



The research team of **Prof. Dr. Moriggl** is seeking a talented and motivated **Master student** to join the Ludwig Boltzmann Institute for Cancer Research to work on an ambitious research project:

O-GlcNAcylation of STAT5 and JAK2 in hematopoietic cancer

STAT5 proteins are key transcription factors gaining increased attention as essential drivers of cancer. STAT5 activation and tyrosine phosphorylation is mainly triggered by JAK tyrosine kinases, themselves frequently mutated and hyper-activated in cancer. An additional post-translational modification, the O-linked β -D-N-acetylglucosamine (O-GlcNAc) glycosylation of STAT5 at threonine 92 is essential for transformation. We used a hyperactive gain-of-function variant of STAT5 lacking O-GlcNAc at threonine 92 to study the impact of O-GlcNAc modification of STAT5 in a recent publication.

We aim to generate deeper mechanistic insight into the role of O-GlcNAcylation of STAT5 to study the role of JAK2 in hematopoietic cancer. The tools, which we have established for STAT5 will be further expanded to JAK2 to study the changes in O-GlcNAcylation under variable in nutritional status. Furthermore, we will also reconstitute STAT5-deficient mouse embryonic fibroblasts with multiple STAT5 O-GlcNAc variants to gain insight into transcriptional target gene regulation using techniques such as RNA-Seq.

P Freund et al. O-GlcNAcylation of STAT5 controls tyrosine phosphorylation and oncogenic transcription in STAT5-dependent malignancies. (2017) Leukemia; doi: 10.1038/leu.2017.4

The Candidate's Profile:

We are looking for a talented and highly motivated Master student with interest to perform basic and translational cancer research with the following skills.

- Advanced knowledge in biology
- High accuracy and reliability
- Good interpersonal skills and ability to work in an international team
- Good written and oral communication skills in English
- Previous experience with cell culture, biochemical and molecular biological methods is highly desirable

We offer

The Master student will gain experience in cell culture techniques, flow cytometry, cloning, transfection, PCR, qPCR, Western blotting, and IP. Furthermore, participation in group meetings and progress reports of the institute will encourage the student's scientific communication skills.

Application Details:

Duration: 10-12months incl. written Master thesis with the possibility of extension

Compensation: 440 €/month

Place of work: Veterinärplatz 1; 1210 Vienna; Austria

Start: as soon as possible

Application: Please send per email your cover letter, detailed *Curriculum Vitae* and arrange for at least one letter of recommendation

Contact: Patricia Freund (Patricia.Freund@vetmeduni.ac.at)

Further Information: <http://lbicr.lbg.ac.at/>