Postdoc in digital pathology

Therapy-response prediction using spatial biology

The group: The candidate will be part of the Computational Systems Biology group at the University of Salzburg, which is headed by Nikolaus Fortelny (https://plus.ac.at/fortelny). The group is focused on integrating single-cell and spatial multi-omics data with biological knowledge using AI/ML and other computational approaches in cancer and immunology research. We focus on approaches that produce robust, reliable, and ideally interpretable results.

The project: Cancer treatment is difficult because patients respond differently to therapies and because therapy responses are challenging to predict beforehand. The candidate will develop computational models to predict therapy response in breast cancer based on images (H&E stains) alone or in combination with spatial omics data. The candidate will closely collaborate with partners from the hospital of Salzburg and the group of Fritz Aberger from the university, who have a biobank of samples and will generate the data. The project is funded by the state of Salzburg in the prestigious "AI-call" that is focused on bringing AI into real-world applications.

The place: The city of Salzburg has ample natural and cultural attractions as well as fast connections to Vienna and Munich. It is surrounded by beautiful lakes and mountains, with various opportunities for recreational and sports activities. The university has 18 000 students, and a highly collaborative research environment in both biomedical and computational sciences.

Qualifications:

- PhD in bioinformatics, biotechnology, computer science, statistics, physics, or similar
- Excellent scientific thinking and communication, high level of motivation and drive
- Programming skills (python) and AI/ML frameworks (pytorch, tensorflow or similar)
- Experience with predictive models, ideally for image analysis, evidenced by publications
- An understanding of and interest in basic biomedical concepts
- Excellent English and communication skills

Details:

- Start date: ideally January 2025
- Duration: 3 years
- Salary and work hours according to Austrian funding regulations
- Place of work: Salzburg, Austria

Our offer:

- Research in bringing AI/ML and spatial omics into the clinic
- Cutting-edge academic environment (https://scholar.google.at/citations?user=IHjaqgkAAAAJ)
- Being part of an international, interdisciplinary, and fun team
- Opportunities for self-growth through courses for hard and soft skills
- Participation in conferences and project meetings
- Excellent social benefits of working in Austria (holidays, health insurance, …)
- Environment that values a healthy work / life balance

Enthusiastic scientists, who are motivated to develop AI/ML models for real-world biomedical applications are encouraged to apply. Please send a letter describing your motivation (one page), CV, and names of 2-3 reference contacts to nikolaus.fortelny@plus.ac.at, writing "Application Postdoc Digital Pathology 2025" in the subject line.

Deadline: October 26th, 2025.

We look forward to hearing from you!