

# CURRICULUM VITAE: CHARLES M. RICE

Date: January 31, 2016

## 1. Personal Information:

- a. Sex: Male
- b. Date of Birth: August 25, 1952

## 2. Citizenship: U.S.A.

## 3. Address and Telephone Numbers:

Office: Laboratory of Virology and Infectious Disease  
Center for the Study of Hepatitis C  
The Rockefeller University  
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New York, NY 10065  
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## 4. Present Positions:

Scientific & Executive Director, Center for the Study of Hepatitis C	1999-
Maurice R. and Corinne P. Greenberg Professor, Rockefeller University, Head, Laboratory of Virology and Infectious Disease	2001-
Adjunct Professor, Washington University School of Medicine, Department of Molecular Microbiology	2001-
Adjunct Professor of Virology in Medicine, Weill Medical College, Cornell University	2002-

## 5. Education:

Undergraduate: University of California, Davis, CA. 1974 B. S. in Zoology  
Woods Hole Marine Biology Lab, Woods Hole, MA 1973 Physiology Course

Graduate: California Institute of Technology, Pasadena, CA 1981 Ph. D. in Biochemistry

Postgraduate: Postdoctoral Research Fellow/Gosney Research Fellow, Caltech, Pasadena, CA  
1981-1985

## 6. Academic Positions and Employment:

Woods Hole Marine Biology Laboratory, Woods Hole, MA	1973
Assistant Instructor for the Physiology Course	1975

Graduate Teaching Assistant, Caltech, Pasadena, CA	1975-1981
California State University, Northridge, CA, Invited Instructor for faculty course on current techniques in molecular biology	Summer 1983
Associate Biologist, Caltech, Pasadena, CA	1985
Visiting Fellow, Australian National University Department of Biochemistry, Canberra, Australia	1985
Assistant Professor, Washington University School of Medicine Department of Molecular Microbiology	1986-1990
Associate Professor, Washington University School of Medicine, Department of Molecular Microbiology	1991-1995
Professor, Washington University School of Medicine, Department of Molecular Microbiology	1995-2000
Interim Department Head, Washington University School of Medicine, Department of Molecular Microbiology	1993-1997
Andrew B. and Virginia C. Craig Faculty Research Fellow	1999-2000
Ad Hoc Reviewer, NIAID (Microbiology and Infectious Disease), NSF (Genetics), USDA	1988-1994
Member, Site visit team: Laboratory of Vector-Borne Viral Diseases, CBER, FDA	1996
Member, Experimental Virology Study Section, NIAID, NIH	1997-2000
Ad Hoc Grant Reviewer, The Wellcome Trust	1997-present
Special Emphasis Panel, HIV Vaccine Research and Design, NIAID	1999-2002
Reviewer, Ancillary Study Proposals for the HALT-C trial, NIDDK	1999
Ad Hoc Reviewer, WHO, Australian Research Council, VA, Swiss National Science Foundation, Arthritis Soc.	1989-present
Temporary Advisor, WHO	1990
International Organizing Committee, International Meetings on Hepatitis C Virus and Related Viruses	1991-present
International Committee on the Taxonomy of Viruses Flaviviridae Study Group	1993-2015
Togaviridae Study Group	1990-present
Chair	1993-1997
American Society of Virology, Nominating Committee Chair	96, 99, 09, 11 2004
American Society of Virology, Program Committee	1996-2002
American Society of Virology, Councilor for Animal Virology	1997-2000
American Society of Virology, President	2002-2003
American Society of Virology, Finance Committee	2006-2010
American Society of Gene Therapy Scientific Committee on AIDS,	1998-2002

Infectious Disease and Immunology	
Scientific Advisory Committee, International Conference on Therapies for Viral Hepatitis	1999-present
St. Jude Children's Research Hospital-Pediatric Infectious Diseases Society Fellowship Selection Committee	2000-present
Chair, NIAID SRG, "CHALLENGE GRANTS: Joint Ventures in Biomedicine and Biotechnology, Vaccines and Therapeutics for Emerging Infections	2000
Visiting Professor, Shanghai (Fudan) Medical College, China	1999-2002
Ad Hoc Member, Board of Scientific Counselors, NIAID, LID review	2000
Faculty of 1000, Virology Section Head with Ann Arvin	2001-present
AASLD, Single Topic Conference on Hepatitis C, Co-Course Director	2001
Gordon Research Conference, Viruses and Cells, Vice Chair	2003
Gordon Research Conference, Viruses and Cells, Chair	2005
American Liver Foundation, New York Chapter Medical/Scientific Advisory Board	2001-2011
Fox Chase Cancer Center, Institute for Cancer Research Scientific Advisory Committee	2001-2004
Review of the MRC Virology Unit, Glasgow Physiological Medicine and Infections Board Subcommittee	2002
Keystone Symposia, Infectious Disease Study Group	2002-2003
University of Washington, NIDA Center Chair, External Advisory Committee	2002-2011
Consultant, NWO/SPINOZA prize, Netherlands	2003
New York Blood Center, Lindsey F. Kimball Research Institute Scientific and Medical Advisory Committee	2003-present
American Academy of Microbiology, Steering Committee for the Colloquium On Genomics and Pathogenesis, Key Largo, Florida	2003-2004
Department of Energy, Genome Synthesis Committee	2004
NIAID Special Emphasis Panel, Chair Biodefense and Emerging Infectious Disease Research Opportunities	2004
Member, Board of Scientific Counselors, DIR, NIAID, NIH	2004-2009
Member, SAB Emory Vaccine Center Human Immunology Center Grant	2005-2009
External Reviewer, National Canadian Research Training Program in Hepatitis C	2005-2010
Advisory Panel, GBF Braunschweig/Hannover Med. School Translational Research Centre for Experimental and Clinical Infection Research	2005
Chair, Novartis Foundation Symposium on New Treatment Strategies for Dengue and other flavivirus diseases. Singapore	2005

Ad hoc Member, Board of Scientific Counselors, DIR, NIDDK, NIH	2009
Ad hoc Member, Board of Scientific Counselors, DIR, NIAID, NIH	2012
HHMI New Investigator Selection Panel	2008
HHMI Investigator Review Panel	2009
Ad hoc Member, Microbiology and Infectious Disease Research Committee NIAID, NIH	2012
Council of Councils Working Group on the Use of Chimpanzees in NIH-supported Research	2012
NWO Division for Earth and Life Sciences, Grant Reviewer	2012
Organizing Committee, Bridging the Sciences, Atlanta GA	2012
Wellcome Trust Peer Review College	2012-present
Advisor, Type 1 Diabetes Mouse Resource Committee, NIDDK, JAX	2012-present
Member, Int'l SAB, Institute of Medical Microbiology, Fudan University	2012-present
Member, International Advisory Committee, 2015 ISVHLD	2013-present
Member, EAB, Antiviral Drug Discovery and Development Center, UAB	2014-present
Jury, Francqui Prize in the Biological and Medical Sciences, Belgium	2014
Member, Board of Scientific Counselors, DIR, NIAID, NIH	2014-2019
AAAS Council Delegate	2015-2018

## **7. University Appointments, Committees, and Service:**

Graduate Admissions Committee, Wash. U.	1987-1991
MSTP Admissions Committee, Wash. U.	1992-1996
Co-director: Center for Infectious Disease Research, Wash. U.	1993-2000
Ph.D./MSTP Thesis Committee Member for:	

### Current:

Pradeep Ambrose, Mariel Bartley, Daniel Blanco Melo, Lillian Cohn, Gregory W. Goldberg, Elizabeth Hubin, Doowon Huh, Philip Nussenzweig, Avital Percher, Gabrielle Rabinowitz, Vyas Ramanan (MIT), Violeta Rayon, Stephanie Sarbanes, Constantin Nicolae Takacs, Matthew Takata.

### Past:

Sean M. Amberg, Ritu Banerjee, Cameron Bess, Erika Billick, Rohit Chandwani, Rebecca Chin (Albert Einstein), Eric Clambey, Graeme Couture, Tshaka Cunningham, Douglas Deder, Thomas Dentzer, Aparna Deora, Alexander Diehl, Alan Eggenberger, Christopher Fields, Benedito A. L. Fonseca (outside dissertation reviewer: Yale University), Susan Francis, Arash Grakoui, Kent K. Grindstaff, Carrie Groft, Nicholas Gulati, Ariel Halper-Stromberg, Daniel Hart, Mark Heise, David Hendrixson, Jennifer

Hertz, Jessica Sook Yuin Ho, Heather Holeman, Chris Hug, Chia Hung, Mary E. Jones, Sherri Kan, Sharookh Kapadia, Jason Kimata, Meghan Kirksey, Kathleen Kolakovich, Gary Laco, Mark LaStarza, Youngnam Lee, Julie A. Lemm, Robin Levis, Guangpu Li, Chao Lin, Brett Lindenbach, Mara Lippa, Joy Loh, Randy Longman, Jia Min Loo, Joseph Luna, Bill Lyon, Joseph Mancias, Laura McMullan, Lubomir Merkov, Philip Meuleman, Kevin Mohammed, Catherine Murray, Kiran Musunuru, Isabella Muylaert (University of Brazil), Shengyong Ng (MIT), Thomas Oh, Joseph Osmundson, Hal Padgett, Elizabeth Paine, Emily Joe Paulson, Nora Pencheva, Robert Piper, John Polo (outside member: University of North Carolina, Chapel Hill), Karen Preiter, Rachel Presti, Lin Qu, Nicole Ramsey, Michael Reagan, Karen Reed, Suzannah Rihn, Michael Robek, Dean Rochester, Brad Rosenberg, Shannan Rossi (UTMB), Natacha Ruiz, Srihari Sampath, Bianca Santomasso, Johannes Scheid, Dorothee Schmid, Jonathan Schmitz, Uwe Schäfer, Leonard Smith, David Stark, Alison Strack, Bretton Summers, Marianne Sweetzer, Eric Schroeter, Steven Soll, Till Strowig, Donna Tscherne, Manuel Tsiang, Sid Venkatesh, Peter Westervelt, Kathy Weston, Matt M. Wielgosz, Christine Wilcox, Maria Zhadina, Wenyong Zhang

Nucleic Acids Preliminary Examination Committee, Wash U.	
Member	1987-90
Chair	1989-90
Institutional Biosafety Committee, Wash. U.	
Member	1987-00
Chair	1989-00
Biohazard Containment Design Committee (Animal Facilities), Wash. U.	1992-98
Animal Space, Biohazard Committee, Wash. U.	1996-98
Executive Faculty, Wash. U.	1993-97
Executive Council, Wash. U.	1993-97
Academic Affairs Committee of the Executive Faculty, Wash. U.	1995-97
W. M. Keck Fellowship Selection Committee, Wash. U.	1995-98
Academic Affairs Committee; ad hoc committee on Faculty Appointments on the Research Track, Wash. U.	1996-97
Research Affairs Committee, Wash. U.	1996-97
Biochemistry Chair Search Committee, Wash. U.	1996-99
Technology Transfer Committee, Wash. U.	1997-99
Infectious Disease Search Committee, Rockefeller	2000
Virology Search Committee, Chair, Rockefeller	2001-2003
Member, Academic Council, Rockefeller	2001-2004
Chair	2003-2004
Advisory Committee, High Throughput Screening Resource, Rockefeller	2002-2004
Advisory Committee, DNA Sequence Resource Center, Rockefeller	2002-2004
Advisory Committee, Flow Cytometry Resource Center, Rockefeller	2004-2005

Advisory Committee, Bio-Imaging Resource Center, Rockefeller	2004-2008
Strategic Planning Core Group, Rockefeller	2004-2008
Institutional Biosafety Committee, Rockefeller	2005-present
Friday Lecture Series Committee, Rockefeller	
Vice-Chair	2005-2006
Chair	2007-2009
Finance Committee, Rockefeller	2009-2011
Postdoctoral Awards Review Committee, Rockefeller	2009, 2013
Board, Faculty and Student Club, Rockefeller	2010-present
Strategic Planning Committee, Rockefeller	2011-2012
Member, Academic Council, Rockefeller	2012-2015
Friday Lecture Series Committee, Rockefeller	2013-2015
Strategic Planning Group, Rockefeller	2012-2013
Mid-Career Hiring Committee, Rockefeller	2012-present
Conflict of Interest Committee, Rockefeller	2013-present
Scientific Advisory Board, Tri-I Therapeutic Discovery Institute	2014-present
Scientific Committee, International Meeting on Hepatitis Cure & Eradication	2014
International Scientific Advisory Board, VHPCE Program	2015-present
Scientific Advisory Board, NCDIR	2015-present
Scientific Committee Member, InBev-Baillet Latour Medical Research	2015-present
Member, LKS AVI Science Advisory Board	2015
Member, Robert Koch Foundation, Berlin, Germany	2015-present
Scientific Committee, 2016 Scientific Symposium of the Institute Pasteur International Network	2016

8. **Medical Licensure and Board Certification:** None

9. **Military Service:** None

10. **Honors and Awards:**

Phi Kappa Phi	
Phi Beta Kappa	
Herbert A. Young Award, University of California, Davis	1974
Visiting Fellowship, Australian National University	1985
Wallace P. Rowe Symposium, NIH	1990
Pew Scholar in the Biomedical Sciences	1986-1990

Andrew B. and Virginia C. Craig Endowed Faculty Research Fellow	1999-2000
Honess Memorial Lecture, Mill Hill	2000
Grossberg Lecturer, Medical College of Wisconsin	2000
Maurice R. and Corinne P. Greenberg Chair in Virology	2000-present
Visiting Professor, Shanghai (Fudan) Medical College	1999-2002
President, American Society for Virology	2002-2003
Gordon Research Conference, Viruses and Cells, Co-Chair and Chair	2003, 2005
Noble Lectureship, University of Oklahoma HSC	2001
Hans Popper Basic Science Award, AASLD	2003
Ellison Medical Foundation Senior Scholar in Global Infectious Diseases	2003-2007
John Karling Distinguished Lectureship in Biology, Purdue	2004
The Harvey Society	2004
Paul Sherlock Distinguished Lecturer, MSKCC	2004
Board of Scientific Counselors, DIR, NIAID, NIH	2004-2009
Fellow, American Association for the Advancement of Science	2004
Member, U. S. National Academy of Sciences	2005
Fellow, American Academy of Microbiology	2005
Bertram M. Marx Lecturer, University of Alabama, Birmingham	2005
Sulkin Visiting Professorship, University of Texas, Southwestern	2006
Hilleman Lecturer, University of Chicago	2006
Brockman Memorial Lectureship, University of Michigan, Ann Arbor	2006
K. F. Meyer Lecturer, University of California, San Francisco	2006
Kelsey Named Professor, The Mayo Clinic, Rochester, MN	2006
Shiple Symposium Lecturer, Harvard Medical School, Boston	2006
Beijerinck Lecturer, Dutch Annual Virology Symposium, Amsterdam	2007
Steven F. Degar Memorial Lecturer, Yale University	2007
Klein Distinguished Lecturer, New York University	2007
Bassford Memorial Lecturer, University of North Carolina, NC	2007
M. W. Beijerinck Virology Prize	2007
Distinguished Lecturer, Huck Institute, Penn State University	2008
Dean's Distinguished Lecturer, U. of Colorado at Denver, Health Sci. Ctr.	2008
3 <sup>rd</sup> Oxford Distinguished Lecturer in Virology, University of Oxford	2008
Tumor Virology Symposium to honor Harald zur Hausen, Heidelberg,	2009
Keynote, 16 <sup>th</sup> Int, Meeting on Hepatitis C Virus & Related Viruses	2009
Keynote, 57 <sup>th</sup> Annual Meeting of Japanese Society for Virology	2009
Lamb Center Discovery Series Lecturer, Vanderbilt Medical Center	2009
Dolman Lecturer, University of British Columbia	2010
Keynote, 9 <sup>th</sup> International Symposium on Positive Strand RNA Viruses	2010
Rockefeller University Teaching Award	2010
Thomas J. Matthews Endowed Lecturer, Duke University	2010
Student Invited Distinguished Lecturer, Scripps Florida	2010
Distinguished Guest Lecturer, Sylvester Comprehensive Cancer Center	2011
Keynote Lecture, ShenQuist, Princeton	2011
Keynote Speaker, Gordon Research Conference, "Viruses and Cells"	2011
Visiting Professor, Stanford Division of Gastroenterology & Hepatology	2012
Opening Keynote, ICAAC, San Francisco, CA	2012

Schinazi Distinguished Lecturer, Emory	2012
Dautrebande Prize, Belgian Royal Academy of Medicine	2013
ALF Distinguished Scientific Achievement Award, Washington, D.C.	2014
Bruce Witte Distinguished Lecturer, Hepatitis B Foundation	2014
Storer Lectureship in the Life Sciences, University of California, Davis	2014
Bernard Fields Lecture, Scripps Research Institute, La Jolla CA	2015
Bernard Fields Award Lecture, CROI, Seattle WA	2015
Plenary Lecture, NIDDK Symposium, NIH	2015
Howard M. Temin Lecture, University of Wisconsin-Madison	2015
Nicholson Lectureship, Karolinska Institutet, Stockholm, Sweden	2015
Bernard Fields Lecture, FASEB, Keystone CO	2015
Robert Koch Award, Berlin, Germany	2015
AASLD Distinguished Achievement Award, San Francisco, CA	2015

## 11. Editorial Responsibilities:

Reviewer: *Arch. Virol.*, *Biotechniques*, *Blood*, *Cell*, *Cell Host & Microbe*,  
*Gastroenterology*, *Hepatology*, *Immunity*, *J. Antiviral Research*, *J. Biol. Chem.*, *J. Cell. Biol.*, *J. Clin. Invest.*, *J. Exp. Med.*, *J. Gen. Virol.*, *J. Inf. Dis.*, *J. Virology*,  
*Lab. Investigation*, *Molecular Cell*, *Nature*, *Nature Biotechnology*, *Nature Communications*, *Nature Medicine*, *PLoS Pathogens*, *PLoS One*, *Proc. Natl. Acad. Sci. USA*, *Protein Engineering*, *Science*, *Science Translational Medicine*, *Virology*

### Editorial Boards:

<i>Gastroenterology</i>	2011-present
<i>Hepatitis: Index &amp; Reviews</i>	2003-present
<i>J. Virology</i>	1995-2003
<i>Proc. Natl. Acad. Sci. USA</i>	2005-present
<i>Virology</i>	1991-2005

### Editor:

<i>J. Exp. Med.</i>	2003-2007
<i>J. Virology</i>	2003-2008
<i>PLoS Pathogens</i>	2005-present

## 12. Professional Societies and Organizations:

American Association for the Advancement of Science  
 American Association for the Study of Liver Diseases  
 American Liver Foundation  
 American Society for Biochemistry and Molecular Biology  
 American Society of Gene Therapy  
 American Society for Microbiology  
 American Society of Virology  
 The Harvey Society  
 Infectious Disease Society of America



New York Academy of Sciences  
Society for General Microbiology

**13. Major invited lectureships (1986-):**

1st International Symposium on Positive Strand RNA viruses, Keystone, Colorado (1986)  
Oswaldo Cruz Foundation, Rio de Janeiro, Brazil (1986)  
VIIth International Congress of Virology, Edmonton, Canada (1987)  
Current Approaches for the Development of Dengue Vaccines, WHO, Edmonton, Canada (1987)  
American Society of Tropical Medicine and Hygiene, Los Angeles, California (1987)  
Australian Society for Microbiology, Canberra, Australia (1988)  
2nd International Symposium on Positive Strand RNA viruses, Vienna, Austria (1989)  
Development of Flavivirus Vaccines for Dengue and Japanese Encephalitis, WHO, Vienna, Austria (1989)  
U.S.-Japan Viral Disease Panels Symposium, Annapolis, Maryland (1989)  
American Society of Tropical Medicine and Hygiene, Seattle, Washington (1989)  
Wallace P. Rowe Symposium, NIH, Bethesda, Maryland (1990)  
American Society for Microbiology, Anaheim, California (1990)  
Second International Symposium on HCV, Los Angeles, California (1990)  
VIIIth International Congress of Virology, Berlin, Germany (1990)  
International Symposium on Dengue and Dengue Haemorrhagic Fever, WHO, Bangkok, Thailand (1990)  
Molecular Biology of Human Pathogenic Viruses, Keystone Symposium, Lake Tahoe, California (1991)  
American Society for Virology, Ft. Collins, Colorado (1991)  
Third International Symposium on HCV, Strasbourg, France (1991)  
American Society for Microbiology, Division Lecturer, New Orleans, Louisiana (1992)  
Hepatitis C virus and related viruses, 1st International Meeting, Venice, Italy (1992)  
International Symposium on Viral Hepatitis and Liver Disease, Tokyo, Japan (1993)  
Structural and Molecular Biology of Protease Function and Inhibition, Keystone Symposium, Santa Fe, New Mexico (1994)  
Resistance to Viral Infection, Instituto Juan March, Madrid, Spain (1994)  
American Society for Virology, Madison, Wisconsin (1994)  
Hepatitis C virus and related viruses, 2nd International Meeting, San Diego, CA (1994)  
Symposium on Hepatitis C virus, NIH, Tokyo, Japan (1994)  
International Society for Antiviral Research, Santa Fe, New Mexico (1995)  
39th OHOLO Conference, Vaccines: Novel Strategies in Design and Production, Eilat, Israel (1995)  
4th International Symposium on Positive Strand RNA viruses, Utrecht, Netherlands (1995)  
Gordon Research Conference: Viruses and Cells, Tilton, New Hampshire (1995)  
Hepatitis C virus and related viruses, 3rd International Meeting, Gold Coast, Australia (1995)  
First European Meeting of Virology, Würzburg, Germany (1995)  
First International Conference on Therapies for Viral Hepatitis, Kauai, Hawaii (1995)

Hepatitis C and Beyond, Keystone Symposium, Burlington, Vermont (1996)  
Viral Genome Replication, Keystone Symposium, Tamarron, Colorado (1996)  
International Symposium on Viral Hepatitis and Liver Disease, Rome, Italy (1996)  
Molecular Mechanisms of RNA replication, IRBM Workshop, Sardinia (1996)  
National Academy of Sciences Colloquium on Genetic Engineering of Viruses and Viral Vectors, Irvine, California (1996)  
Xth International Congress of Virology, Jerusalem, Israel (1996)  
Gordon Research Conference: Medicinal Chemistry, New London, New Hampshire (1996)  
International Symposium: "Chronic Hepatitis C: Responding to the Enigma of this Progressive, Unpredictable Disease", AASLD, Chicago, Illinois (1996)  
U.S.-Japan Combined Hepatitis Panel Meeting, Nagasaki, Japan (1996)  
Hepatitis C virus and related viruses, 4th International Meeting, Kyoto, Japan (1997)  
Frontiers of RNA virus research: The Oji International Seminar, Kyoto, Japan (1997)  
American Society for Virology, Plenary Lecturer, Bozeman, Montana (1997)  
Flavivirus Symposium, Lyon, France (1997)  
China-US Workshop on Molecular Virology and Immunology, Shanghai, China (1997)  
2nd International Conference on Therapies for Viral Hepatitis, Kona, Hawaii (1997)  
Challenge in Virology: Eighth Swiss Seminar, Saanen/Gstaad, Switzerland (1998)  
National Cancer Institute Workshop on Cancer Vaccines, Bethesda, MD (1998)  
Frontiers in Hepatology, Pamplona, Spain (1999)  
Mid-Winter Symp. on Molecular Biology & Immunology of HCV, St. Vincent, WI (1999)  
Third International Conference on Therapies for Viral Hepatitis, Maui, Hawaii (1999)  
Challenge in Virology: Tenth Swiss Seminar, Saanen/Gstaad, Switzerland (2000)  
Genetics, Pathogenesis, and Ecology of Emerging Viral Diseases, Keystone Symposium, Taos, New Mexico (2000)  
7th Conference on Retroviruses and Opportunistic Infections, San Francisco, CA (2000)  
Glasgow Virology Workshop, Glasgow, Scotland (2000)  
NIMR Mill Hill Lecture Series, The Honess Lecture, London, England (2000)  
Connecticut Virology Club, Bristol Myers Squibb (2000)  
Symposium on Viral Hepatitis, Beijing, China (2000)  
Shanghai Medical University, Shanghai, China (2000)  
2<sup>nd</sup> Annual Symposium on virus-host interactions, Keynote Speaker, New York Academy of Sciences (2000)  
Virologic and Immunologic Aspects of HCV infection, Kunkel Society, Rockefeller University, NY (2000)  
Viruses in the Etiology of Human Cancers, Heidelberg, Germany (2000)  
Highlights in Immunology, Oncology and Virology: "Aids, Cancer, and Hepatitis: scientific and ethical challenges", Republic of San Marino (2000)  
American Society of Microbiology, Division T Lecturer, Los Angeles, CA (2000)  
American Society for Virology, State of the Art Lecture, Fort Collins, CO (2000)  
Global Grand Rounds, Eli Lilly and Co, Indianapolis, IN (2000)  
Grossberg Lecture, Medical College of Wisconsin, Milwaukee, WI (2000)  
Infectious Disease and Antibiotic Resistance in the Postgenomic Era, Lessons learned from HIV, Hepatitis C and Tuberculosis, Rockefeller University, NY (2000)

- VI International Symposium on Viral Hepatitis, Barcelona, Spain (2000)
- Centennial Symposium, Infectious Disease and Antibiotic Resistance in the Postgenomic Era: Lessons from HIV, Hepatitis C, and Tuberculosis, Rockefeller University, NY (2000)
- 7<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Gold Coast, Queensland, Australia (2000)
- Expert Perspectives: Strategies for the Management of HIV.HCV Coinfection, Development Meeting, Puerto Rico (2001)
- GI Grand Rounds, Weill Medical College of Cornell University, NY (2001)
- Distinguished Lecture Series, Fox Chase Cancer Center, PA (2001)
- Control of Viral Latency and Persistence, Keystone Symposium, Keystone CO (2001)
- Distinguished Lecture, Fox Chase Cancer Center, Philadelphia, PA (2001)
- Distinguished Scientist Lecture Series, Bard College, NY (2001)
- 8<sup>th</sup> HIV Dynamics and Evolution Meeting, Paris, France (2001)
- Graduate Student Sponsored Seminar, U. Penn., Pennsylvania, PA (2001)
- AASLD Single Topic Conference on Hepatitis C, Chicago, IL (2001)
- Grand Rounds, Dept. of Medicine, Weill Medical College of Cornell University, NY (2001)
- Keynote Speaker, Gordon Conference, “Viruses and Cells”, Tilton, NH (2001)
- 8<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Paris, France (2001)
- 2<sup>nd</sup> Symposium on Antiviral Drug Resistance, NCI, Chantilly, VA (2001)
- Grand Rounds, Dept. of Pediatrics, Weill Medical College of Cornell University, NY (2001)
- Noble Lecturer, University of Oklahoma, Oklahoma City, OK (2001)
- Keystone Symposium, Strategies for the Identification and Development of Novel Antimicrobial Agents, Santa Fe, NM (2002)
- The John H. Erskine Lecture in Infectious Disease, St. Jude’s Children’s Research Hospital, Memphis, TN (2002)
- 2<sup>nd</sup> Congress of Biochemistry and Molecular Biology of Viruses, Acapulco, México (2002)
- CANVAC Symposium on Viral Immunity, Montreal, Quebec, Canada (2002)
- Dean’s Lecture Series, Mt. Sinai School of Medicine, New York, NY (2002)
- 2002 Meeting of the Society of Virology (GfV), Erlangen, Germany (2002)
- International Conference on Picornaviruses (EUROPIC<sup>america</sup>), Cape Cod, MA (2002)
- IUBMB Symposium on Genome Replication of RNA viruses, Helsinki, Finland (2002)
- 9<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, UCSD, San Diego, CA (2002)
- Health Consequences of Chronic Viral Infections, ASV Medical Virology Satellite Symposium, Lexington, KY (2002)
- International Symposium of Pestiviruses, European Society for Veterinary Virology, Cambridge, England (2002)
- Rockefeller University Council Meeting (2002)
- “Engineering RNA Virus Genomes as Biosafe Vectors” Workshop, Juan March Foundation, Madrid, Spain (2002)
- 12<sup>th</sup> Irwin M. Arias Symposium, American Liver Foundation, “Bridging Basic Science and Liver Disease”, Boston (2002)
- 2<sup>nd</sup> Behr Symposium, “Infection and Human Cancers: Parasites, Bacteria and Novel Viral Agents”, Heidelberg, Germany (2002)

Quinziemes Entretiens du Centre Jacques Cartier, "Nouveaux traitements des hépatites virales: de la recherché a la clinique", Lyon, France (2002)  
 Annual Meeting, American Medical Society of Microbiology & Immunology Chairs, Nassau, Bahamas (2003)  
 AASLD Hepatitis Single Topic Conference, Hepatitis C New Drug and Clinical Trials Development: promises and pitfalls, Chicago, Illinois (2003)  
 Triennial International Symposium on Viral Hepatitis and Liver Disease, Sidney, Australia (2003)  
 Shanghai Medical College, Shanghai, China (2003)  
 1<sup>st</sup> Annual Clinical Care Options for Hepatitis Symposium, Dana Point, CA (2003)  
 8<sup>th</sup> Conference on Current Trends on Chronically Evolving Hepatitis, Lyon, France (2003)  
 Hans Popper Basic Science State-of-the-Art Lecture, 54<sup>th</sup> Annual Meeting of the AASLD, Boston, MA (2003)  
 Infection & Vaccines Conference, Karolinska Institute, Stockholm, Sweden (2003)  
 10<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Kyoto, Japan (2003)  
 HEP DART 2003, Frontiers in Drug Development for Viral Hepatitis, Kauai, HI (2003)  
 11<sup>th</sup> Congress on Retroviruses and Opportunistic Infections, San Francisco, CA (2004)  
 National Canadian Research Training Program in Hepatitis C, Keynote, Kananaskis, Alberta, Canada (2004)  
 New York Academy of Sciences, Microbiology Section, New York, NY (2004)  
 Society for General Microbiology Annual Meeting, University of Bath, Bath, UK (2004)  
 Emory Vaccine Center, Georgia Research Alliance Distinguished Lecturer, Atlanta, GA (2004)  
 John Karling Distinguished Lectureship in Biology, Purdue University, IN (2004)  
 Grand Rounds, New York University, Bellevue Hospital, New York, NY (2004)  
 7<sup>th</sup> International Symposium on Positive Strand RNA viruses, San Francisco, CA (2004)  
 Grand Rounds, Memorial Sloan Kettering Cancer Center, Department of Medicine, Sherlock Lecture, New York, NY (2004)  
 Grand Rounds, Columbia University School of Medicine, New York, NY (2004)  
 American Society for Virology, Montreal, Quebec, Canada (2004)  
 Infectious Disease Symposium, Public Health Research Institute, Newark, NJ (2004)  
 Mirsky Lecture, The Rockefeller University, New York, NY (2004)  
 NIAID, Workshop on Vaccines for Hepatitis C virus, Bethesda, MD (2005)  
 Pathobiology Seminar, Brown University, Providence, RI (2005)  
 Hepatitis C Virus Infection: Pathobiology and Implications for New Therapeutic Options. AASLD Single Topic Conference, Chicago, IL (2005)  
 Hepatobiliary Disease in Clinical Practice: Update XVI, Miami Beach, FL (2005)  
 Friday Lecture, PhD Recruitment Day, The Rockefeller University, New York NY (2005)  
 IRBM P. Angeletti, Pomezia, Roma (2005)  
 3<sup>rd</sup> Annual Clinical Care Options for Hepatitis Symposium, Santa Barbara CA (2005)  
 Keynote lecture, 12<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Montreal, Quebec, Canada (2005)  
 The Bertram Marx Symposium: "Virology in the 21<sup>st</sup> Century" UAB, Birmingham, AL (2005)  
 The Scripps/Oxford International Biotechnology Conference: "Building a New Model for Bioscience, Biotechnology, and Bio-Medicine". Palm Beach, Florida (2005)  
 Challenge in Virology: 16th Swiss Seminar, Saanen/Gstaad, Switzerland (2006)

Sulkin Visiting Professor, UT Southwestern Medical Center, Dallas, Texas (2006)  
 Hilleman Lecturship, University of Chicago, Chicago, Illinois (2006)  
 Kelsey Lectureship in Gastroenterology, Mayo Clinic, Rochester, MN (2006)  
 Revolutionizing the Way We Treat HCV: STAT-C, AASLD Symposium, Boston, MA (2006)  
 University of Heidelberg, Heidelberg, Germany (2006)  
 22<sup>nd</sup> Ernst Klenk Symposium, Cologne, Germany (2006)  
 22<sup>nd</sup> Shipley Symposium Lecturer, Dept. of Microbiology and Molecular Genetics, Harvard Medical School, Boston, MA (2006)  
 Pew Scholars Program in the Biomedical Sciences, 20<sup>th</sup> Anniversary Reunion Meeting, Cancun, Mexico (2007)  
 Isis Pharmaceuticals, Inc., La Jolla, California (2007)  
 Beijerinck Lecture, Dutch Annual Virology Symposium, Amsterdam, Netherlands (2007)  
 Institute for Research in Biomedicine, Bellinzona, Switzerland (2007)  
 Steven Degar Memorial Lecture, Yale University Cancer Center, New Haven, CT (2007)  
 Klein Distinguished Lecture, New York University, New York, NY (2007)  
 Philip J. Bassford Memorial Lecturer, University of North Carolina, Chapel Hill, NC (2007)  
 ICAAC Symposium, "Viral hepatitis: What's new?" Chicago II (2007)  
 University of Utah, Microbial Pathogenesis Retreat Keynote, Park City, UT (2007)  
 Keynote, Advances in Humanized Mouse Models, Inst. Pasteur, Paris, France (2007)  
 Beijerinck Virology Prize Lecture, Amsterdam, Netherlands (2007)  
 AAAS Symposium, A Viral Time Bomb: Hepatitis C in the Developing World, Boston, MA (2008)  
 CINVESTAV, Mexico City, Mexico (2008)  
 Duke/GSK Minisymposium on Pathogenic Human Viruses, Durham, NC (2008)  
 Distinguished Lectures in Life Sciences, Huck Institute, Penn State Univ., University Park, PA (2008)  
 Dean's Distinguished Seminar Series, University of Colorado at Denver and Health Sciences Center, Denver, CO (2008)  
 15<sup>th</sup> International Symposium on Infections in the Immunocompromised Host, Thessaloniki, Greece (2008)  
 iTherX Pharmaceuticals, Inc., San Diego, CA (2008)  
 4<sup>th</sup> Smögen Summer Symposium on Virology, Keynote Lecture, Smögen, Sweden (2008)  
 15<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Keynote Lecture, San Antonio, TX (2008)  
 8<sup>th</sup> Annual Symposium in Virology, Nebraska Center for Virology, Lincoln, NE (2008)  
 18<sup>th</sup> Irwin M. Arias Symposium, American Liver Foundation, "Bridging Basic Science and Liver Disease", Boston (2008)  
 10<sup>th</sup> Norman Salzman Memorial Award and Symposium in Virology, NIH, Bethesda, MD (2008)  
 3<sup>rd</sup> Oxford Distinguished Lecture in Virology, University of Oxford, Oxford, United Kingdom (2008)  
 James and Ellen Strauss, Symposium on Molecular Virology, Caltech, Pasadena CA (2008)  
 Tumor Virology Symposium to honor Harald zur Hausen, Heidelberg, Germany (2009)  
 Program in Virology, Harvard Medical School, Cambridge MA (2009)

Keynote Lecture, 13<sup>th</sup> Triennial International Symposium on Viral Hepatitis and Liver Disease, Washington, DC (2009)

Lamb Center Discovery Series Lecturer, Vanderbilt Medical Center, Nashville, TN (2009)

Keynote Lecture, UCSF Liver Center Annual Advisory Board Symposium, San Francisco, CA (2009)

Gilead Sciences, Inc. Foster City, CA (2009)

15<sup>th</sup> Annual International Congress of the International Society of Liver Transplantation (ILTS), New York, NY (2009)

16<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Keynote Lecture, Nice, France (2009)

57<sup>th</sup> Annual Meeting of Japanese Society for Virology, Keynote Lecture, Tokyo, Japan (2009)

Shanghai Medical College, Fudan University, Shanghai, China (2009)

Institute Pasteur Korea, Seoul, Korea (2009)

University of California, Davis, California (2009)

University of Sherbrooke, Sherbrooke, Canada (2009)

HEP DART, Frontiers in Drug Development for Viral Hepatitis, Hawaii, HI (2009)

2<sup>nd</sup> Minisymposium on Challenges in Viral Hepatitis, Lausanne, Switzerland (2010)

20<sup>th</sup> Challenge in Virology Seminar, Saanen, Switzerland (2010)

Global Health & Emerging Pathogens Institute, Mount Sinai School of Medicine, New York (2010)

Keynote, The 4<sup>th</sup> Annual Egyptian French Scientific Meeting, Cairo, Egypt (2010)

MMI Invited Speaker, OHSU, Portland, Oregon (2010)

Plenary Lecture, 17<sup>th</sup> Conference on Retroviruses and Opportunistic Infections (CROI), San Francisco, CA (2010)

GI Grand Rounds, Columbia University Medical Center, New York, NY (2010)

GI Grand Rounds, Weill Cornell Medical College of Cornell University, New York, NY (2010)

Dolman Lecturer, University of British Columbia, Vancouver BC, Canada (2010)

Merck-Frosst, Montreal, Canada (2010)

Goodman Cancer Research Center, McGill University, Montreal, Canada (2010)

Keynote, 9<sup>th</sup> International Symposium on Positive Strand RNA Viruses, Atlanta, GA (2010)

2<sup>nd</sup> Annual U. Minnesota-Mayo Clinic Lectures in Virology and Gene Therapy, Rochester, Minneapolis, MN (2010)

Keynote Lecture, HEP-NET Annual Meeting, Hannover, Germany (2010)

Invited Lecture, Joint Session 5<sup>th</sup> International Workshop on Hepatitis C: Resistance & New Compounds, Boston, MA (2010)

6<sup>th</sup> International Conference on The Future of Science, *Viruses: The Invisible Enemy*, Venice, Italy (2010)

60<sup>th</sup> Anniversary Symposium, Instituto de Microbiologia Paulo de Góes, Federal University of Rio de Janeiro, Brazil (2010)

Department of Microbiology and Molecular Genetics, Michigan State University, East Lansing, Michigan (2010)

Keynote Lecture, Inaugural Research Day, Novartis Vaccines and Diagnostics, Cambridge MA (2010)

Rockefeller Hospital Centennial Symposium, Rockefeller University, New York, NY (2010)

- 25<sup>th</sup> Reunion, Pew Scholars Program in the Biomedical Sciences, Duck's Key, FL (2010)
- 6<sup>th</sup> Lennox K. Black Symposium, Advances and Challenges in Infectious Disease, Thomas Jefferson University, Philadelphia, PA (2010)
- 6<sup>th</sup> Annual Thomas J. Matthews Endowed Lectureship, Duke University Medical Center, Durham, NC (2010)
- 1<sup>st</sup> Latin American Symposia on Antiviral Therapy Against HCV: STAT-C & Other New Therapy, Sao Paulo, Brazil (2010)
- Student Invited Distinguished Lecturer, Scripps Research Institute, Jupiter, FL (2010)
- Immunology Affinity Group, Scripps Research Institute, La Jolla, CA (2011)
- Center for Virus Research, University of California, Irvine, CA (2011)
- Department of Microbiology and Immunology, Columbia University, New York, NY (2011)
- 36<sup>th</sup> Lorne Conference on Protein Structure and Function, Lorne, Australia (2011)
- Department of Microbiology, University of Pennsylvania School of Medicine, Philadelphia, PA (2011)
- Center for Advanced Biotechnology and Medicine, Rutgers University, Piscataway, NY (2011)
- Keynote Lecture, ShenQuist, Princeton, NJ (2011)
- New York Biotechnology Association, Infectious Disease Panel, New York, NY (2011)
- Keynote Lecture, 4<sup>th</sup> Biological Sciences Symposium, Seton Hall University, South Orange, NJ (2011)
- Management of Hepatitis C virus in the New Era: Small Molecules Bring Big Changes, IAS-USA, New York, NY (2011)
- American Philosophical Society, Philadelphia, PA (2011)
- Distinguished Guest Lecturer, Sylvester Comprehensive Cancer Center, U. Miami, Miami, FL (2011)
- Monday Lecture Series, The Rockefeller University, New York, NY (2011)
- Keynote Speaker, Gordon Research Conference, "Viruses and Cells", Il Ciocco, Italy (2011)
- 9<sup>th</sup> International Meeting on Therapy in Liver Diseases, Barcelona, Spain (2011)
- Symposium, Viruses: Bedside to Bench, 49<sup>th</sup> Annual Meeting IDSA, Boston, MA (2011)
- HEP DART 2011, Frontiers in Drug Development for Viral Hepatitis, Kauai, HI (2011)
- 1<sup>st</sup> Global Workshop on HCV Therapy Advances: New Antiviral in Clinical Practice, Madrid, Spain (2011)
- 2<sup>nd</sup> Annual Symposium, Institute of Molecular Biology, Taipei, Taiwan, ROC (2012)
- International Symposium Quantitative Biology & Cytokine Signaling, Engelberg, Switzerland (2012)
- Novartis, Infectious Disease Advisory Board Meeting, Emeryville, CA (2012)
- Frontiers Lecture, IAVI, New York, NY (2012)
- Visiting Professor, Stanford Division of Gastroenterology and Hepatology, Stanford, CA (2012)
- Keynote Lecture, Workshop on the Study of Hepatitis C Virus Infections, Madrid, Spain (2012)
- Symposium Lecture, European Association for the Study of the Liver, Barcelona, Spain (2012)
- Guest Scholar, Graduate Track in Infection, Immunity, and Inflammation, UMDNJ, Newark, NJ (2012)
- Li Ka Shing Institute of Virology / Gairdner Foundation Virology Symposium, University of Alberta, Edmonton, Canada (2012)

- International Symposium on Viral Hepatitis and Liver Cancer, Peking University Center for Infectious Disease Research, Beijing, China (2012)
- Opening Lecture, 14<sup>th</sup> International Symposium on Viral Hepatitis and Liver Disease, Shanghai, China (2012)
- Novartis Vaccines and Diagnostics China, Shanghai, China (2012)
- 22<sup>nd</sup> Annual Biennial Congress of the European Association for Cancer Research, Barcelona, Spain (2012)
- Stephen M. Feinstone Retirement Symposium, NIH, Bethesda MD (2012)
- Opening Keynote Lecture, ICAAC 2012, San Francisco CA (2012)
- Clinical and Translational Research Day, The Rockefeller University, NY, NY (2012)
- 19<sup>th</sup> International Meeting on Hepatitis C Virus and Related Viruses, Keynote Lecture, Venice, Italy (2012)
- 1<sup>st</sup> Simpósio Internacional de Imunologia, Instituto Carlos Chagas-Fiocruz, Curitiba, Brasil (2012)
- 2<sup>nd</sup> Raymond Schinazi Distinguished Lectureship, Department of Pediatrics, Emory University, Atlanta (2012)
- Chancellor's Distinguished Visitor Lecture, University of Missouri, Columbia MO (2012)
- 2<sup>nd</sup> Global Workshop on HCV Therapy Advances: New Antivirals in Clinical Practice, Rome, Italy (2012)
- 6<sup>th</sup> Paris Hepatitis Conference, International Conference on the Management of Patients with Viral Hepatitis, Opening State-of-the-Art Lecture, Paris, France (2013)
- Bridging the Gap, Ce-M-M-Research Center for Molecular Medicine for the Austrian Academy of Sciences, Vienna, Austria (2013)
- Student Invited Seminar, Northwestern University Feinberg School of Medicine, Chicago, Illinois (2013)
- Dautrebande Prize Lecture, Prize of Pathophysiology Professor Lucien Dautrebande, Belgian Royal Academy of Medicine, Brussels, Belgium (2013)
- Invited Lecture, ASCI/AAP Joint Meeting, Chicago, Illinois (2013)
- National Cancer Institute, Frederick, Maryland (2013)
- SUNY Stonybrook, Stonybrook, New York (2013)
- International Symposium on Control or Eradication of Viral Hepatitis B and C, Barcelona, Spain (2013)
- Keynote Lecture, The Viral Hepatitis Congress, Frankfurt, Germany (2013)
- Keynote Lecture, 2013 International Meeting on Molecular Biology of Hepatitis B Viruses, Shanghai, China (2013)
- Annual Awards Reception, AASLD/ALF, Washington, D.C. (2013)
- HEPDART 2013, Frontiers in Drug Development for Viral Hepatitis, Big Island, Hawaii (2013)
- Challenges in Viral Hepatitis, Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland (2014)
- 24<sup>th</sup> Challenge in Virology, SAFE-ID, Saanen, Switzerland (2014)
- Keystone Symposium on Innate Immunity to Viral Infections, Keystone, Colorado (2014)
- Keynote, Glasgow Virology Workshop, Glasgow, Scotland (2014)
- Postdoc Invited Speaker, Biomedical Sciences Seminar Series, Penn State University, Hersey, PA (2014)
- 9<sup>th</sup> International Workshop on Hepatitis C, London, UK (2014)



Molecular Microbiology & Microbial Pathogenesis Seminar Series, Washington University School of Medicine, St. Louis, MO (2014)  
 Keynote, Yale Training in Virology Symposium, New Haven, CT (2014)  
 Bruce Witte Distinguished Lecturer, Hepatitis B Foundation, Doylestown, PA (2014)  
 Plenary Lecture, Bridging Session, IUMS, Montreal, Canada (2014)  
 Keynote Lecture, 21<sup>st</sup> International Meeting on Hepatitis C Virus and Related Viruses, Banff, Canada (2014)  
 6<sup>th</sup> TWINCORE Symposium, Hannover, Germany (2014)  
 Storer Lectureship in the Life Sciences, University of California, Davis, Davis, CA (2014)  
 Bernard Fields Lecture, Scripps Research Institute, La Jolla, CA (2015)  
 Bernard Fields Award Lecture, CROI, Seattle, WA (2015)  
 Cornell University, Ithaca, NY (2015)  
 Keynote, NIDDK Symposium, NIH, Bethesda MD (2015)  
 Howard M. Temin Lecturer, University of Wisconsin-Madison, WI (2015)  
 Nicholson Lecturer, Karolinska Institutet, Stockholm, Sweden (2015)  
 Tyrrell Lectureship in Infection and Immunity, University of Alberta, Edmonton, Canada (2015)  
 Bernard Fields Lecture, FASEB, Keystone, CO (2015)  
 Novo Nordisk Award Symposium, Copenhagen, Denmark (2015)  
 Keynote Lecture, Harvard Virology Program Retreat, Wylie Center, MA (2015)  
 Keynote Lecture, 22<sup>nd</sup> International Meeting on Hepatitis C Virus and Related Viruses, Strasbourg, France (2015)  
 Minisymposium on Hepatitis Viruses, ICBP, Lyon France (2015)  
 Opening Lecture, 13<sup>th</sup> Annual Chicago Biomedical Consortium, Chicago, IL (2015)  
 Robert Koch Lecture, Max Planck Institute for Infection Biology, Berlin, Germany (2015)

#### **14. Consulting relationships and board memberships:**

##### Current:

AlphaVax (SAB)	1999-present
American Liver Foundation, NY Chapter (SAB)	2001-present
ANRS Viral Hepatitis Site in Egypt (Scientific Committee, Chair)	2008-present
Apath, LLC (Founder)	1997-present
BIOASTER (SAB)	2012-present
Hepatitis B Foundation/Inst. for Hepatitis and Virus Res. Labs (SAB)	2007-present
Inst. of Med. Microbiol., Shanghai Med. College, Fudan Univ. (SAB)	2004-present
Jackson Laboratory (Trustee)	2011-present
Merck (SAB)	2008-present
Twincore (SAB)	2014-present

##### Past:

Affinium Pharmaceuticals, Inc.	2003
Astra-Merck	1996-1997
BioChem Pharma	1997,9,2000
Bio-Méga, Boehringer Ingelheim	1999
Bristol Myers Squibb	2011

CANVAC (SAB)	2000-2007
Chiron vaccines (SAB)	2005-2006
Eli Lilly	1999-2000
Fox Chase Cancer Center, Scientific Advisory Committee	2001-2004
Genentech, Inc.	2006-2009
GlaxoSmithKline (ID CEDD/TAU Advisory Board)	2008-2013
Human Immunology Center Grant, Emory University (SAB)	2005-2009
iTherX (SAB)	2008-2012
NanoVec (SAB)	2004
Novartis Infectious Disease (SAB)	2012-2013
Novartis Vaccines & Diagnostics (SAB)	2006-2014
Pan American Health Organization	1986
Pathogenesis, Inc.	1993-1994
Pfizer, Inc.	1996
Pfizer, Inc. (ID Science Panel)	2008-2010
RedShift Sciences, Inc. (SAB)	2002
Sanofi-Aventis	2011
Scriptgen Pharmaceuticals, Inc.	1999
Searle and Co.	1989
TaiMed Biologicals, Inc. (SAB)	2008-2009
UCSF Liver Center (EAB)	2008-2014
USUHS, Hepatitis C Advisory Board	2002-2003
UW NIDA Center, External Advisory Committee, Chair	2003-2011
Vertex Pharmaceuticals	2006
ViroPharma Incorporated (SAB)	1994-1999
VivoQuest (SAB)	2001-2005
XTL Biopharma (SAB)	2006-2008

## 15. **Research Support:**

### a. Governmental

#### Current:

Principal Investigator of NIH grant “A systematic analysis of small RNA interactions during RNA virus infections” for the period of 12/15/15-11/30/20.

Project Principal Investigator of NIH/NIAID Cooperative Research Center grant (Ravetch) “Integrating innate and adaptive pathways in vaccine responses”; Project 4: “Effects of persistent innate immune activation on vaccine efficacy” for the period of 04/01/14 – 03/31/19.

Principal Investigator of NIH grant “Hepatitis C antivirals: Mechanism of action, combination efficacy and resistance” for the period of 05/01/12-04/30/17.

Principal Investigator of NIH grant “Identification and characterization of cellular factors involved in HCV entry” for the period of 12/15/06-04/30/17.

Principal Investigator of NIH grant “Type I interferon-stimulated genes and the antiviral immune response” for the period of 3/1/11-2/29/16.

Principal Investigator of NIH grant “Structure and function of the HCV RNA replicase” for the period of 4/1/09-2/29/16 (no-cost extension).

Subcontract Principal Investigator on NIH/NIAID Cooperative Research Center grant (Ahmed) “Vaccine Induced Immunity in the Young and Aged”; Project 2: “Innate Immunity” for the period of 4/1/09-4/30/19.

Past:

Principal Investigator of NIH/ Office of the NIH Director Transformative R01 (“T-R01”) co-PI S. Bhatia, MIT, grant “Modeling human hepatotropic infections in complex tissue organoids” for the period of 9/30/09-8/31/15 (no-cost extension).

Subproject Investigator on NIH grant (Shaw) “Transmitted/founder HCV clones as targets for treatment and eradication” for the period of 09/15/13-08/31/15.

Northeastern Biodefense Center/NIAID (Lipkin/Sturman), Developmental Subproject Principal Investigator “Identification of interferon effectors that inhibit RNA virus replication” for the period of 5/1/09-6/28/14.

Principal Investigator of NIH grant “Simianizing hepatitis C: Defining the species-tropism of a hepatotropic virus” for the period of 7/1/10-6/30/15.

Principal Investigator of NIH grant “Role of HCV p7 and NS2 in infectious virus production” for the period of 1/1/08-12/31/13, total direct costs \$1,237,550.

Principal Investigator of NIH/ARRA stimulus grant “An inbred mouse model for HCV infection, immunity and pathogenesis” for the period of 9/30/09-8/31/11, total direct costs \$588,574.

Principal Investigator of NIH/ARRA competing supplement to “Structure and function of the HCV RNA replicase” for the period of 9/30/09-8/31/11, total direct costs \$332,000.

Consultant on NIH grant (MacDonald) “Host Factors in the Alphavirus Replication Complex” for the period 2/1/05-1/31/11.

Hepatitis C Virus Cooperative Research Center Grant NIH/NIAID. Program Director of the Center and Principal Investigator of Project 1 “Hepatitis C: Studies of Immunity and Pathogenesis” for the period of 7/1/05-6/30/10, total direct costs \$3,332,424 (to all projects). Special ARRA Summer Outreach Supplement 6/16/09-10/31/09, total direct costs \$2,960.

Principal Investigator of NIH grant “Hepatitis C Virus – Developing Antivirals and Vaccines” for the period of 8/1/96-3/31/09, \$922,301.

Northeastern Biodefense Center/NIAID (Lipkin/Sturman), Subproject Principal Investigator “Development of Conditional-Live Pathogens” for the period of 3/1/06-2/28/09, total direct costs \$444,403.

Subcontract Investigator on NIH grant (Walker) “AAV Vectors for Prevention and Therapy of HCV Infection” for the period of 9/29/03-2/28/08, total direct costs ~\$160,000.

Northeastern Biodefense Center/NIAID (Lipkin/Sturman), Subproject Principal Investigator “Broad-Spectrum Passive Immunoprophylaxis for Flavivirus Infection” for the period of 3/1/05-8/31/06, total direct costs \$150,000.

Principal Investigator of NIH grant “Immunotherapy Protection and Vaccines for Hepatitis C” for the period of 9/15/99-6/30/05, total direct costs \$1,286,448.

Principal Investigator of NIH grant “Molecular Genetics of Sindbis Virus Replication” for the period of 2/1/96-1/31/07 (MERIT), total direct costs ~\$2,250,000.

Principal Investigator of NIH grant “Molecular Genetics of Sindbis Virus Replication” for the period of 2/1/90-1/31/96, total direct costs \$648,773.

Principal Investigator of NIH grant “Molecular Genetics of Sindbis Virus Replication” for the period of 2/1/87-1/31/90, total direct costs \$248,395.

Principal Investigator of NIH grant “Small Molecules as Research Tools for HCV Biology” for the period of 4/1/03-3/31/06, total direct costs \$300,000.

Co-Investigator of NIH grant (McKeating) “Functional Analysis of Hepatitis C Virus Glycoproteins” for the period of 4/1/04-3/31/06, total direct costs \$400,000.

Hepatitis C Virus Cooperative Research Center Grant NIH/NIAID. Program Director of the Center and Principal Investigator of Project 4 “Global Analysis of Hepatitis C Virus-Host Interactions” for the period of 8/15/00-6/30/05, total direct costs \$722,315.

Hepatitis C Virus Cooperative Research Center Grant NIH/NIAID. Principal Investigator of subcontract “Construction and Identification of Functional HCV cDNA Clones” for the period of 8/1/96-7/31/00, subcontract total direct costs \$741,140. In addition, a \$217,031 supplement was requested and granted for FY 97-98.

Principal Investigator of NIH grant “Hepatitis C virus – Developing Antivirals and Vaccines” for the period of 8/1/92-7/31/96, total direct costs \$745,261.

Principal Investigator of NIH grant “Proteolytic Control of Flavivirus Replication” for the period of 8/1/91-12/31/96, total direct costs \$593,703.

Principal Investigator of U.S. Army Contract “Expression of Yellow Fever Virus Antigens and Infectious Virus from Cloned cDNA” for the period of 6/1/87-12/31/92, total direct costs \$1,048,726.

b. Non-Governmental

Current:

Robertson Therapeutic Development Fund, Proof of Concept Awards

“The role of innate immune response in HBV infection and persistence” for the period of 03/01/15-02/29/16.

“Genome-scale high-throughput screening of host factors involved in hepatitis B virus infection and replication” for the period of 08/01/15-07/31/16

Misc. licensing income 1993-present.

The Bawd Foundation.

The Greenberg Medical Research Institute.

The Starr Foundation.

Past:

Robertson Therapeutic Development Fund, Proof of Concept Awards

“A cell-based, high throughput screen for small molecule inhibitors of hepatitis E viral replication” for the period of 10/01/14-09/30/15.

“Detection of viral DNA by live cell imaging and applications in hepatitis B virus therapies” for period of 03/01/14-02/28/15.

Bill & Melinda Gates Foundation/Foundation for the NIH, Grand Challenges in Global Health Initiative (Flavell), Subproject Principal Investigator “A mouse model for human malaria” for period of 11/1/10-10/31/12, total direct costs \$745,432.

Bill & Melinda Gates Foundation/Foundation for the NIH, Grand Challenges in Global Health Initiative (Ahmed), Subproject Principal Investigator “Immunological Strategies for Curing Chronic Hepatitis Virus Infections” for period of 10/1/05-12/31/12 (no-cost extension), total direct costs \$1,160,569

U.S. Department of State/Pakistan-U.S. Science and Technology Cooperative Program via National Academy of Sciences “Hepatitis C virus management in Pakistan” for period of 7/1/08-12/31/11 (no-cost extension), total direct costs \$217,392.

Bill & Melinda Gates Foundation/Foundation for the NIH, Grand Challenges in Global Health Initiative (Balling), Subproject Principal Investigator “Mice with a Functional Human Immune System for Testing HIV and HCV Vaccines”, years 3-5 for period of 7/1/05-6/30/10, total direct costs \$527,325.

Bill & Melinda Gates Foundation/Foundation for the NIH, Grand Challenges in Global Health Initiative (Steinman), Subproject Principal Investigator “Malaria Vaccine Based on the 17D Vaccine Strain of Yellow Fever Virus” for period of 8/31/05-8/30/10, total direct costs \$1,171,871.

Ellison Medical Foundation Senior Scholar in Global Infectious Diseases “Towards Broad Spectrum Antivirals” for the period of 11/1/03-10/31/2007, total direct costs \$600,000.

Subcontract with Braton Biotechnologies, Inc., to support follow up studies on clonally HCV transfected chimpanzees for the period of 1/98-9/30/99, total direct costs \$106,835.

“Development of HCV Proteinase Inhibitors” collaborative research agreement with Vertex Pharmaceuticals for the period of 10/13/93-10/12/96, total direct costs \$240,000.

Co-Investigator of Monsanto grant “Sindbis Virus Replicons as Selective Antiviral Agents” for the period of 1/1/95-12/31/96, total direct costs \$176,000.

Pew Scholar Award “Alphaviruses and flaviviruses: The molecular basis of RNA-dependent RNA replication, design of novel vaccine strategies, and the use of animal RNA viruses as eucaryotic expression vectors” for the period of 7/1/86-6/30/90, total direct costs \$200,000.

**16. Clinical Title and Responsibilities: None**

**17. Teaching Title and Responsibilities:**

a. Coursework

Molecular Virology (Bio 5391)	1987
Co-coursemaster	1996-2000
Molecular Virology (Rockefeller University)	1999
Co-coursemaster with Paul Bieniasz	2000-present

Perspectives in Human Disease (Bard College), invited lecturer	2000-2002
Graduate Virology Course (NYU), invited lecturer	2000-present
Vaccines and Public Health (Columbia School of Public Health)	2001
Advanced Topics in Immunology (Cornell, MSKCC) Virus-Host Cell Interactions	2002
Graduate Course in Microbial Pathogenesis (Albert Einstein COM) Virus-Host Cell Interactions	2003

b. Graduate and Visiting Students

Sean M. Amberg, M.S., Ph.D. (1997); Current position: Research Scientist, SIGA Technologies, Inc., Corvallis, Oregon.

Pradeep Ambrose (2013-);

Mariel Bartley (2013-);

Niklas Björkström (2007); Visiting M.D/Ph. D. student from the Karolinska Institute, Sweden.

Claudia Brunetti (2009-2010): Visiting Ph.D. student from University of Bari, Italy

Paola Concari (1999-2002); Visiting Ph.D. student from the University of Milan,  
Current position: Scientist, Biopharma.

Thomas Dentzer (2005-2011); Visiting student, Diploma thesis. Visiting PhD student, thesis research conducted in Dr. Rice's lab. Current position: Consultant in Healthcare and Life Sciences, Deloitte (Luxembourg).

Rashidah Green (2004,5); Visiting high school student (2004); Gateways to the Laboratory Program (2005): Current position: Undergraduate, Brown University, Providence, RI.

Hans-Heinrich Hoffmann (2003-2004); Visiting student, Diploma thesis. Current position: Postdoctoral Associate, The Rockefeller University.

Catherine (Murray) Jones, Ph.D. (2001-2007); Science Writer, Novartis, San Francisco, CA

Mary E. Jones, M.S. (1993); Current position: Director, Core Laboratory, Macrophage Program Project, University of Kansas Medical Center.

Constance Kinge (2013); Visiting PhD student from North-West University, South Africa.

Mark W. LaStarza, Ph.D. (1992); Private practice in Internal Medicine, Florida.

Julie A. Lemm, Ph. D. (1992); Current position: Research Investigator, Bristol-Meyers Squibb, Pharmaceutical Research Institute, Wallingford, CT.

Guangpu Li, Ph.D. (1991); Current position: Assistant Professor, Dept. of Cell Biology, University School of Oklahoma.

Chao Lin, M.S., Ph.D. (1995); Current position: Research Scientist, Vertex Pharmaceuticals, Inc., Cambridge, MA.

Brett D. Lindenbach, Ph.D. (1999); Current position: Assistant Professor, Yale University.

Mara Lipka (1996-99); M.S.; Current position: Amgen, Seattle, WA.

Peng Liu (2013-2014); Visiting Ph.D. student.

Jeff Long-McGie (1999-00); M.S. Currently pursuing an MBA at St. Louis University, St. Louis, MO.

Randy Longman, M.D., Ph.D. (2006); Current position: Assistant Professor of Medicine, Weill Cornell Medical College

Joe Luna, Ph.D. (2010-2015); Current Position: Postdoctoral Associate, Rockefeller University

Tobias Marcello (2003-4); Visiting Student, Currently finishing medical training.

Laura McMullan, Ph.D. (2001-2007); Staff Scientist, CDC, Atlanta GA.

Michiel Mommersteeg (2012-2013); Visiting PhD student from University of Groningen, The Netherlands

Isabella Muylaert, Ph.D. (1996); Postdoc, University of Umea, Sweden.

Thomas Oh (2005-2012); Current position: Senior Developer, Schrödinger, Inc.

Lin Qu (1997-99); M.S., Ph.D. program UTMB, Galveston, Texas.

Karen E. Reed, Ph.D. (1998); Current position: Research Associate, NIDDK, NIH.

Brad Rosenberg, Ph.D. (2005-2010); M.D., Ph.D., Current position: John C. Whitehead Presidential Fellow Rockefeller University

Lisa Sandmann (2012); Visiting MD student from Hannover Medical School, Germany.

Stephanie Sarbanes (2014-);

Uwe Schaefer (2006-2010); Postdoc, Glaxo Smith Kline

Leon Louis Seifert (2015-); Visiting Ph.D. student

Constantin Nicolae Takacs (2010-);

Donna Tscherne (Judd), Ph.D. (2001-2007); Current position: Scientific Associate, Ogilvy Healthworld

Werna Uniken Venema (2015); Visiting Ph.D. student

Köen Vercauteren (2014-2015); Visiting Ph.D. student

Kuanhui Xiang (2014-); Visiting Ph.D. student.

c. Visiting Master's/Diploma Student Interns

Samuel Bouvet, France (2010); Qian Feng, The Netherlands (2008-09); Oliver Grünvogel, Germany (2012); Sandra Kurz, Germany (2014); Barbara Maier, Germany (2010); Cindy Nuernberger, Germany (2009); Jill Pilet, France (2015); Kristina Schierhorn, Germany (2009-10); Anne Theisen, Luxembourg (2010); Marieke van de Belt, The Netherlands (2009); Alexander Vogt, Germany (2011)

d. Postdoctoral Fellows and Research Associates

Ashley Acevedo, Ph.D. (2015-);

Eugene V. Agapov, M.D., Ph.D. (1993-2000); Current position: Research Assistant Professor, Washington University.

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## **18. Bibliography:**

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1. Rice, C.M. and Strauss, J.H. (1981) Nucleotide sequence of the 26S mRNA of Sindbis virus and deduced sequence of the encoded virus structural proteins. *Proc. Natl. Acad. Sci. USA* **78**:2062-6.
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