PhD Position (m/f/d) in Biomedical Sciences – Lipid Nanoparticle Profiling

Start April 2026 | Duration 3 years | 30 hrs/week | Salary € 2,786.10 gross/month (full-time basis, acc. to FWF as of 02/2025)

We are looking for a highly motivated PhD student to be jointly hosted by the University of Applied Sciences Wr. Neustadt (Biotech Campus Tulln) and the University for Continuing Education Krems (UWK). The position is part of the GFF-funded project "LNP Profiling" and is fully embedded in the PhD Programme "Regenerative Medicine" at UWK. The position is based in Tulln and Krems and offers also a close collaboration with the company RNAnalytics.

Project description
Lipid nanoparticles (LNPs) play a central role in the success of mRNA vaccines and gene therapies. Understanding how the composition of nanoparticles influences cell signalling, immunomodulation and tissue uptake is essential for the development of safe and effective therapeutics. The aim of the 'LNP profiling' project is to develop an innovative analysis platform that combines advanced cell-based assays and 3D tissue models with multi-omics analyses, high-resolution imaging and bioinformatic data integration to define the molecular mechanisms of LNP function and safety.

Tasks
- Develop cell-based assays to assess LNP cytotoxicity, immunogenicity and transfection efficiency
- Conduct RNA-Seq, RT-qPCR and LC-MS/MS analyses to characterize off-target effects
- Cell culture as well as confocal microscopy, flow cytometry and data analyses
- Writing scientific publications, and presenting the project results at conferences
- Support the research group in administrative tasks
- Collaborate closely with academic and industrial partners (FH Tulln, UWK, RNAnalytics)

Your Profile
- Master's degree in Molecular Biology, Tissue Engineering, Biotechnology, Biochemistry or related
- Experience in cell culture and molecular methods (RNA analysis, qPCR, immunoassays)
- Strong interest in RNA therapeutics, nanomedicine and translational research
- Willingness to learn new techniques (e.g. omics) and data-science analyses
- Very good communication skills in English (min. C1), German language skills are desirable
- Team-oriented, precise, and self-motivated working style, high flexibility and mobility

We offer
- 30 hours/week, salary of € 2,786.10 gross/month full-time basis acc. to FWF as of 02/2025
- Diverse and exciting research project at the interface of molecular biology and nanomedicine
- Access to state-of-the-art research infrastructure and core facilities
- PhD Programme "Regenerative Medicine" (training modules, mentorship, scientific networking)
- Opportunities for scientific publication as well as participation at national and international conference
- Collaboration with two universities and an industrial partner in a translational research setting
- Social benefits (e.g. workplace health programmes)

Your Application
Please submit your application **by January 31st, 2026,** via e-mail to agnes.gruenfelder@fhwn.ac.at
Submissions after this deadline will be considered as long as the position is vacant.
Your application should include:
- Letter of Motivation
- Curriculum Vitae
- Degrees and Transcripts
- Documentation of Scientific Experience
- Two Letters of Recommendation