

We are seeking to recruit a talented student to pursue PhD studies in the Laboratory of RNA Biology and Functional Genomics, Institute of Biochemistry and Biophysics of Polish Academy of Sciences in Warsaw.

We are looking for a highly motivated candidate who would like to join a team working in the field of human RNA metabolism within the project granted to Dr Rafal Tomecki (<https://orcid.org/0000-0003-2473-5004>) by the National Science Centre, Poland (SONATA BIS programme).

#### **Short description of the project:**

Tight regulation of gene expression is key for maintaining normal cellular development and is mostly achieved via changes in gene transcription, RNA decay in the cytoplasm and regulating protein stability.

The successful applicant will be involved in studying different facets of eukaryotic gene expression regulation. The goal of the proposed project is to investigate the function of protein X in transcription, RNA degradation and RNA quality control. Protein X is a relatively small molecule encompassing repeats of conserved short structural motifs, and is a constituent of two complexes important for the regulation of gene expression in human cells. One complex is localized in the nucleus, where it modulates efficiency of transcription elongation, as well as participates e.g. in histone modifications and RNA 3'-end formation. The second complex is a factor assisting ribonucleases in the degradation of normal and aberrant protein-coding transcripts. Detailed functions of protein X within such distinct multiprotein complexes, acting in different cellular subcompartments have not been defined to date.

One of the aims of the proposed PhD project is an attempt to characterize *in vivo* interactions with remaining subunits of the mentioned complexes, as well as with other factors, using co-immunoprecipitation coupled to proteomic analyses. This will be complementary to our ongoing *in vitro* structural and biochemical analyses. Furthermore, model cell lines will be constructed, which are planned to be utilized for selective removal of protein X from either of the two complexes mentioned above, and influence on the transcriptome, RNA polymerase II distribution and post-translational histone modifications will be assessed employing global RNA-seq and ChIP-seq analyses. Similar experiments will be performed using fibroblasts from patient with mutation in the gene encoding protein X, what should bring us closer to the explanation of the molecular mechanism behind the set of neurological symptoms observed in this patient. Implementation of the project will likely provide new interesting data concerning RNA synthesis and degradation in higher Eukaryotes.

<b>Stipend amount:</b>	<b>Position starts on:</b>	<b>Maximum period of stipend agreement:</b>
3500 PLN/month	October 1 <sup>st</sup> , 2019	45 months (with possible extension by 3 months)

#### **Candidate profile and requirements:**

1. M.Sc. degree in molecular biology, cell biology, biotechnology, genetics or other related life science discipline (title obtained or studies close to be completed)
2. Practical and theoretical knowledge in the area of molecular biology, documented by good and very good university records.
3. Knowledge of the basic molecular biology techniques (e.g. PCR, DNA cloning, nucleic acid and protein electrophoresis, western-blot etc.).
4. Some experience in culturing human cells and cell transfection is desirable.
5. Proven ability to work with RNA (RNA electrophoresis, northern-blot, reverse transcription, qPCR) and/or knowledge of co-immunoprecipitation technique will be considered advantageous.

6. Any experience in RNA-seq, ChIP-seq or bioinformatic analysis of next-generation sequencing data will be an additional advantage.
7. At least good command of English (both spoken and written) is a must.
8. Ability to work independently as well as in a team.
9. Ability to analyze scientific data and draw conclusions.
10. Good communication and organization skills.
11. Work with agreement of scientific ethic and good practice in laboratory work.
12. The successful candidate will need to be enrolled at the School of Molecular Biology IBB PAS (<https://www.ibb.waw.pl/en/news/call-applications-phd-student-positions>)

**Required documents:**

1. CV including scientific achievements, short description of research project(s) conducted so far, list of known/used methods by the applicant, any other relevant information (awards, honors, list of publications and conference communications, information on participation in training, courses or workshops etc.).
2. Copy of MSc diploma or statement about the predicted date of MSc promotion. A copy of MSc thesis and referees' reports are welcome, but not obligatory.
3. List/transcription of academic grades (diploma supplement), if available.
4. Opinion from current scientific supervisor.
5. Contact information (name, phone number and e-mail address) for at least one additional professional reference.
6. Motivation letter - summary and relevance of your previous research and why you are interested in the position (maximum 1,5 page, Calibri, 12 pts)
7. All documents (written in English or Polish) should be merged into one pdf file. The file should be named as follows: Last name\_First name\_CV.pdf. Please submit this file to: [sonata.bis.tomecki@gmail.com](mailto:sonata.bis.tomecki@gmail.com).
8. Please include in your offer: I hereby give my consent for the processing of my personal data by the Institute of Biochemistry and Biophysics PAS with its seat in Warsaw Pawińskiego 5a, 02-106 hereinafter referred to as the Institute for the purpose of the recruitment process and for future recruitment processes conducted by the Institute under Art. 23 paragraph 1 tiret 1 of the Personal Data Protection Act dated on 29 August 1997, consolidated text: Journal of Laws 2016, item 922 with further amendments and under Art. 6 paragraph 1 tiret a of 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 GDPR (Journal of Law. UE. L. 2016 No 119.).

**Full offer:** <https://euraxess.ec.europa.eu/jobs/414102>

**Selection process:** Application deadline is 21-06-2019, 12:00:00 (local time). Applications submitted after the deadline will be still considered if position is not filled.