

PostDoc project – Interplay between *Chlamydia* and host mitochondria

Project: Mitochondria generate the majority of the cell's ATP and are also involved in triggering immune responses in response to bacterial infection. Consequently, some bacteria have developed strategies for modulating mitochondrial function to support pathogen survival or evade host immunity. With over 100 million cases annually, *Chlamydia trachomatis* is the most prevalent bacterial agent of sexually transmitted diseases and a common cause of blinding eye infections. Within the patient, the pathogen invades epithelial cells to exploit them as a growth niche. Because *C. trachomatis* depends on host-derived metabolites and energy for growth, it needs to preserve the functional intactness of its host cell and thus likely the functionality of host mitochondria. **The purpose of this project is to determine the role of mitochondrial distress in cell-autonomous immunity against *Chlamydia*.**

Environment: This collaborative project between the research groups of Paulina Wanrooij and Barbara Sixt at Umeå University in Sweden will benefit from the complementary expertise of these groups on mitochondrial function and infection biology, respectively. The postdoc to be recruited will also be affiliated with the Laboratory for Molecular Infection Medicine Sweden (MIMS), a part of the Nordic EMBL Partnership for Molecular Medicine, and the Umeå Centre for Microbial Research (UCMR), providing a stimulating, collaborative, and highly international environment with excellent access to modern research facilities. The city Umeå itself combines a rich cultural life with exceptional closeness to nature and is particularly welcoming to internationals.

Qualifications: To be eligible, candidates must hold a PhD degree or equivalent in molecular biology, cell biology, infection biology or an equivalent field. This qualification requirement must be fulfilled at the time of application or latest within six months after the closing date of the application. Moreover, preference will be given to applicants who received their degree no more than three years before the end of the application period, unless special circumstances exist. To be considered for the project, candidates must have documented practical experience in molecular biology techniques and mammalian cell culture. Previous practical experience in conducting infection experiments with intracellular bacterial pathogens is a desirable skill, as is experience in studying mitochondrial function and/or immune signaling. Candidates should be passionate about science, willing to take on scientific challenges, and committed to highest quality research. Candidates are expected to be proficient in written and spoken English, to work as part of an interactive team, to participate in the mentoring of junior team members, and to have the capacity to individually develop and drive a research project involving two separate research groups.

Project duration: 2 years (with possibility for further prolongation depending on satisfactory performance)

Starting date: preferentially fall/winter 2023 (can be negotiated)

Application: The project is part of the “Excellence by Choice” Postdoctoral Programme in Life Science at Umeå University. Further information and a link to the online application portal can be found here: <https://www.umu.se/en/ucmr/cc-postdoc-programme/excellence-by-choice-postdoctoral-programme-in-life-science/>
Online application deadline: **19 March 2023**.

In your online application, indicate your interest in **project 10** (Role of mitochondrial dysfunction in host cell-autonomous immunity against *Chlamydia*). Questions can be addressed to Paulina Wanrooij (paulina.wanrooij@umu.se) and Barbara Sixt (barbara.sixt@umu.se).

To find out more about the labs and research environment, visit the following websites:

- The Wanrooij Lab: <http://pwanrooijlab.com/>
- The Sixt Lab: <http://www.sixtlab.org/>
- Umeå University: <http://www.umu.se/en/>
- Umeå Centre for Microbial Research (UCMR): <http://www.ucmr.umu.se>
- The Laboratory for Molecular Infection Medicine Sweden (MIMS): <http://www.mims.umu.se/>
- Nordic EMBL Partnership for Molecular Medicine: <https://projects.au.dk/nordic-embl-partnership/>
- Umeå PostDoc Society: <https://umeapostdocsociety.se/>