Christian Doppler Laboratory for

Knowledge-based Production of Gene Therapy Vectors

Your work should make a difference? Join our team!

Vision

Our goal is the **advancement of modern gene therapy**, as it is one of the most promising treatments against gene defects, cancer, auto immune diseases as well as infectious diseases. With highly **efficient tools and reliable and scalable production platforms**, new and better therapeutics will be made available and contribute to human health and well-being.

Translation

The mission of the proposed CD Laboratory is to guide production of gene therapy vectors from empiricism driven approaches towards knowledge-based approaches which are in line with the **Quality–by–Design concept for pharmaceutical production**. This will be achieved by better understanding of the cellular response to virus production to be used for cell line optimisation. Advanced offline analysis will be established for better product characterisation. This information integrated with online analysis will be used as soft sensors for model based real time monitoring of the process enabling process control strategies. A miniaturized process development platform will enhance process understanding based on the investigation of interrelationship of subsequent process steps. The availability of all these methods will **enhance efficiency and safety of rAAV production** and will **increase accessibility of these valuable pharmaceuticals**.

The CD Laboratory has been started **with January 2023** and is planned until end of 2029, including two evaluation procedures. Currently, a team of 2 PostDocs, 2 Technician and 4 PhD candidates are working on realizing our goals. From now we are hiring the second generation of PhD candidates for our team, starting with

PhD position on

Model based monitoring of downstream processes for production of AAVs as gene therapy vectors

When? From Nov 2025

What we expect?

- Knowledge of downstream processing and analysis of proteins and bionanoparticles
- Experience with preparative chromatography
- Interest in process modeling and programming
- Understanding of biotechnological processes, particularly the requirements of biopharmaceuticals
- High motivation and willingness to learn and perform
- Strong team spirit

What to expect? We are an ambitious team of scientists working in a very well-equipped scientific environment. Vivid discussions, a strong team spirit, and the collaboration with a big player within the biotech industry create the environment for further developing your specialist knowledge, innovative research, and presentation skills. The PhD position is financed for 3 ½ years and you will be embedded in the network of the DocSchool BioproEng.

Send your application (motivation letter, CV, Bachelor's and Master's degree certificates, 2 letters of recommendation**) to: Dr. Astrid Dürauer** (Head of CD laboratory), astrid.duerauer@boku.ac.at