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ACADEMY OF SCIENCES AND HUMANITIES IN HAMBURG

Hamburg, 6 October 2025

Florian Klein receives the Hamburg Science Prize 2025 for his work on “Immunomodulation”

Florian Klein, Director of the Institute of Virology at Cologne University Hospital and a leading international expert in the field of human immunodeficiency virus (HIV), receives the Hamburg Science Prize 2025 for "Immunomodulation". The Academy of Sciences and Humanities in Hamburg honours the physician's groundbreaking work in the field of antibody-mediated prevention and therapy of HIV and other viral infections. The prize of 150,000 euros is endowed by the Foundation „Hamburgische Stiftung für Wissenschaften, Entwicklung und Kultur Helmut und Hannelore Greve“. The prize will be awarded on the 21st of November 2025 at Hamburg City Hall. The patron is the First Mayor of the Free and Hanseatic City of Hamburg.

Prof Dr Florian Klein investigates the development of human B lymphocytes and their production of antibodies that target viral pathogens such as HIV, HCV, Ebola viruses and SARS-CoV-2. He is particularly interested in so-called broadly neutralising monoclonal antibodies, which he develops for new approaches to prevent and treat infectious diseases. The research of Florian Klein's team and his collaborators is particularly focused on translating basic biological findings into clinical applications for patients and people at risk for viral infections.

Beyond his scientific work, Florian Klein is committed to science policy and society. During the coronavirus pandemic, he worked with partners from the German Centre for Infection Medicine to develop one of the first antibody-based therapies and tested it in clinical trials. In addition, he and his colleagues advanced smart testing systems including developing the so-called Lolli test. This enabled a broad, simple, and safe testing strategy to allow children the attendance in schools and daycare facilities. Early in the pandemic, the virologist was a strong advocate for developing vaccines to achieve general vaccination protection.

By awarding the Hamburg Science Prize 2025 to Prof Dr Florian Klein, the Academy of Sciences and Humanities in Hamburg recognises his groundbreaking work in the field of antibody defence against viral infections and their immunomodulatory effects. His research contributes to a deeper understanding of antibody functions, laying the foundations for advances in the prevention and treatment of infectious diseases.

Florian Klein will use the **prize money of 150,000 euros** for solving a critical question in HIV research. He wants to find out why, in some people living with HIV, the virus is controlled for many years without medication after antibody therapy. "We can observe that in some patients, the virus is kept in check by the person's own immune systems. This control can last for years," says Florian Klein. "We suspect that the reason for this is based on an interaction between cellular components of the immune system and the antibodies administered. However, we do not know how exactly this works. The generous prize money gives us the opportunity to understand the mechanisms involved." The aim will be to find out whether this situation can be induced not only in a few patients, but in the majority of people living with HIV.

You can read a detailed **interview** with Florian Klein on our Academy website:

"Mit Immunmodulationen HIV in Schach halten"

➤ <https://www.awhamburg.de/magazin/im-gespraech-florian-klein-preistraeger-des-hamburger-wissenschaftspreises-2025-immunmodulation.html>

Prof Dr Mojib Latif, President of the Academy of Sciences and Humanities in Hamburg and Chairman of the Jury: "This year, the presentation of the Hamburg Science Prize coincides with the 20th anniversary of the Academy. The guiding principle for the anniversary year is 'Science for Society'. The research topic of the Hamburg Science Prize, 'Immunomodulation', is an excellent illustration of what outstanding medical research can do for individuals, namely new immune-based therapies for cancer and autoimmune diseases as well as infections. Our prize winner is doing impressive work in this field."

Dr Peter Tschentscher, First Mayor of the Free and Hanseatic City of Hamburg and patron of the Hamburg Science Prize: "Infectious diseases have a profound impact on human health and society as a whole. The Academy of Sciences in Hamburg honors Prof Dr Florian Klein, a virologist whose research significantly contributes to the prevention and treatment of infectious diseases. During the pandemic, Prof Klein has greatly advanced the understanding of SARS-CoV-2 and developed a testing method tailored specifically to children. His scientific work is of great interest to infectious disease researchers in Hamburg and around the world."

Prof Dr Edgar Schömig, Chairman of the Board and Medical Director of Cologne University Hospital:

"It is with great pleasure that I congratulate Prof Dr Florian Klein on being awarded the Hamburg Science Prize 2025. This award recognises not only his outstanding contribution to research in the field of immunomodulation, but also his special commitment in challenging times. During the coronavirus pandemic, Prof Klein and his team delivered a groundbreaking solution with the development of the so-called lolli tests: It enabled children and young people in schools to be tested for SARS-CoV-2 with a high degree of reliability and without unpleasant throat swabs. This

testing strategy has contributed significantly to making schools safer and reducing interruptions to education in North Rhine-Westphalia and beyond.

His scientific work in the field of broadly neutralising antibodies, combined with translational research and rapid clinical trials, exemplifies how relevant research can be for society. The University Hospital of Cologne is extremely proud to have Prof Klein among its ranks."

The award winner Prof Dr Florian Klein

Florian Klein, born in Essen in 1977, studied medicine in Cologne, Zurich, Bologna and Boston. After working for three years as a resident at Clinic I for Internal Medicine in Cologne and completing his doctorate in 2009, he moved to Rockefeller University in New York. Here, he continued his scientific career in the working group of Prof Dr Michel Nussenzweig. In addition to his molecular biology work in the field of virology and immunology, he also focused on translational medicine. After being appointed Instructor of Clinical Investigation and Chief Clinical Scholar, he was appointed Assistant Professor of Clinical Investigation at Rockefeller University in 2013. In 2015, he accepted a DFG Heisenberg Professorship in Cologne and established his research group for experimental immunology at the Centre for Molecular Medicine (ZMMK).

Since February 2017, Florian Klein has been Director and Chair of the Institute of Virology at Cologne University Hospital. Together with Prof Dr Gerd Fätkenheuer, he founded the Cologne Infectious Diseases Network in 2017. Since 2020, he has been spokesperson for the COVIM immunity network within the University Medicine Network (together with Prof. Dr. L. E. Sander, Berlin). At Cologne University Hospital, he is also speaker for the Centre for Infectious Medicine (CIM) and the Centre for Laboratory Diagnostics (CLD). Since 2022, Florian Klein also leads the DZIF bridging topic "Antibody-based Therapies".

Prof Dr Florian Klein is a member of the German National Academy of Sciences Leopoldina and has been one of the world's most cited scientists in his field for several years. He has received numerous awards for his scientific work, including the Georges Köhler Prize from the German Society for Immunology, the Prize for Translational Infection Research from the German Centre for Infection Research, the German AIDS Prize and the Heinz Ansmann Prize for HIV Research.

About the Hamburg Science Prize

The Academy of Sciences and Humanities in Hamburg awards the Hamburg Science Prize every two years. In 2024, the prize will be awarded for the ninth time and is endowed with 150,000 euros. The prize is sponsored by the Foundation „Hamburgische Stiftung für Wissenschaften, Entwicklung und Kultur Helmut und Hannelore Greve“.

The previous themes and award winners:

- 2023 "One Health": Prof Dr Fabian Leendertz, Helmholtz Institute for One Health (HIOH) in Greifswald and University of Greifswald

- 2021 "Artificial Intelligence in Medicine": Prof Dr Dr Fabian Theis, Helmholtz Centre Munich and Technische Universität München
- 2019 "Congenital Rare Diseases": Prof Dr Jutta Gärtner, Department of Paediatrics and Adolescent Medicine, University Medical Centre Göttingen
- 2017 "Energy Efficiency": Prof Dr Xinliang Feng, Centre for Advanced Electronics, Dresden University of Technology, and Prof Dr Dr h. c. mult. Klaus Müllen, Max Planck Institute for Polymer Research, Mainz
- 2015 "Nanoscience": Prof Dr Prof E. h. Dr h. c. Roland Wiesendanger, Department of Physics, University of Hamburg
- 2013 "Dementia Research": Prof Dr Mathias Jucker, Hertie Institute for Clinical Brain Research, Tübingen
- 2011 "Energy Research": Prof Dr Ferdi Schüth, Max Planck Institute for Coal Research, Mülheim an der Ruhr
- 2009 "Infection Research": Prof Dr Stefan Ehlers, Research Centre Borstel and Christian-Albrechts-Universität zu Kiel

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The Academy of Sciences and Humanities in Hamburg

The Academy of Sciences and Humanities in Hamburg brings together leading researchers from all fields of science in northern Germany. It contributes to intensifying cooperation between disciplines, universities and other scientific institutions. It promotes research on socially significant future issues and fundamental scientific problems and has made it its special task to stimulate dialogue between science and the public. Prof Dr Mojib Latif has been President of the Academy since 2022. The Academy of Sciences and Humanities in Hamburg is a member of the Union of the German Academies of Sciences and Humanities and the German Research Foundation (DFG). The Academy's basic funding is provided by the Free and Hanseatic City of Hamburg.

The Institute of Virology at Cologne University Hospital

The Institute of Virology (Director: Prof Dr Florian Klein) provides the entire University Hospital of Cologne and other partner institutions with virological, serological and molecular biological diagnostics. The institute also specialises in researching viruses and their defence by the human immune system, as well as in developing new therapeutic approaches.

