Presents

The Nineteenth Annual
Norman P. Salzman Memorial Award
and Symposium in Virology

Monday, November 6, 2017

The Warren Grant Magnuson Clinical Center
Lipsett Auditorium
National Institutes of Health
Dr. Norman P. Salzman was among the first to characterize viral mRNAs and to visualize replicating viral DNA. Dr. Salzman’s research on AIDS and his studies on human immunodeficiency virus led to his discovery that ongoing evolution of viral quasi-species, despite combination antiretroviral therapy, characterized the relationship among viruses from different compartments and elucidated novel mechanisms of antiretroviral drug resistance. During his distinguished career at NIH, Dr. Salzman made many important and innovative contributions to our basic understanding of the replication of poliovirus, vaccinia virus, polyoma virus, SV40 virus and BK virus.

Dr. Salzman’s memorable achievements in virology are paralleled by the recognition that his laboratory was a training ground for many young scientists, several of whom went on to become laboratory or section chiefs at the NIH, and others to hold leadership positions in academia and industry all over the world. Six have been elected to the National Academy of Sciences and one received the Nobel Prize.

On behalf of the Foundation for the NIH and Lenore Salzman, we would like to thank the NIH Office of Intramural Research and the Virology Interest Group for their support and generosity in making this year’s symposium a tremendous success.
The first Norman P. Salzman Memorial Award was presented on November 18, 1999 to Dr. Joanna Shisler, a young Ph.D. in Dr. Bernard Moss’s Laboratory of Viral Diseases, NIAID. Dr. Clifford Lane provided the introduction to the program with tributes to Dr. Salzman by Dr. Bernard Moss, NIAID, Dr. Robert Wagner, University of Virginia, and Dr. Joseph Kates, SAIC-Frederick. Following the award presentation, Dr. Shisler, presented a lecture on her work on poxvirus gene functions. About 80 colleagues, friends, and young scientists turned out for this first scientific award.

In the spring of 2000, the Virology Interest Group at the NIH contacted Mrs. Salzman and indicated an interest in expanding the program into a half-day symposium and award, with virologists from the NIH, FDA, and SAIC (now Leidos) community assisting with the scientific management of the event. That partnership was the catalyst for the birth of the current Norman P. Salzman Memorial Award and Symposium in Virology. The scientific organizing committee has since become self-sustaining, drawing the participation of junior and senior virologists in planning the meeting and overseeing the award selection. This annual event has expanded from an audience of about 80 in 1999 to over 250 in 2011. Attendees include fellows, medical students, researchers, and allied health professionals from the NIH, SAIC (LEIDOS), FDA, and distinguished universities.

The memorial serves as a living legacy to Dr. Salzman, who was a mentor to many young scientists and postdoctoral fellows in his lab at the NIH. The program gives an award for innovative and creative research in the field of virology to an outstanding postdoctoral fellow from NIH, FDA, or Leidos. The awardee’s mentor is also honored and recognized at the ceremony.

As the Foundation for the NIH grew over the years, so too did its support for the Salzman Memorial. Through the efforts of Amy McGuire Porter, former executive director, and her staff, additional funds were raised for the Salzman Award. With the continuing and enthusiastic administrative support from the FNIH, the Norman P. Salzman Memorial Award and Symposium has reached its 19th year.

If you would like to make a gift in support of the Norman P. Salzman Memorial, please:

Call the Foundation for the NIH at 301-402-4976 or Visit us at fnih.org

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**Norman P. Salzman Memorial Award and Nineteenth Annual Symposium in Virology**

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<td>Michel Nussenzweig, Rockefeller University</td>
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<td>Translating Stem Cell Biology to Understand Human Gastrointestinal Virus Infection</td>
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<td>Mary K. Estes, Baylor College of Medicine</td>
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<td>Tribute to Dr. Norman P. Salzman</td>
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<td>Edward Berger, NIAID, NIH</td>
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<td>Presentation of the 2017 Norman P. Salzman Memorial Award in Virology</td>
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<td>“Defining B Cell Immunodominance to Influenza A Virus”, Cellular Biology Section, Laboratory of Viral Diseases, NIAID</td>
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<td>Abstract Award Presentation II, Tuqi Wu, Ph.D.,</td>
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<td>“Transcription factor TCF1 is a critical regulator of antiviral T cell immunity” Cell Signaling in Immunity Section, Genetic Disease Research Branch, NHGRI</td>
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<td>Alasdair Steven, NIAMS, NIH</td>
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<td>W. Ian Lipkin, Columbia University Mailman School of Public Health</td>
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<td>Eric Freed, NCI Frederick, NIH</td>
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<td>12:50 PM</td>
<td>Luncheon at FAES Terrace and Poster Presentations</td>
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**The 2017 Norman P. Salzman Memorial Award in Virology**

is presented to

**Dr. Davide Angeletti, Ph.D.,** Cellular Biology Section, Laboratory of Viral Diseases, NIAID

Dr. Angeletti received his B.Sc. degree in Medical Biotechnology from San Raffaele University in Milan, Italy and his M.Sc. in Biomedicine from Karolinska Institute in Stockholm, Sweden. He obtained his Ph.D. in medical science from Karolinska Institute under the supervision of Prof. Mats Wahlgren. His graduate work aimed at dissecting the antibody responses to surface adhesion proteins important for the pathogenesis of *P. falciparum* malaria. After joining the Yewdell lab at NIAID in 2014, he has studied antiviral humoral responses with particular emphasis on dissecting B cell and antibody immunodominance in response to Influenza A virus infection and vaccination.

**Dr. Tuoqi Wu, Ph.D,** Cell Signaling in Immunity Section, Genetic Disease Research Branch, NHGRI

Dr. Tuoqi Wu received his B.S. from Peking University (China) in 2007. He conducted his graduate research under the supervision of Dr. Rafi Ahmed at Emory University, where he studied how microRNAs regulate T cell differentiation during viral infection. Dr. Wu joined Dr. Pamela Schwartzberg’s group at NHGRI as a visiting fellow in 2013. His work has revealed that transcription factor TCF1 is required for the differentiation of antiviral T follicular helper cells, which are required for the development of humoral immune memory against viruses. In his more recent work, Dr. Wu has identified a stem cell-like CD8 population generated during chronic viral infection, which is critical for persistent antiviral T cell responses and is reciprocally regulated by TCF1 and type I interferon signaling early after chronic viral infection.

**Poster Presentation Awardees**

**In Vitro Production of Papillomavirus Vectors**

Fellow: Carla Correia Cerqueira, Ph.D.
Mentor: John T. Schiller, Ph.D.
Laboratory of Cellular Oncology, National Cancer Institute

**Novel Heterologous DNA Prime/Boost Vaccine Strategies Focus Immunity to Subdominant Highly Conserved HIV Epitopes Associated with Control of Viremia**

Fellow: Xintao Hu, Ph.D.
Mentor: Barbara K. Felber, Ph.D.
Human Retrovirus Pathogenesis Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute at Frederick

**A Brief History of the Norman P. Salzman Memorial Award and Symposium**

Dr. Norman P. Salzman was an honored and respected member of the NIH biomedical research community. After his passing on December 11, 1997, Dr. Clifford Lane proposed the idea of a virology memorial award to Mrs. Lenore Salzman as a fitting tribute to Dr. Salzman. Drs. Lane and Salzman had been colleagues, with Dr. Lane as Clinical Director of the National Institute of Allergy and Infectious Diseases (NIAID) and Dr. Salzman as the former Chief of the Laboratory of the Biology of Viruses in the NIAID. This kind of memorial would emphasize Dr. Salzman’s unique contributions not only as a noted pioneer in the field of molecular virology but also his mentorship of so many younger scientists who went on to become famous researchers worldwide.

Dr. Lane thought that the newly created Foundation for the National Institutes of Health (FNIH) would be an excellent sponsor for an annual award in virology, and so Mrs. Salzman met with the first executive director of the Foundation. The idea of an award was greeted enthusiastically as the first project for the FNIH, chartered by the United States Congress in 1996 “to support the life-saving research mission of the National Institutes of Health by raising private sector funds to stimulate and facilitate the formation of public-private partnerships” to support NIH’s research priorities.

A significant amount of capital was needed to establish this novel memorial. Since NIH did not allow scientists from NIH to raise funds for an outside program, Mrs. Salzman contacted Dr. James Darnell, a friend and former colleague of Dr. Salzman’s for his help. Dr. Darnell, the Vincent Astor Professor at the Rockefeller Institute in New York, began immediately to contact colleagues, members of scientific societies, and friends of Dr. Salzman. In his letter, dated May 4, 1998, Dr. Darnell asked colleagues to “honor our longtime friend and colleague, Norman P. Salzman, and to provide a stimulus to virological research by young scientists at NIH, a goal that Norman achieved by himself through almost 40 years of outstanding research at NIH, at Georgetown University, and at the Frederick Cancer and Development Center. Norman’s laboratory was the training ground for many young virologists and his work on polio virus, vaccinia virus, SV40, and his most recent work on HIV was widely admired.”

Added to this grass roots support were the contributions from friends and family of Norman’s favorite aunt, Sylvia Edelman, who died two years after Dr. Salzman. These funds proved to be a significant addition to the funds already collected. Within three years, with a start-up of only $15,000 from Mrs. Salzman, the goal of $100,000 to support this memorial in perpetuity was reached. The efforts of the small staff at the FNIH and their support made the first award and subsequent awards a possibility.
Dr. Jon Yewdell earned his A.B. from Princeton University in Biochemistry and MD and PhD (Immunology) degrees from the University of Pennsylvania. His PhD with Walter Gerhard at the Wistar Institute focused on using monoclonal antibodies to characterize recognition of influenza A virus by the adaptive immune system and dissect the mechanism of antigenic drift. After a post-doc with David Lane at Imperial College working on p53, he returned to the Wistar Institute as an Assistant Professor to study the cell biology of hemagglutinin biosynthesis and MHC class I recognition of viruses and immunodominance of anti-viral CD8+ T cell responses. For the past 30 years, he has been at PI at NIAID studying various aspects of cell biology and adaptive immunity at the virus-host interface. His most recent work focuses on immunodominance of B cell antiviral responses and aspects of protein translation related to lymphocyte biology and the generation of MHC class I peptide ligands from viral and tumor genes.

AND

Pamela Schwartzberg, M.D., Ph.D.
Chief, Cell Signaling in Immunity Section, Genetic Disease Research Branch, NHGRI

Dr. Pamela Schwartzberg is a Senior Investigator at the National Institutes of Health. She received her undergraduate degree from Princeton University and her MD PhD in the Medical Scientist Training Program at Columbia College of Physicians and Surgeons, Columbia University, where she worked with Dr. Stephen P. Goff on retroviral replication and homologous recombination in mammalian cells. Her work included the generation of some of first gene-targeted mice. After an internship at Boston Children’s Hospital, she did a fellowship at NCI with Dr. Harold Varmus and Dr. Michael Lenardo, as a special fellow of the Leukemia and Lymphoma Society. She started her own laboratory at the National Human Genome Research Institute in late 1997 and was promoted to senior investigator with tenure in 2003 and Branch Chief in 2014. Her laboratory's work has centered on the use of genetic, biochemical and cellular studies to understand T cell signaling, with a focus on pathways affected by primary immunodeficiencies. Dr. Schwartzberg is an adjunct faculty member at the University of Pennsylvania and the George Washington University. She has served on numerous reviewing and editorial boards and is the recipient of a Searle Scholar's Award, the American Association of Immunologists BD-Pharmingen Biosciences Award for Early Career Scientists and has been elected to the American Society for Clinical Investigation (ASCI) and the Association of American Physicians (AAP).
Past Recipients

Norman P. Salzman Memorial Award in Virology

1999
Joanna Shisler, NIAID

2000
Herman Edskes, NIDDK

2001
Alonzo Garcia, NIAID

2002
Sonja Best, NIAID, Rocky Mountain Laboratories

2003
Kay Grünwald, NIH

2004
Jason Brenchley, NIAID

2005
Yamina Bennasser, NIAID

2006
Christopher Buck, NCI

2007
Adriano Boasso, NCI

Norman P. Salzman Memorial Mentor Award in Virology

1999
Bernard Moss, NIAID

2000
Reed Wickner, NIDDK

2001
Bernard Moss, NIAID

2002
Marshall Bloom, NIAID, Rocky Mountain Laboratories

2003
Alasdair Steven, NIH

2004
Daniel Douek, NIAID

2005
Kuan-Teh Jeang, NIAID

2006
Douglas Lowy, NCI and John Schiller, NCI

2007
Gene M. Shearer, NCI

with Special Recognition of Alasdair C. Steven, NIH

2008
Sriram Subramaniam, NCI

2009
Thomas Kristie, NIAID

2010
Dorian McGavern, NINDS

2011
Vinay K. Pathak, NCI

2012
Peter Kwong, VRC, NIAID

2013
Chris Buck, NCI

2014
Heinz Feldmann, NIAID, Rocky Mountain Laboratories

2015
Paolo Luongo, NIAID; Barbara Rehermann, NIDDK

2016
Dorian McGavern, NINDS

The Norman P. Salzman Memorial Fund Donors

The Foundation for the National Institutes of Health gratefully acknowledges the generous contributions made by the family, friends, and colleagues of Norman P. Salzman to honor his memory and to establish this annual award.

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Mrs. Georgia Francis

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Dr. & Mrs. Michael M. Frank

Dr. Larry O. Arthur
Mrs. Dorothy H. Geary

Ms. Ann Ashby and Mr. Ron Kopicki
Dr. & Mrs. Lawrence Gelb

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Mr. Adam R. Hurwitz

Ms. Jamie N. Cooper
Mr. & Mrs. David Hurwitz

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Dr. & Mrs. Robert B. Couch
Dr. & Mrs. Tomozumi Imamichi

Dr. & Mrs. Keith A. Crandall
Mrs. Dorothy W. Imlay

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