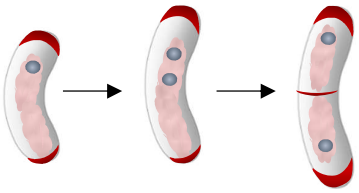
PHD STUDENTSHIP IN MOLECULAR MICROBIOLOGY



Project: Exploring the Link Between the Mycobacterial Cell Cycle, Cell Envelope, and Antibiotic Susceptibility: The Role of ParA-DivIVA Interplay

funded under the NCN Opus28 scheme

Project Principal Investigator: Prof. Dagmara Jakimowicz

Project description

Mycobacteria are mostly known as dangerous pathogens, causing tuberculosis or leprosy. As all bacteria, for successful proliferation, mycobacteria must coordinate the duplication of genetic material, its separation into progeny cells and cell division. Mechanisms responsible for the synchronisation of these key processes of the cell cycle in mycobacterial are still underexplored. **This research project aims to establish the interplay between cell cycle coordinator - ParA and cell envelope machinery.**

To establish the biological function of studied protein, the PhD student will construct the modified strains of non-pathogenic mycobacterium species (*Mycobacterium smegmatis*) and will analyse them using growth assays and advanced microscopy methods. Additionally, the studies will be performed using zebrafish infection by *Mycobacterium marinum* – this part of the research will be conducted during the scientific visit in Max Planck Institute in Berlin. Most of the project will be conducted **in Molecular Microbiology Department, Faculty of Biotechnology, University of Wroclaw.**

What we offer:

- Scholarship at University of Wroclaw,
- Scientific visit in Berlin, Max Planck Institute for Infection Biology,
- Work in dynamic scientific group providing excellent research environment promoting publications in high impact journals,
- Financial support of abroad scientific visits and attending conferences,
- Support in preparing grant applications and engaging in personal development.

Requirements:

- Education: MSc or equivalent in biology, biotechnology or related sciences.
- Has to participate in the Doctoral School of the University of Wrocław
- Required skills:
  - Practical experience in molecular microbiology (prior work experience in bacterial genetics or microscopy methods will beneficial)
  - Professional working proficiency in English
  - Professional working proficiency in Polish is beneficial
- Strong motivation in scientific research, creativity in solving problems, independence, ability to work as part of a team.

Further information

Project start date: October 2025

Application and additional information

Application deadline: 29th July 2025. To apply, please send your application, including motivation letter, CV with the list of your publications (if available) and achievements, Master's (or Bachelor's)

degree thesis and contact information to the scientific supervisor and other referees (if available) to the following e-mail address: dagmara.jakimowicz@uwr.edu.pl

We thank all applicants for their interest; however, only selected candidates may be invited for an interview. Applications will be accepted until the position is filled. Incomplete applications may not be considered. If the winner of the competition resigns from signing the contract, we may choose the next best person from the ranking list. The successfully recruited candidates will be notified **by 8th August**. For additional information, please contact the principal investigator: Dagmara Jakimowicz dagmara.jakimowicz@uwr.edu.pl)

Due to the entry into force of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, all candidates are requested to provide consent to the processing of his or her personal data by the institution which carries out the recruitment process. Thus, please include in your application the following statement: "I hereby agree to the processing of my data included in the application documents by University of Wroclaw, Poland, to carry out the recruitment process."