We are looking to support our rapidly growing team as soon as possible:

Doctoral Researcher / PhD Candidate in Immunotherapy of Viral Infections (f/m/x)

Institute of Virology - Laboratory of Experimental Immunology

TV-L: 25 h/week (64,94%)

Fixed-term employment for 3 years under the German Academic Fixed-Term Contract Act (WissZeitVG) for the purpose of pursuing a doctoral degree (PhD)

Your salary will be based on TV-L

Your tasks

- Contribute to research projects investigating broadly neutralizing antibodies (bNAbs) to effectively target HIV-1 *in vivo*
- Design and evaluate AAV-based gene vector strategies for *in vivo* delivery of bNAb combination therapy
- Establish multispecific antibody-derived protein constructs to target the HIV-1 envelope protein
- Investigate bNAb expression, antibody-mediated virus neutralization *in vitro* and *in vivo*, and pathways of viral immune escape
- Plan, perform, and analyze experiments under scientific supervision using state-of-the-art approaches in immunology, virology, and molecular biology
- Establish, optimize, and apply immunological and virological assays, including cell culture, flow cytometry, ELISA, neutralization assays, molecular cloning, and next-generation sequencing
- Perform experiments using infectious viral material *in vitro* and *in vivo* (humanized mice) in biosafety level S3 environments
- Collaborate with national and international research partners in an interdisciplinary research

Your future with us

We are one of the leading university hospitals in Germany and network research, teaching and health care at the highest level. That's why many things are a lot bigger for us: the spectrum of exciting development opportunities. The limitless openness with which specialists from all over the world work together here. Or our commitment as an employer to support all employees as best we can in reconciling their job with their goals and life situations.

This is the University Hospital of Cologne: Everything but ordinary.

Your future in detail

We are a dedicated translational research group focused on understanding the fundamentals of human immune responses to viral pathogens and on developing novel strategies for the prevention and treatment of infectious diseases. Our work combines cutting-edge immunology, virology, antibody engineering, and translational research approaches to address clinically relevant questions in viral infections.

This PhD project focuses on the investigation of AAV-

environment
- Present research findings at scientific meetings and conferences, and prepare scientific manuscripts
- Maintain detailed experimental records and ensure high standards of scientific quality, reproducibility, and documentation

Your profile

- Excellent university degree (M.Sc. or equivalent) in biology, biomedicine, immunology, virology, molecular medicine, or a related life science discipline
- Strong interest in translational research at the interface of immunology, virology, and infectious diseases
- Hands-on experience with immunological and molecular biology methods (e.g., cell culture, flow cytometry, ELISA, PCR, cloning, or sequencing technologies) as well as experience working with small animal models are advantageous
- Willingness to conduct experiments using HIV-1-infected humanized mouse models (existing FELASA certification is beneficial)
- Prior experience in virology, antibody research, B cell biology, or HIV research is beneficial but not required
- Independent, structured, and detail-oriented approach to scientific work based on high personal scientific standards
- High level of motivation to independently address complex scientific questions and develop creative as well as innovative solutions for scientific problems
- Strong teamwork and communication skills, as well as enthusiasm for working in an interdisciplinary and international research environment
- Excellent written and spoken English

Our offer

- Participation in a highly modern and internationally connected research project with strong scientific and societal relevance
- An excellent scientific environment within a dynamic and interdisciplinary team
- Access to state-of-the-art technologies and laboratory infrastructure within the new “Translational Research for Infectious Diseases and Oncology (TRIO)” research center
- Close scientific supervision and support for your professional and personal development
- Opportunities to participate in national and international conferences and to publish scientific findings
- Challenging and diverse responsibilities with a high

based strategies to effectively target HIV-1 using broadly neutralizing antibodies. A central goal of the project is to develop novel approaches for enabling *in vivo* expression of bNAb combinations that overcome limitations of AAV packaging capacity. The project will involve the design and detailed characterization of multispecific bNAb-derived constructs, the *in vivo* validation of AAV-mediated protein expression, and the analysis of antiviral activity as well as viral evolution in HIV-1-infected humanized mouse models. The successful candidate will work in a highly collaborative environment with access to state-of-the-art laboratory infrastructure and clinical research networks.

Your work will contribute to a deeper understanding of antibody activity against HIV-1 as well as viral escape mechanisms, and support the development of innovative preventive and therapeutic strategies.

degree of independence and creative freedom
- For further information, please visit www.klein-lab.de

Applications from female candidates are expressly welcome and will be given priority in the event of equal suitability, competence and professional performance. People with disabilities are welcome to apply and will be treated preferentially in the event of equal suitability and qualification.

Contact

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Geschäftsbereich Personal
Kerpener Str. 62
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Uniklinik Köln Karriere

Application deadline: 12 July 2026

Job-ID: 8kh7ynoo

apply now

We look forward to receiving your application and getting to know you!