



Curriculum Vitae Prof. Dr. Christian Drosten



Image: Oliver Abraham

Name: Christian Drosten

Born: 12 June 1972

Research interests: Virology, coronaviruses, new emerging infectious diseases, diagnostic tests for viral infections

Christian Drosten is a physician and virologist. He works in the fields of viral diversity, ecology and epidemiology across the different evolutionary levels, from the natural reservoir of a pathogen right through to a global outbreak in the human population.

Academic and professional career

- since 2017 W3 Professor and Director, Institute of Virology, Charité – Universitätsmedizin Berlin, Berlin, Germany
- 2007 - 2017 W3 Professor, Faculty of Medicine, and Director, Institute of Virology, University of Bonn, Bonn, Germany
- 2003 PhD in Medicine, Goethe University Frankfurt, Frankfurt am Main, Germany
- 2000 - 2007 Working Group Head, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany

Awards and honorary memberships

- since 2021 Member, German National Academy of Sciences Leopoldina
- 2021 Berlin Science Award 2020 awarded by the governing mayor of Berlin, Germany
- 2021 University Lecturer of the Year, German Association of University Professors and Lecturers
- 2021 Leibniz Medal, Berlin-Brandenburg Academy of Sciences and Humanities, Germany

2021	Eduard Buchner Prize, German Society for Biochemistry and Molecular Biology
2020	Order of Merit of the Federal Republic of Germany, First Class
2020	Special Award for Outstanding Achievements in Scientific Communication during the COVID-19 Pandemic, German Research Foundation (DFG), Germany
2010	Honorary Membership, Hungarian Society for Microbiology
2005	Cross of the Order of Merit, Federal Republic of Germany
2004	Postdoctoral Award for Virology, Robert Koch Foundation, Berlin, Germany
2003	Prize for the promotion of medical research, Werner Otto Foundation, Hamburg, Germany

Research interests

Christian Drosten is a physician and virologist. He works in the fields of viral diversity, ecology and epidemiology across the different evolutionary levels, from the natural reservoir of a pathogen right through to a global outbreak in the human population.

Virus discovery is a vital tool in understanding etiologically unclear disease presentations. Likewise, the characterisation of biological diversity is fundamental to understanding their evolutionary biology. However, the question of how we analyse the equidistance of unknown viruses remains unsolved. In recent years, Christian Drosten and his team have developed a strategy to describe significant new viruses, based on advanced cell culture systems and multi-pronged molecular characterisation. In addition, they have developed new bioinformatic approaches to identify viral sequences in meta-transcriptomic data.

Alongside this work, Christian Drosten has also been focusing on the expanding field of viral ecology, in particular the need to improve our understanding of viral diversity so that future pandemics can be identified early and prevented. What is still needed are concepts that make it possible to apply the complex relationships observed in viral ecology as part of a practical prevention strategy. Christian Drosten's research focuses on the dilution effect and speciation processes. He and his working group are looking at the concept of the species barrier, which they believe has functional correlates in terms of the interferon system and other cellular interactions. Their viral working models for this research are the coronaviruses, for which they have the relevant molecular biological repertoire.

During the discovery of the MERS (Middle East Respiratory Syndrome) coronavirus, Christian Drosten and his research group delivered some fundamental findings with regards to the epidemiology of the virus and disease progression. The current picture is that of a classic zoonosis with limited transmissibility, which can cause fulminant disease progression in individual cases, but appears relatively infrequently in the overall population. Christian Drosten and his team explored the evolution of the diversity and virulence of the MERS

pathogen in the animal reservoir (dromedary camels). In comparison, the COVID-19 pandemic was caused by a highly transmissible coronavirus. Christian Drosten and his research group were again involved in studying the new virus and contributed to both diagnostics and clinical and virological characterisation of the disease.