

# 2011 Albert B. Sabin Gold Medal Award Ceremony

May 18, 2011

**Awarded to**

**Douglas R. Lowy, MD and John T. Schiller, PhD**

For their groundbreaking research which led to the development of the first vaccines intended to prevent cancer

City View Room  
The George Washington University  
Elliott School of International Affairs  
1957 E Street, NW, 7th Floor  
Washington, DC 20052

## Program

5:30 - 6:30 pm      Registration and Refreshments

6:30 - 7:30 pm      Welcome  
Ambassador Michael W. Marine  
Chief Executive Officer  
Sabin Vaccine Institute

Remarks  
Peter J. Hotez, MD, PhD  
President, Sabin Vaccine Institute;  
Distinguished Research Professor,  
Walter G. Ross Professor and Chair,  
Department of Microbiology, Immunology & Tropical Medicine,  
The George Washington University

Introduction and Presentation of the  
Albert B. Sabin Gold Medal  
Brian Murphy, MD  
Co-Chief of the Laboratory of Infectious Diseases (Ret.)  
National Institute of Allergy and Infectious Diseases  
U.S. National Institutes of Health

Acceptance  
Douglas R. Lowy, MD and John T. Schiller, PhD  
2011 Albert B. Sabin Gold Medal Award Recipients  
Head, Signaling and Oncogenesis Section  
Head, Neoplastic Disease Section;  
Center for Cancer Research  
National Cancer Institute  
U.S. National Institutes of Health

7:30 - 8:30 pm      Reception

## Douglas R. Lowy, MD and John T. Schiller, PhD 2011 Albert B. Sabin Gold Medal Award Recipients

Douglas R. Lowy and John T. Schiller are renowned for their groundbreaking research which led to the development of the first vaccines intended to prevent cancer.



Dr. Lowy received his medical degree from New York University School of Medicine, and trained in internal medicine at Stanford University and dermatology at Yale University. Dr. Schiller received his bachelor's degree in Molecular Biology from the University of Wisconsin, Madison and his Masters and PhD degrees in Microbiology from the University of Washington, Seattle.



Dr. Douglas Lowy

Drs. Lowy and Schiller have worked at the U.S. National Institutes of Health, Nation Cancer Institute (NCI) for over 25 years. It is at NCI that they made two breakthrough discoveries which made vaccination against human papillomavirus (HPV) possible. First, the two showed that the L1 major structural protein of papillomaviruses could self-assemble into non-infectious VLPs, and that such VLPs had the ability to induce high-titer neutralizing antibodies, and could be produced by a method that was amenable to large-scale industrial production.

Secondly, the two found that the L1 gene of the prototype HPV16 isolate was a mutant and identified the wild type, which formed VLPs efficiently. They further noted that co-expression of L1 with the L2 minor structural viral protein increased efficiency of VLP assembly.

Drs. Lowy and Schiller are the first and second inventors on government-owned patents covering their discoveries, which have been licensed to Merck and GlaxoSmithKline for commercial development of HPV vaccines.



Dr. John Schiller

Drs. Lowy and Schiller remain at the forefront of HPV research and vaccine development. Dr. Lowy's current research focus includes the biology of papillomaviruses and the regulation of normal and neoplastic growth. His growth regulation research focuses primarily on the DLC family of tumor suppressor genes and their mechanism of action. Dr. Schiller's current interests include basic studies of papillomavirus virion assembly and infection, the development of 2nd generation HPV vaccines, and the generation of virus-like display and HPV pseudovirus-based vaccines for other antigens.



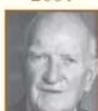
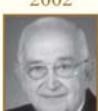
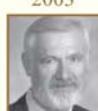
Drs. Lowy and Schiller have co-authored more than 100 papers over the past 25 years. The two have been honored for their vaccine research and have received several awards including the Landon-ACCR Prize for Transnational Cancer Research, the Novartis Immunology Prize for Clinical Immunology, the AMA's Nathan Davis

Award for Outstanding Government Service, and the Service to American Medal-Federal Employee of the Year.

## The Albert B. Sabin Gold Medal Award

Awarded annually since 1994, the Gold Medal Award—the highest scientific honor bestowed by the Sabin Vaccine Institute—recognizes researchers who have made extraordinary contributions in the field of vaccinology or a complementary field.

### Past Honorees

 1994	 1995	 1996	1994: Donald A. Henderson, MD, MPH 1995: Robert M. Chanock, MD (d. 2010) 1996: Joseph L. Melnick, PhD (d. 2001)
 1997	 1998	 1998	1997: Maurice R. Hilleman, PhD, DSc (d.2005) 1998: Myron M. Levine, MD, DTPH 1998: Allen C. Steere, MD
 1999	 2000	 2001	1999: Maj. Gen. Philip K. Russell, MD (USA Ret.) 2000: Ciro A. de Quadros, MD, MPH 2001: John B. Robbins, MD
 2002	 2003	 2004	2002: Stanley A. Plotkin, MD 2003: Samuel L. Katz, MD 2004: William S. Jordan, Jr., MD (d.2008)
 2005	 2006	 2007	2005: Albert Z. Kapikian, MD 2006: William H. Foegen, MD, MPH 2007: Hilary Koprowski, MD
 2008	 2009	 2010	2008: Ruth S. Nussenzweig, MD, PhD 2009: Rino Rappuoli, PhD 2010: John D. Clemens, MD

## The Legacy of Dr. Albert B. Sabin

### *50 year anniversary of oral polio vaccine licensure*



2011 marks the 50 year anniversary of the licensure of Dr. Albert B. Sabin's type-1 oral polio vaccine (OPV).

Dr. Sabin began research on poliomyelitis (polio), which at the time had reached epidemic proportions around the globe, in 1931 after receiving his MD from New York University.

Before entering full-time research he trained in pathology, surgery and internal medicine at Bellevue Hospital and spent a year conducting research at the Lister Institute of Preventive Medicine in London. In 1935 Dr. Sabin returned to New York and joined the research staff at the Rockefeller Institute before joining the University of Cincinnati's Children's Hospital Research Foundation in 1939. At Children's Hospital Research Foundation, Dr. Sabin proved that polio was an infection of the alimentary tract, indicating that polio might be prevented by an oral vaccine.

Dr. Sabin focused on isolating a mutant form of the polio virus incapable of producing the disease and thereby safe for introduction to the human body. The avirulent virus reproduced rapidly in the intestines, displacing lethal forms of the polio virus and providing protection from the disease.

The oral vaccine was first tested outside the U.S. from 1957 to 1959. In the U.S., Sabin's OPV vaccine was first used on a large scale in 1960 in Cincinnati, where it was given to 180,000 schoolchildren on "Sabin Sunday." Two years later all three constituents of the vaccine, one against each of the three major polio virus types, were licensed by the U.S. Public Health Service. A successful Sabin vaccine was used to eradicate polio throughout the world.

## Sabin Vaccine Institute

Sabin Vaccine Institute is a non-profit, 501(c)(3) organization of scientists, researchers, and advocates dedicated to reducing needless human suffering caused by vaccine preventable and neglected tropical diseases. Sabin works with governments, leading public and private organizations, and academic institutions to provide solutions for some of the world's most pervasive health care challenges.



Since its founding in 1993 in honor of the oral polio vaccine developer, Dr. Albert B. Sabin, the Institute has been at the forefront of efforts to control, treat, and eliminate vaccine preventable and neglected tropical diseases by developing new vaccines, advocating use of existing vaccines, and promoting increased access to affordable medical treatments.



Sabin's three main programs – Sabin Vaccine Development, the Global Network for Neglected Tropical Diseases, and Vaccine Advocacy and Education – strive to uphold Dr. Sabin's lifelong efforts by developing preventative measures for diseases that place burdens on the world's poorest communities.



The Sabin Vaccine Institute  
gratefully acknowledges contributions from

**Merck Vaccine Division**  
**Pfizer Vaccine Research**  
sanofi pasteur

that helped make the 2011 Albert B. Sabin Gold Medal Award  
ceremony and reception possible.



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