



Institute of Biochemistry and Biophysics

Polish Academy of Sciences

Pawińskiego 5a; 02-106 Warszawa; Tel.: +48 22 / 592 21 45; Fax: +48 22 / 592 21 90; e-mail: secretariat@ibb.waw.pl; <http://www.ibb.waw.pl>

How to apply:

Institute of Biochemistry and Biophysics PAS, Laboratory of Transcription Mechanisms is opening a call for a position of a **postdoctoral researcher**

The Laboratory of Transcription Mechanisms headed by dr hab. Tomasz Turowski is looking for a **postdoctoral researcher**. You will join the project entitled **“Molecular Mechanisms underlying the assembly and biogenesis of RNA polymerases I and III”** funded by the National Science Centre Weave-UNISONO grant.

In all eukaryotic cells, transcription of RNA from a DNA template is the first step of gene expression and functional RNA synthesis. This process takes place in the nucleus and is carried out by three distinct multi-subunit RNA polymerases (Pols). Whereas Pol II synthesizes messenger RNA and most regulatory RNAs, Pol I is responsible for production of the ribosomal RNA (rRNA) precursor and Pol III synthesizes small non-coding RNA including transfer RNA (tRNA), the 5S rRNA, U6 RNA and others. The molecular mechanisms underlying transcription by all three Pols and their regulation were studied in much detail in vitro, in vivo and on a structural and functional level over the past decades. However, it remains unclear how the three Pols are assembled, how the assembly is regulated, how Pols are transported into the nucleus, and whether Pol biosynthesis is common among the three transcription systems. Here, we propose to use the expertise of our groups in studying Pol I and Pol III structure and transcription regulation by teaming up to explore Pol biogenesis. We will identify the sequence and mechanisms of subunit assembly.

We postulate that early Pol I and III assembly steps are interconnected and aim at understanding the basis of the assembly process. A previous study identified conserved eukaryotic protein, Rbs1, which hypothesize to facilitate initial Pol I and Pol III assembly in yeast by a putatively co-translational mechanism. To explore this, we will first use a top-down approach extracting material from living cells to characterize the targeted mRNA-protein and protein-protein interaction of the Rbs1 assembly factor. We will also use a bottom-up approach to recombinantly synthesize Pol assembly intermediates for their structural characterization using cryo-Electron Microscopy (cryo-EM). Finally, we will test our findings in a cell-based system that relies on partially inactivated Pol in a yeast mutant strain in which this transcription system is not essential. Fundamental questions asked in this project are directly linked with a variety of rare human diseases, where mutations of Pols subunits affecting their assembly cause a clinical phenotype, including Treacher-Collins syndrome and Hypomelynating Leukodystrophy.

Job description:

The successful applicant will be responsible for conducting experimental and analytical tasks during the project. Bioinformatics training can be provided. Ideal candidate should have strong background in molecular biology and interest in transcription or neurobiology.

Requirements for the candidate:

- PhD in biology, biochemistry, or related life science field, for not more than 7 years before the position starts.
- Hands-on experience in basic molecular biology methods.
- Good understanding of data analysis and relevant statistics.
- Previous experience in RNA work, yeast genetics or data analysis will be an advantage.
- Passion for science and ability to work independently under appropriate supervision.
- Proficiency in spoken and written English.
- Solid knowledge in molecular biology.



Institute of Biochemistry and Biophysics

Polish Academy of Sciences

Pawińskiego 5a; 02-106 Warszawa; Tel.: +48 22 / 592 21 45; Fax: +48 22 / 592 21 90; e-mail: secretariate@ibb.waw.pl; <http://www.ibb.waw.pl>

How to apply:

We offer:

- Opportunity to work on an ambitious and medically relevant scientific problem using a broad range of molecular biology, biochemistry and bioinformatics methods in a multi-disciplinary team.
- Full-time employment contract for 36 months in the amount of gross 8 000 PLN/month with possibility to increase.
- The position with 100% focus on research (no teaching obligations).
- Training opportunities.
- Good work-life balance culture.

Lab webpage: <https://turowskilab.ibb.edu.pl>

The deadline for applications is **November 30th, 2025, early applications encouraged.**

How to apply

The application should be sent via recruitment platform:

<https://system.erecruiter.pl/FormTemplates/RecruitmentForm.aspx?WebID=c188996f05be47a2b612c7c53a21d2c8>

- Your application must be submitted in English and should contain:
 - Cover letter (briefly describing background, interests and motivation for the project, max 1 page).
 - Scientific CV including achievements and used methodology (max 5 pages).
 - Contact details to 2 potential referees, including one of your PhD supervisor.
 - **All documents should be merged in a single pdf file.**
- **Please include the following statement in your application:** 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 ust 1 pkt 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 ust.1 lit. 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 (Dz. U. UE. L. z 2016 r. Nr 119)"

In case of any difficulties please contact: recruitment@ibb.waw.pl

Any formal and informal inquiries shall be sent to tomasz.turowski@ibb.waw.pl

- In the subject include **"PostDoc"** and your first and last name

Selected candidates will be invited for an interview (possible on-line).

Applications submitted after the deadline will be still considered if the position is not filled.