

Master student project RNA therapeutics

Expected duration: ca 4-6 months (unpaid), with the opportunity for a remunerated extension to 12 months
Start date: as soon as possible

We are looking for a highly motivated student with excellent curricular training in biochemistry/molecular biology to work on a master thesis project within the area of **RNA therapeutics** and RNA editing at the Paris-Lodron University of Salzburg (PLUS). The research work will be part of collaborative project between **PLUS** (Austria) and **WAVE life sciences** (USA). The project will explore the intracellular transport and RNA editing efficiencies of various oligonucleotides in different disease model cell systems. The project is also associated with the new Ludwig Boltzmann Institute for Nanovesicular Precision Medicine (**LBI-NVPM**) at the PLUS and will be embedded within its larger interdisciplinary scientific mission of translating the fundamental biology of RNA and extracellular vesicles into therapeutic applications.

The successful candidate will learn and develop strategies for quantitative and qualitative analysis of cellular trafficking and molecular mechanisms of therapeutic oligonucleotides applying advanced molecular and cellular biology, biochemistry, and microscopy technologies. The work will build on cutting-edge techniques well-established in the lab whereas the successful candidate will closely work with other scientists within LBI-NVPM.

Techniques and learning opportunities:

- Culture of mammalian and primary cells
- Isolation, purification and quantification of nucleic acids and proteins, and characterizing their interactions using molecular biological/biochemical techniques, such as RNA-protein co-immunoprecipitations, analytical chromatography, western blotting, qPCR, ELISA, fluorescence and luminescence techniques
- Quantification of oligonucleotides in subcellular compartments, and functional studies in different cell models using nucleic acid-based quantitative methods.
- Advanced fluorescence microscopy in live and fixed cells
- RNA editing activities of various antisense oligonucleotides
- Data analysis, documentation, and presentation at the group's internal and external meetings
- Experience to work at the interface of basic research and the biotech/pharmaceutical industry

Minimum requirements:

- Bachelors degree in Life Sciences
- Comprehensive knowledge in the areas of biochemistry and molecular biology
- Excellent command of the English language
- Excellent organizational skills
- Previous work in the field of RNA biology and/or experience in fluorescence microscopy would be desirable

We specifically welcome applicants who:

- Are enthusiastic to contribute to the evolution of RNA therapeutics
- Are passionate to work in an interdisciplinary team towards a common mission
- Are reliable
- Have the desire and aptitude to acquire new knowledge
- Think creatively and critically
- Are motivated by translating basic science into therapeutic applications

Interested?

Applications should be submitted to: muhammad.nawaz@plus.ac.at and cc to nicole.meisner-kober@plus.ac.at including a motivation letter, curriculum vitae, a copy of the certificates of highest obtained degree and a specification of previous training in biochemistry/molecular biology or RNA biology. Applications will be accepted until the position is filled.

Univ. Prof. Dr. Nicole Meisner-Kober

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