We are looking to support our rapidly growing team starting February 1, 2026:

PhD Position (f/m/x) in Human Herpesvirus Antibody Responses

Institute of Virology - Laboratory for Infection and Immune Biology

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

limited for 3 years according to WissZeitVG within the framework of a scientific doctoral thesis

Your salary will be based on TV-L

Your tasks

- Conduct in-depth mechanistic analyses of humoral immune responses against Human Cytomegalovirus (HCMV) and other human herpesviruses
- Isolate and characterize human monoclonal antibodies targeting key viral surface proteins.
- Engineer viral variants and antibody constructs to investigate viral entry, neutralization pathways and immune escape strategies
- Explore and evaluate new therapeutic concepts derived from antibody–virus interactions
- Communicate and coordinate experimental progress with national and international collaboration partners, including structural biology and clinical teams

Your profile

- Master’s degree in biology, biomedicine, immunology, molecular medicine, virology or a related life-science discipline
- Strong motivation and genuine interest in immunology, virology and molecular mechanisms of virus–host interactions
- First experience in cell culture and molecular biology methods is an advantage; experience with

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 highly dedicated, translational and internationally wellconnected research group investigating the mechanisms of the human antibody response to infectious agents and their translation into clinical practice (e.g. Zehner et al., Immunity 2023; Kreer & Zehner et al., Cell
2020; Ehrhardt & Zehner et al., Nat. Med. 2019). Our work aims to define fundamental mechanisms of human antiviral immunity and to translate these insights into next-generation therapeutic strategies.
A major research focus of our laboratory is the human

antibodies or viruses is welcome but not required
- Ability to plan, perform and analyze experiments carefully, reliably and with critical thinking
- Good organizational skills and the ability to work independently on experimental tasks
- Strong communication skills and enjoyment of working in an interdisciplinary, collaborative team
- Willingness to learn new experimental approaches and actively contribute to scientifically meaningful projects

Our offer

- **Everything but ordinary:** You can expect a secure job in a challenging, innovative environment – including company pension schemes and regular working hours without business trips.
- **Work-life balance:** Whether full-time or part-time, with or without children – with numerous support options, we will find the right path together.
- **Team spirit in R(h)ine culture:** You will be warmly welcomed by an interdisciplinary team that values mutual respect and helpfulness.
- **Strong perspectives:** We offer extensive training opportunities – so you can continuously grow and set new goals.

antibody response to Human Cytomegalovirus (HCMV)—a globally prevalent pathogen with high clinical relevance. We aim to dissect the molecular interfaces between HCMV and the immune system, determine how potent neutralizing antibodies recognize viral entry complexes, and uncover the strategies the virus employs to escape these responses. A central component of our program is the isolation and in-depth characterization of human monoclonal antibodies with unique functional properties.
Our research environment offers access to state-of-the-art technologies, including advanced infection models, single-cell antibody discovery platforms, and interdisciplinary collaborations with clinicians, structural biologists and international partners. These resources enable mechanistic projects with direct translational potential, including the identification of therapeutic lead candidates.
You will be embedded in an ambitious, supportive and excellence-driven scientific environment that encourages independent thinking, rigorous experimentation and high-impact research. Your contribution will advance our understanding of viral immune evasion and help shape new strategies for preventing and treating HCMV and other infectious diseases, and may inform future antibody-based interventions against HCMV and related pathogens.

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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Application deadline: 21.12.2025

Job-ID: fkytota3

apply now

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