Leopoldina
Nationale Akademie
der Wissenschaften

Curriculum Vitae Prof. Dr. Lothar H. Wieler

Name: **Lothar Heinz Wieler**
Date of birth: **8th February, 1961**

Main areas of research: animal diseases, zoonoses, epidemiology of multi-resistant bacteria

Lothar Heinz Wieler is a veterinarian and microbiologist. His research focuses on epizootic diseases and infectious diseases which can be transmitted between animals and humans, so-called zoonoses. He particularly concentrates on infections involving multi-resistant bacteria and investigates their transmission mechanisms and disease-causing factors.

Academic and Professional Career

since 2015	President, Robert Koch-Institut, Berlin, Germany
2012	Research residency, Wellcome Trust Sanger Institute, Hinxton, Cambridge, GB
1998 - 2015	University Professor of Microbiology and Epizootic Diseases, Managing Director Department of Veterinary Medicine, Institute of Microbiology and Epizootics, Freie Universität (FU) Berlin, Germany
1997	Certified veterinary specialist for Microbiology
1996	Habilitation in the field of Infectious Diseases and Animal Hygiene, Department of Veterinary Medicine, Justus-Liebig-University Gießen, Germany
1996	Research residency, NIH scholarship, Center for Vaccine Development, University of Maryland, Baltimore, USA
1990 - 1998	Scientific assistant, Institute for Hygiene and Infectious Diseases of Animals, Justus Liebig University Gießen, Germany

1988	Doctorate, Institute for Hygiene, Medical Microbiology and Epidemiology, Ludwig-Maximilians-University (LMU) Munich, Germany
1987 - 1990	Scientific assistant, Department of Pathology, University of Ulm, Germany
1982 - 1985	Study of Veterinary Medicine, FU Berlin and LMU Munich, Germany

Functions in Scientific Societies and Committees

since 2018	Member, Strategic and Technical Advisory Group for Infectious Hazards (STAG-IH), World Health Organization (WHO)
since 2018	Member, European Advisory Committee on Health Research, EACHR, WHO Regional Office Europe
since 2017	Member, Executive Board, International Association of National Public Health Institutes (IANPHI)
since 2016	Guest member, Scientific Advisory Board, Heinrich Pette Institute (Leibniz Institute for Experimental Virology)
since 2016	Senator at The Leopoldina, Section: Veterinary Medicine
since 2016	Member, Scientific Advisory Board, Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)
since 2015	Guest member, Scientific Advisory Board, Bernhard-Nocht-Institute for Tropical Medicine (BNITM) and Scientific Advisory Board, Research Center Borstel
since 2015	Member, Berlin Network/Center for Bioinformatics (BNZB)
2012 - 2015	Member, Protection Commission, German Federal Ministry of the Interior
2012 - 2014	Chairmen, specialist group “Zoonosen”, German Society for Hygiene and Microbiology (DGHM)
2011 - 2015	Chairmen, Scientific Advisory Board, Friedrich-Loeffler-Institut
since 2011	Member, Advisory Council on Military Medicine, German Federal Ministry of Defense
2009 - 2014	Member, Executive Board, German Society of Veterinary Medicine
2009 - 2014	Member, Internal Advisory Board, “Nationale Forschungsplattform für Zoonosen”
2008 - 2016	Elected member, DFG Specialist Review Board 207
2003 - 2009	Vice Dean for Research, Department of Veterinary Medicine, FU Berlin

Project coordination, membership in collaborative projects

since 2015	Vice Speaker of the Executive Board, Projektkonsortium InfectControl 2020
2010 - 2016	Speaker, International DFG Research Training Group 1673 „Functional Molecular Infection Epidemiology“
2008 - 2014	Vice Speaker, Working group “Zoonosen und Infektionsforschung”, Technology and Method Platform for Medical Research (TMF)
since 2009	Associate Editor, Scientific Journal “Gut Pathogens”
2007 - 2015	Coordinator, BMBF-Network “Food-borne zoonotic infections in humans” (FBI-Zoo)
since 2003	Publisher, „Berliner und Münchener Tierärztliche Wochenschrift“ (BMTW)

Honours and Awarded Memberships

2016	Walter Frei-Award, Vetsuisse-Faculty, Universität Zürich
since 2010	Member of the German National Academy of Sciences Leopoldina
2009 - 2014	Board member of the German Veterinary Society
2007	Main Award of the German Society for Hygiene and Microbiology (DGHM)
1997	Young Talent Award of the German Veterinary Society (DVG)

Major Scientific Interests

Lothar H. Wieler is researching infectious diseases which are transmitted between animals and humans, so-called zoonoses. In particular, he deals with infections caused by multi-resistant bacteria, their transmission mechanisms and disease-causing factors.

Zoonoses are caused by bacteria, parasites, fungi or viruses. The pathogens can be transmitted by ticks and mosquitoes, but also by milk, eggs, meat or other food items. Known zoonoses are borreliosis and early summer meningoencephalitis (TBE), both transmitted by ticks. But rabies, enterohaemorrhagic Escherichia coli (EHEC), BSE and Ebola fever also belong to this group. The Ebola virus can, for example, be transmitted by infected flying foxes – infections in animals and humans are closely related. Due to population growth and human mobility, zoonoses spread faster and faster and pathogens are introduced and transmitted before antibodies can be produced. Research into zoonoses is therefore becoming increasingly important.

With his work, Lothar Wieler hopes to clarify how bacterial pathogens infect different hosts. Molecular classification methods are used to identify the zoonotic pathogens within a bacterial species and decode their genesis and relationships. DNA sequence analyses, in vitro methods and animal models within the natural hosts (chicken, pig) are used to identify the bacterial factors

(adhesins, invasins, toxins, modulins) that cause a successful infection in the respective host. The aim is to detect potential outbreaks of zoonotic diseases more quickly and to develop prophylactic intervention strategies.

A central challenge for Lothar Wieler and his colleagues is the increasing resistance of pathogens. Bacteria no longer react to antibiotics, viruses no longer to antivirals – pathogens are constantly developing new mechanisms of resistance. In order to recognize and understand these processes, pathogens are cultured and genetically modified. Subsequently, it will be investigated how pathogens and medication multiply and behave in the natural host (chicken, pig).