MAX PLANCK INSTITUTE
FOR DYNAMICS OF COMPLEX
TECHNICAL SYSTEMS
MAGDEBURG

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BIOPROCESS ENGINEERING
Sandtorstrasse 1 I 39106 Magdeburg I Germany

Dr.-Ing. Sascha Y. Kupke
Teamleader Molecular Biology
Bioprocess Engineering Group

Sandtorstrasse 1
39106 Magdeburg
Germany
P +49 391 6110-253

kupke@mpi-magdeburg.mpg.de
www.mpi-magdeburg.mpg.de

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Postdoc or PhD position (m/f/d) - Molecular biology / Biotechnology

The Bioprocess Engineering Group at the Max Planck Institute for Dynamics of Complex Technical Systems (Magdeburg) offers a postdoc or PhD position in the Molecular Biology team (homepage: https://www.mpi-magdeburg.mpg.de/25630/molecular_biology) with the following topic:

"Genetic engineering of virus-cell propagation systems for cell culture-based viral vector production"

One of the major aims of the Bioprocess Engineering group is the optimization of cell culture-based production processes for viral vectors in bioreactors. Viral vectors offer several options for genetic modifications which results in a large versatility with respect to medical treatment opportunities in animals and humans. For instance, propagation-incompetent viral vectors are being used for vaccination approaches. In addition, transgenic viruses that are able to transfer a gene to individuals can be used to ameliorate or cure diseases. Some of these viral vectors applicable for gene therapy are already approved for use in humans. With respect to cancer therapy, viruses can be modified such that they are able to specifically target and destroy cancer cells, and/or to strengthen innate and adaptive immune responses against the tumor. Finally, specific viral vectors can target virus replication itself by interfering with and suppressing of particular parts of the viral replication cycle (antiviral agent).
In this Postdoc/PhD project we are planning to enlarge our expertise in the field of genetic engineering of viral vectors. For this, cell lines for virus production may also need to be modified to propagate the viral construct. For reconstitution of the viral vectors, we employ reverse genetics. Viruses will be devised and genetically modified (to suit a particular application) based on literature research/educated guess. The applicant will focus on applied research in the field of good health and well-being.

Qualification profile:

- Above-average Master or PhD degree in biochemistry, molecular biotechnology, biosystems engineering, molecular bioengineering or similar
- Profound knowledge in molecular biology, virology and immunology
- Methods (optional): animal cell culture, real-time RT-qPCR, molecular cloning, transfection and transduction, reverse genetics for reconstitution of viruses, retroviral transduction or CRISPR/Cas9
- High motivation, a self-initiative, autonomous and conscientious working style, team work skills

We offer a position in an interdisciplinary and intercultural research group, extensive training, direct and competent supervision, and state-of-the-art instrumentation and laboratory equipment. The salary is based on the collective agreement of the public service (TVÖD, EG13, 100%).

Please submit your application documents including a CV, reference letters, and transcript of records (high school, Bachelor and Master degree; PhD degree optional) only via email to:

Dr.-Ing. Sascha Y. Kupke
kupke@mpi-magdeburg.mpg.de

The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Please note the information regarding the storage of personal data:
https://www.mpi-magdeburg.mpg.de/data-protection-for-applicants