Uniwersytet Wrocławski

FACULTY OF BIOTECHNOLOGY

DEPARTMENT OF MOLECULAR MICROBIOLOGY
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Unit Name:
University of Wrocław, Faculty of Biotechnology, Department of Molecular Microbiology

Position Title:
PhD Student - Scholarship

Proposed Research Topic:
The role of the ParA protein cycle in synchronizing apical growth with chromosome compaction in *S. venezuelae*.

Requirements:

1. Scientific interest in microbiology, molecular biology, or genetic engineering, combined with independence, organizational skills, communication abilities, and teamwork skills.
2. Basic experience in molecular biology techniques, including RNA, DNA, and protein isolation and analysis, as well as basic sterile techniques. Experience in techniques such as ChIP-Seq, fluorescence microscopy, or purification of recombinant proteins will be an additional asset. (NOTE: Experience working with *Streptomyces* is not required.)
3. Proficient command of English, sufficient for participation in international conferences and departmental seminars, as well as for preparation of publications.
4. Master's degree (MSc or MSc Eng.) in biotechnology, biochemistry, molecular biology, microbiology, or a related field.
5. Successful admission to the Doctoral School at the University of Wrocław (required before starting work in the project).

Position Description:

The offered position is part of a planned research team within the OPUS25 project entitled *"In search of molecular mechanisms controlling ParB-dependent chromosomal architecture changes in Streptomyces"*, led by Dr. habil. Marcin Szafran. The project involves interdisciplinary research focusing on identifying unknown intracellular factors responsible for the reorganization of the spatial topology of the *Streptomyces* chromosome. The project continues previous work by the research team published in *Nature Communications* (https://www.nature.com/articles/s41467-021-25461-2).

The proposed research topic focuses on the construction, purification, and characterization of selected ParA protein mutants, followed by introducing selected mutations into a bacterial model to assess their impact on growth, differentiation, and spatial chromosomal organization. The PhD student will have the opportunity to gain experience in protein purification and in vitro activity analysis techniques (e.g., BLI, DLS), as well as in vivo approaches (advanced fluorescence microscopy including PALM and FRAP, ChIP-Seq, HiC-Seq, and others).

Application Deadline:
15 July 2025, 12:00 PM (CET)

Employment Conditions:

University scholarship (as part of the Doctoral School), supplemented with a research scholarship under the OPUS25 project.

Start Date:
1 October 2025

Required Documents:

1. Application letter addressed to the project leader, dr hab. Marcin Szafran
2. Curriculum Vitae (CV)
3. Information on scientific achievements, awards, and research internships
4. Copy of the master's diploma or information regarding the planned date of obtaining the degree
5. Confirmation of PhD student status (required after admission to the Doctoral School)
6. Contact information of persons who may provide references
7. Candidate's consent for the processing of personal data in accordance with the Personal Data Protection Act of 29 August 1997 (Journal of Laws of 2015, item 2135, as amended) for the purpose of the recruitment process.

The selection of the candidate will be carried out in accordance with the *Regulations for awarding research scholarships for young scientists in research projects* (Annex to Resolution No. 124/2022 of the NCN Council, dated 1 December 2022). Selected candidates may be invited for an interview.

The results of the competition will be announced by **31 July 2025.** The committee reserves the right not to resolve the competition in the event of a lack of suitable candidates.

Contact:
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