fixed-term full time employment

Number of job offers: 1

Remuneration: ~ PLN 8500 gross

Employment period: 36 months

Date of commencement of work: Directly after recruitment (negotiable)

Name and surname of the project head: Dr. Jacek K. Nowak

Project title: "Elongation factors in synthesis of developmentally controlled non-coding RNA"

Project description:

Transcription performed by RNA Polymerase II (Pol II) is highly regulated process that can generate either to mRNA or non-coding (ncRNA). The transcription machinery of the ciliate *Paramecium tetraurelia* seems to be perfect for studies of these two modes of RNA production, as mRNA synthesis takes place in the vegetative macronucleus while the entire genome of the generative micronucleus is transcribed only at defined time-point of the sexual cycle – meiosis - leading to genome-wide ncRNA production. Similar wave of non-coding transcription occurs in new macronucleus during its early development. We hypothesize that this developmentally specific burst of transcription would on the one hand require a very different epigenetic landscape, but on the other hand also a different composition of the Pol II complex. Clarification of these genetic and epigenetic factors dissecting differential Pol II activity is necessary to understand and to interpret the polymerase – chromatin interaction. We will base our studies on discovered and characterized TFIIS, Spt5 and Spt4 elongation factors involved in synthesis of long and short ncRNAs in *Paramecium* (Maliszewska-Olejniczak et al. 2015, PLOS Genetics; Gruchota et al. 2017, NAR; Owsian et al. 2022,



NAR). In the present proposal, we will focus on their function in synthesis of coding and non-coding RNAs as well as their role in changes of chromatin landscape.

Expectations towards candidates:

1. Doctorate in the field of biology, biotechnology, molecular biology, biophysics, biochemistry.
2. Practical and theoretical knowledge of molecular biology and biochemistry.
3. Demonstrated skills in RNA biology or chromatin immunoprecipitation (ChIP) or protein purification or ciliate research will be an asset.

List of documents:

1. Documentation of the doctoral degree (doctorate cannot be older than 7 years)
2. CV
3. cover letter
4. contact or letter of recommendation from the previous employer or doctorate supervisor

The evaluation of candidates consists of:

1. In the first stage the Selection Committee, composed of Project Manager and two independent researchers from IBB PAN) will select eligible candidates. We reserve the right to contact selected candidates.
2. In the second stage the candidates will be interviewed by the Selection Committee. The candidate will be asked to briefly present his or hers CV and outline one main scientific project, which will be then discussed in more detail with the Selection Committee. During the meeting the candidate will be free to inquire about details concerning the project.

Contact for formal and informal inquiries: jknowak@ibb.waw.pl

Deadline for submitting applications: Review of applications will begin on 23rd April 2023, and continue until the position is filled.

Please include the following consent to process personal data (applications not including this statement will not be processed for legal reasons):

„Wyrażam zgodę na przetwarzanie moich danych osobowych dla potrzeb niezbędnych do realizacji procesu rekrutacji zgodnie z Ustawą z dnia 29 sierpnia 1997 r. o ochronie danych osobowych (Dz. U. z 2016 r. poz. 922 z późn. zm.)”