

Postdoctoral scholarship (2 years) in Infection Biology to study Herpes Simplex Encephalitis and its neurological consequences by 3D optical imaging.

Despite the availability of acyclovir, Herpes Simplex encephalitis is the most common sporadic viral encephalitis, with significant mortality and neurological morbidities in survivors. Furthermore, the link between Herpes Simplex infection in the brain and Alzheimer's disease is a long-standing and actively debated hypothesis. The possibility to study "viral behavior" in the whole brain with high resolution in combination with markers for neuroinflammation and amyloidosis, could significantly improve our understanding of herpes simplex encephalitis, its neurological consequences and its potential link with Alzheimer's disease. We have recently developed protocols to visualize and quantify neurotropic viral infections in the whole mouse brain by 3D optical imaging. We are now looking for a highly motivated post-doctoral researcher to strengthen our team to further implement these techniques to investigate herpes simplex encephalitis, virus-induced neuroinflammation and their neurological consequences.

We offer a post-doctoral scholarship for two years (tax free stipend at a fixed amount, financed by the Kempe Foundations) to study Herpes Simplex Encephalitis and its pathophysiological changes in the brain, leading to permanent neurological consequences and potentially Alzheimer's disease. We will provide the candidate with the possibility to use a multidisciplinary approach in which optical 3D imaging by optical projection tomography and light sheet fluorescence microscopy will play a central role, but access to a broad range of state-of-the-art equipment for molecular biology and virology approaches will be provided. For the conduction of the project, we have identified novel markers for whole brain imaging of virus-induced neuroinflammation. With this technology at hand, we are also open for innovative project ideas by the candidate. The research will take place in an international research environment with access to state-of-the-art equipment within most fields of life sciences.

Starting date: as soon as possible upon agreement.

Competence requirements

To be eligible for the scholarship, you should have a PhD, or be in the very final stages of finishing your PhD, in infection imaging, neuroimmunology or related disciplines. We are primarily seeking applicants with experience in viral infections, a strong background in molecular infection biology and a genuine interest in the brain. Furthermore, the applicant should be willing to perform mouse experiments. Therefore, previous experience with animal experimentation is a strong merit. Previous experience with fluorescence imaging techniques such as confocal microscopy or 3D optical imaging is also a merit. You can consider yourself a strong applicant if you: i) have a genuine motivation for scientific research; ii) consider yourself a problem-solving person, someone who enjoys challenges and is determined to succeed; III) have high standards for honesty, respect, and collegiality.

We expect the candidate to be able to work with great independence, however, being able to perform as part of a team is crucial. Excellent oral and written communication skills in English are required.

The application

Interested candidates should send a single PDF file composed by i) cover letter (max 1 page); ii) CV (max 2 pages); iii) a complete publication list; iv) the contact information of 3 references (preferably one of whom should be your PhD supervisor) and v) copies of the latest degree certificate(s).

Submit your application as a single PDF marked with "Postdoc CLIMI" in the subject field directly to stefanie.willekens@umu.se. The application must be written in English. Applications are continuously evaluated until a suitable candidate is identified.

Further information

For further information about the position and project(s), please contact dr. Stefanie Willekens, Department of Clinical Microbiology (stefanie.willekens@umu.se).

More about us

Umeå University is one of Sweden's largest institutions of higher education with over 35,000 students and 4,200 faculty and staff. We are characterised by world-leading research in several scientific fields and a multitude of educations ranked highly in international comparison. Umeå University is also the site of the pioneering discovery of the CRISPR-Cas9 genetic scissors - a revolution in genetic engineering that has been awarded the Nobel Prize. At Umeå University, everything is nearby. Our cohesive campus environment makes it easy to meet, collaborate and exchange knowledge, which promotes a dynamic and open culture where we rejoice in each other's successes. If you are interested in knowing about Umeå University as a workplace, read more at: <https://www.umu.se/en/work-with-us/>. Umeå University also offers a strong postdoc community with the Umeå Postdoc Society (UPS), which fosters networking amongst postdocs, organises social and career development events and works towards improving the postdoc experience at Umeå campus. Check out their website: <https://umeapostdocsociety.se/>, and do not hesitate to get in contact with them early on! More information about the city of Umeå can be found here: <https://visitumea.se/en>.

We look forward to receiving your application!