



Curriculum Vitae Professor Dr. Peter Palese

Name: Peter Palese
Born: 15 April 1944



Image: Private Source

Research Priorities: Influenza-viruses, influenza, viral replication, endogenous defense, development of vaccinations, reverse genetics

Peter Palese is a microbiologist and one of the leading scientists in the research on influenza-viruses. He was the first to map the genes of the three types of viruses (A, B, C) and elucidated the mechanisms of RNA viruses replication. Based on his research, new vaccinations against influenza were developed.

Academic and Professional Career

- since 2023 Professor of Medicine/Infectious Diseases, Icahn School of Medicine at Mount Sinai, New York City, USA
- since 1978 Professor of Microbiology, Icahn School of Medicine at Mount Sinai, New York City, USA
- 1987 – 2023 Chair, Department for Microbiology, Icahn School of Medicine at Mount Sinai, New York City, USA
- 1974 - 1977 Associate Professor, Icahn School of Medicine at Mount Sinai, New York City, USA
- 1971 - 1974 Assistant Professor, Icahn School of Medicine at Mount Sinai, New York City, USA
- 1970 - 1971 Postdoc, Roche Institute of Molecular Biology, Nutley, USA
- 1970 Master's Degree in Pharmaceutics, Vienna, Austria
- 1969 PhD in Chemistry, Vienna, Austria

Functions in Scientific Societies and Committees

since 2018	Member, Scientific Advisory Board, Institute of Human Virology (IHV), Baltimore, USA
since 2017	Member, Board of Directors, Global Virus Network (GVN)
2005 - 2006	President, American Society for Virology (ASV), USA
2003 - 2004	President, The Harvey Society, New York City, USA
1999 - 2003	Member, Virology Study Section, National Institute of Allergy and Infectious Diseases (NIAID), USA
1992 - 1997	Member, Advisory Board, Max-Planck Society, Munich
1990 - 1994	Member, Virology Study Section, NIAID, USA
1978 - 1981	Member, Grant Review Panel for Genetic Biology, National Science Foundation (NSF), USA
1977 - 2001	Associate Editor, Virology

Honours and Awarded Memberships

2020	Fellow, National Academy of Inventors, USA
2017	IHV Lifetime Achievement Award, IHV, University of Maryland, Baltimore, USA
2017	Drexel Medicine Prize in Translational Medicine, Drexel University, Philadelphia, USA
2016	Maurice Hilleman/Merck Award, American Society for Microbiology, USA
2016	Honorary Doctorate, McMaster University, Hamilton, Canada
2015	Mount Sinai Inventor of the Year Award, Icahn School of Medicine at Mount Sinai, New York City, USA
2015	Beijerinck Virology Prize, Royal Netherlands Academy of Arts and Sciences, Netherlands
since 2014	Fellow, American Academy of Arts and Sciences, USA
2014	Honorary Doctorate, Baylor College of Medicine, Houston, USA
since 2012	Member, National Academy of Medicine, USA
2012	Sanofi-Institut Pasteur Award, Pasteur Institut, Paris, France
2010	European Virology Award, European Society for Virology
2006	Honorary Doctorate, Icahn School of Medicine at Mount Sinai, New York City, USA
since 2006	Member, German National Academy of Sciences Leopoldina, Germany
2006	Robert-Koch Prize, Robert-Koch Foundation, Berlin, Germany

2005	Howard Taylor Ricketts Award, University of Chicago, Chicago, USA
2005	Austrian Decoration for Science and Art, Austria
since 2001	Corresponding Member, Austrian Academy of Sciences, Austria
since 2000	Member, National Academy of Sciences, USA
2000	Fellow, American Academy for Microbiology, USA
since 1998	Fellow, American Association for the Advancement of Science, USA
1991	Bristol-Myers Squibb Unrestricted Infectious Disease Research Grant, Bristol-Myers Squibb, New York City, USA
1980	Gustav Stern Award in Virology

Research Priorities

Peter Palese is a microbiologist and one of the leading scientists in the research on influenza-viruses. He was the first to map the genes of the three types of viruses (A, B, C) and elucidated the mechanisms of RNA viruses replication. Based on his research, new vaccines against influenza were developed.

The pathogens of influenza are RNA-containing viruses that can change rapidly. This happens by an accumulation (antigenic drift) of mutations in the hemagglutinin or by the acquisition of a completely new (antigenic shift) hemagglutinin gene. During influenza pandemics such as the Spanish flu of 1918 or the Asian flu of 1957, viruses with novel haemagglutinin-genes caused countless deaths.

Palese researched how a harmless influenza-virus becomes a dangerous influenza-virus and how it can override the body's own defences. He could show that the inhibition of neuraminidase prevents the replication of viruses in cell culture and in animals. He identified the mechanism of action of these neuraminidase inhibitors. On this basis of this work, neuraminidase-inhibitors were FDA-approved as medication against influenza.

Furthermore, Palese pioneered the discipline of reverse genetics, by which influenza-viruses are produced in vitro so that their genes can be purposefully altered. With this method, the influenza-virus of 1918 was successfully recreated in the laboratory. Using this technology, novel vaccines against influenza and other viral diseases viruses were developed. Most recently Palese focused on next generation SARS-CoV-2 vaccines.