

Fighting the Influenza Virus



Peter Palese
Professor and Chair, Microbiology

CURRENT RESEARCH

Developing a universal influenza virus vaccine and a broad-spectrum antiviral

Dr. Peter Palese, Professor and Chair of the Department of Microbiology at the Icahn School of Medicine at Mount Sinai is drawing on his four decades of experience to understand the specific processes of influenza viral infection and develop tools to combat the virus. Developing a universal influenza virus vaccine that would only need to be required once or twice in a lifetime will not only protect millions of individuals from one of the most persistent seasonal viruses, but also reduce the need for annual vaccination. This will reduce the need for multiple and annual treatments, and thus reduce medical costs, increasing the availability of the vaccine to many who are prohibited by cost from attaining annual vaccines. Dr. Palese is further studying the mechanisms by which the influenza virus attacks host cells and organisms in order to develop a broad-spectrum antiviral for treatment of already infected individuals. This antiviral would target specific host-cell proteins identified with viral RNA replication, but would work beyond influenza with a wide range of respiratory-disease causing viruses. This work has the potential to overwhelmingly strengthen the human fight against a virus that is known to have the frightening potential to cause epidemics and pandemics.

Worldwide, seasonal influenza outbreaks amount to between 3-5 million cases of severe illness, with 250-300 thousand of those cases resulting in deaths, according to the World Health Organization. Dr. Peter Palese has spent the last four decades as a virologist researching various aspects of the influenza virus, including studying its RNA, proteins, genetics and pathogenicity. The influenza virus is constantly changing, which is why we need...

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AFFILIATION



Icahn School of Medicine at Mount Sinai

EDUCATION

- Ph.D., in Chemistry, 1969 , University of Vienna, Austria
- M.S., in Pharmacy, 1970 , University of Vienna, Austria

AWARDS

- Elected Fellow of the American Academy of Arts and Sciences, 2014
- Honorary Doctorate, Baylor College of Medicine, 2014
- Election to the Institute of Medicine of the National Academy of Sciences, 2012
- Sanofi-Institut Pasteur Award, 2012
- European Virology Award (EVA), European Society for Virology, 2010

RESEARCH AREAS

Life Science, Diagnostics, Infectious

FUNDING REQUEST

Your contributions will fund the development of a universal influenza vaccine that will only need to be administered once or twice in a lifetime. Beyond influenza, funding for the development of a broad-spectrum antiviral for general respiratory diseases will revolutionize treatment for infected individuals. Contributions for basic influenza research will improve diagnosis techniques and treatment capabilities.