



Position for Postdoctoral researcher

The *Laboratory of Molecular Basis of Aging and Rejuvenation* (www.topf-lab.org) headed by Dr. Ulrike Topf seeks a motivated and curious postdoctoral researcher to join the project entitled “**Molecular function of zinc storage in ribosomal proteins of eukaryotic cells**”. The project is funded by the Polish National Science Centre under OPUS 23 grant 2022/45/B/NZ1/03714.

Our laboratory conducts fundamental research in cell and molecular biology using yeast and *C. elegans* as model organism. We are interested in the identification and characterization of mechanisms that help to maintain cellular protein homeostasis. In particular, we are interested how the cell regulates the balance between protein production, protein folding and degradation. We focus on changes in the ribosome on the level of ribosomal proteins and their post-translational modifications ([Jonak et al, 2023](#)) as well as ribosome-associated factors and chaperones responsible for co-translational protein folding ([Goscinska et al, 2020](#); [Tahmaz et al., 2023](#)).

This project is based on our previous expertise but will expand our research interests by exploring the involvement of ribosomal proteins in cellular zinc homeostasis during aging. Zinc ions are essential micronutrients but exist in the cell only bound to proteins. Some proteins require zinc for structural stability or zinc is part of the catalytic site of a protein. Ribosomal proteins are abundant and some bind zinc. Cysteine residues coordinate the zinc binding in ribosomal proteins. During cellular stress and ageing the production of reactive oxygen species (ROS) increases leading to the reversible oxidation of thiol groups in ribosomal proteins ([Topf et al., 2018](#)). Using protein biochemistry and spectroscopy approaches, we will be studying if zinc ions can be released from ribosomal proteins and what are the consequences of such process for the ribosome and the translation process. Further, we will analyse consequences for the translation machinery of restriction of zinc availability and zinc supplementation during aging.

Job description

The successful applicant will be responsible for executing laboratory-based research within the project. They will be responsible for isolating ribosomes from yeast and worms, measure zinc release, conduct *in vitro* and *in vivo* translation assays, and investigate changes in ribosome profile upon zinc supplementation of aged *C. elegans*. Besides conducting and analyzing experiments the successful applicant is expected to take part in supervising undergraduate students in the lab, actively participate in writing scientific papers, and present the project at internal and external meetings.

Requirements for the candidate:

- Holds a Doctoral degree/ PhD in biology, chemistry, biochemistry or related life science field for not more than 7 years before the position announcement.
- Is proficient in spoken and written English.
- Has solid knowledge of molecular biology and/ or biochemistry.
- Demonstrated skills in metal biology or protein purification or in proteomics will be an asset but is not mandatory.
- Previous experience with yeast and/ or *C. elegans* research will be of advantage but is not mandatory.
- Can present research achievements including at least one publication in an international journal.



We offer:

- Full-time employment contract for 3 years (including 6 months' probation).
- Gross salary of about 8,500 PLN/month. Net salary depends on individual circumstances influencing tax.
- The position with 100% focus on research (no teaching obligations).
- Work in a young, active and international team in a collaborative work environment.
- Supportive English-speaking administration and help with visa application if needed.
- Free language courses including Polish for foreigners.
- Good culture of work-life balance.

The deadline for applications is **October 31st 2023**. The job starting date is as soon as possible after recruitment completion (negotiable).

How to apply:

- **Apply now** to jobs@topf-lab.org
- In the subject include "**PostDoc**" and your first and last name.
- Your application must be submitted in English and should contain:
 - Motivation letter
 - CV including scientific achievements and a short description of research projects conducted so far including used methodology
 - Copy of PhD diploma
 - Contact details to 2 potential referees, including one of your PhD supervisor
 - **Please include the following statement in your application:** "In accordance with the personal data protection act from 29th August 1997, I hereby agree to process and to store my personal data by the Institution for recruitment purposes."

Selected candidates will be invited for an interview (possible online). **Applications will be reviewed on a rolling-basis.**

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