

July 5, 2019

CURRICULUM VITAE

DOUGLAS D. RICHMAN

Work Address:	VA San Diego Healthcare System and University of California San Diego Departments of Pathology & Medicine, 0679 9500 Gilman Drive La Jolla, CA 92093-0679
Telephone:	(858) 552-7439
Fax:	(858) 552-7445
E-mail:	drichman@ucsd.edu
Website:	https://cfar.ucsd.edu/en/who-we-are/directors/doug-richman/
Home Address:	9551 La Jolla Farms Road La Jolla, California 92037
Birth Date:	February 15, 1943
Birthplace:	New York, New York
Family:	Married: June 21, 1965 Wife: Eva Acquino Richman Children: Sara, born December 12, 1971 Matthew, born May 22, 1977 Grandchild: Isabella Louise Carr, born June 18, 2007
Education and Positions:	Dartmouth College A.B. - 1965 Stanford University M.D. - 1970
1965 - 1970	Part-time research with Dr. Thomas C. Merigan Division of Infectious Diseases Department of Medicine Stanford University
1970 - 1971	Intern in Medicine Stanford University Hospitals
1971 - 1972	Resident in Medicine Stanford University Hospitals

1972 - 1975	Research Associate Laboratory of Infectious Diseases (Dr. Robert M. Chanock, Chief) National Institute of Allergy and Infectious Diseases National Institutes of Health
1975 - 1976	Clinical Fellow Division of Infectious Diseases Beth Israel Hospital and Children's Hospital Medical Center Harvard Medical School Boston, Massachusetts
1976 - 1982	Assistant Professor of Pathology and Medicine (Infectious Diseases) University of California San Diego School of Medicine
1976 -	Staff Physician Veterans Affairs San Diego Healthcare System
1976 - 2006	Chief, Clinical Virology Section, Laboratory Service Veterans Affairs San Diego Healthcare System
1982 - 1988	Associate Professor of Pathology and Medicine (Infectious Diseases) University of California San Diego School of Medicine
1988 - 2009	Professor of Pathology and Medicine (Infectious Diseases) University of California San Diego School of Medicine Director, Research Center for AIDS and HIV Infection of the VA San Diego Healthcare System
1994 -	San Diego Center for AIDS Research; Co-Director (1994-2000), Director (2000-2018), Co-Director (2018-)
1996 -	UCSD HIV Institute (previously named UCSD AIDS Research Institute) Co-director (1996-2000), Director (2000 -)
2004 - 2019	Florence Seeley Riford Chair for Acquired Immune Deficiency Syndrome Research
2009 - 2019	Distinguished Professor of Pathology and Medicine (Infectious Diseases) University of California San Diego School of Medicine
2019-	Distinguished Professor Emeritus (Active) of Pathology and Medicine (Infectious Diseases), University of California San Diego School of Medicine

Military Service: Lt. Cmdr/Surgeon, 1972-1975,
United States Public Health Service (#34991)
Honorable Discharge, July 3, 1975

Certification: Licensed, California State Board of Medical Examiners (G-21088), 1971
Diplomate, National Board of Medical Examiners (#113044), 1972
Diplomate, American Board of Internal Medicine (#43457), 1973
Diplomate, Subspecialty of Infectious Disease (#043457), 1976

Honors: A.B. (cum laude) Dartmouth College, 1965
Alpha Omega Alpha, 1970
Lowell Rantz Award in Infectious Diseases, 1970
AMA Physicians Recognition Award, 1976, 1979, 1982, 1985, 1988
John Simon Guggenheim Fellowship, 1984
Visiting Fellowship, Clare Hall, University of Cambridge, 1984-1985
Visiting Professor; Hubei Medical College, Wuhan, Peoples Republic of China, Oct., 1987
Visiting Professor; Tokyo Medical and Dental University, Kumamoto University School of Medicine, Institute for Virus Research at Kyoto University, St. Marianna University (Tokyo), Institute for Medical Research at Tokyo University, Fukushima Prefecture Medical School, Japan, Nov., 1990
The Donald P. Shiley Visiting Lectureship, Scripps Clinic and Research Foundation, March, 1991.
Howard M. Temin Award for Clinical Science for Scientific Excellence in the Fight Against HIV/AIDS, 1993
The Howard Gilman Foundation Honors Program Lecture, New York University, February 28, 1994
NIH MERIT Award, 1994
UCSD School of Medicine Distinguished Faculty Lectureship, 1994
Visiting Professor, Academisch Ziekenhuis Utrecht, University of Utrecht, 8-10 May, 1996
ARA Endowed Chair for AIDS Research Visiting Professor, Academic Medical Center, University of Amsterdam, 13-15 May, 1996
Pfizer Visiting Professor, University of Rochester, 2-4 October, 1996
Honorary Medical Advisory Board, Ryan White Foundation, 1997 – 1998
Jay Sanford Visiting Professor, University of Texas Southwestern Medical School, Dallas, Tx 6-8 January 1999
Pfizer Visiting Professor, Mt. Sinai School of Medicine, 26-27 April, 1999
John T. Carey Memorial Visiting Professor, Case Western Reserve School of Medicine, 5-6 May, 1999
Gertrude Elion Distinguished Lectureship, Conference on Drug Development for Antiretroviral Therapies, San Juan P.R., 18 Dec 2000

ISI Most Highly Cited Researchers, 2000-

Steve Chase Humanitarian Award for Science and Medicine, Desert AIDS Project, 10 February 2001

Institute for Scientific Information Highly Cited Researcher, 2001, 2002

Best Doctor listing, Infectious Disease, annually since 2001

Gordon Meiklejohn Visiting Professor, Univ of Colorado, 7-8 March 2001

UCSD Health Sciences Award of Excellence in Research, 2002

Dept of Veterans Affairs William S. Middleton Award, 2002

Pan American Society for Clinical Virology: Clinical Virology Award, 2004

Bernard Fields Memorial Lectureship, Conference on Retroviruses and Opportunistic Infections 3 February 2008

Thomas C. Merigan Visiting Lectureship, Stanford University, 30 September 2008

Docteur en Medecin, Honoris Causa, University of Lausanne, 2010

Hayden-Farr Lectureship in Epidemiology and Virology University of Virginia, Charlottesville April 9, 2013

European Journal of Clinical Investigation, cited in List of Highly Influential Biomedical Researchers, 1996-2011, Volume 43, Issue 12, pages 1339-1365, October 2013

Visiting Professor, Department of Medicine, Northwestern University, October 20-21, 2014

Gerald Medoff Visiting Professorship in Infectious Diseases, Washington University School of Medicine, St. Louis, MO, October 30-31, 2014

Dr. A. Brad Tuax Award, 2015

Gertrude Elion Award Lectureship, International Society for Antiviral Research, La Jolla, California, 18 April 2016

Annual Award from the Fundación Lucha contra el Sida (Foundation for the Fight against AIDS), Madrid, Spain, 22 November 2016

Patents

E Raz, HJ Cho, DD Richman, AA Horner
"Methods for Increasing A Cytotoxic T Lymphocyte Reponse in Vivo"
US Patent No. 6,534,062 B2, March 2003

A Rosowsky, KY Hostetler, JR Beadle, GD Kini, DD Richman
"Antiviral Compounds and Methods of Administration"
US Patent No. 6,686,462B 2, February 2004

D Richman, MT Wrin, S Little, CJ Petropoulos, NT Parkin, J Whitcomb, W Huang
"Method of Evaluating a Patient Antibody Response to Envelope Proteins of a Virus"

US Patent No. 7,247,439, July 2007

D Richman, MT Wrin, S Little, CJ Petropoulos, NT Parkin, J Whitcomb, W Huang
"Methods for Determining the Presence of Antibodies Blocking Viral Infection"
US Patent No. 9,175,355 B2, November 2015

Societies: Fellow, American Academy of Microbiology
Fellow, American Association for the Advancement of Science
Fellow, American College of Physicians
Fellow, Infectious Diseases Society of America
American Association of Physicians
American Clinical and Climatological Association (retired)
American Federation for Clinical Research
American Society for Microbiology
American Society for Virology
International AIDS Society
International Society for Antiviral Research
Western Association of Physicians
VA Society for Physicians in Infectious Diseases

Editorial Boards: *AIDS*, 1990 – 1993, 2007-2013
AIDS Alert, 1990 -2009
Antimicrobial Agents and Chemotherapy, 1987 - 2002
Antiviral Research, 1988 - 2000
Antiviral Chemistry and Chemotherapy, 1994 - 2012
Diagnostic Microbiology and Infectious Diseases, 1982 - 1997
Drug Resistance Updates, 1998 - 2010
Infectious Agents and Disease, 1991 - 1996
International Antiviral News, 1992 - 2002
JAMA HIV/AIDS Information Center Website, 1997 - 2001
Journal of Virology, 1994 - 2003
Journal of Human Virology, 1997 - 2002
Journal of Acquired Immunodeficiency Syndromes, 1988 -
Journal of Clinical Investigation, Consulting Editor, 1991 - 1998
Reviews in Medical Virology, 1990 -
Virology, 2005 –
Future Virology, 2005 –
The Open Virology Journal, 2007-
The Open AIDS Journal, 2007-2017
Current Opinion in HIV and AIDS, 2005-
Invited Editor: PNAS, 2012, 2013
Journal of Virus Eradication 2014-
Associate Editor, Pathogens and Immunity, 2016-

Editor-in-Chief: *Antiviral Therapy* 1996-

Improving the Management of HIV Disease 1994 - 1999; name change to *Topics in HIV Medicine*, 2000 - 2011; name change to *Topics in Antiviral Medicine*, 2011- Publication of the International AIDS Society - USA

Outside Committee Service:

1984-1989

Member, University of California President's Cancer Research Coordinating Committee

1986-1989	Consultant, FDA Center for Drugs and Biologics
1987-1990	Member, NIH AIDS Research Review Committee
1987-1990	Publications Committee, Infectious Disease Society of America
1987-1992	Councillor, Pan American Group for Rapid Viral Diagnosis
1987-1995	Member, Primary Infection Core Committee, NIAID AIDS Clinical Treatment Groups
1990-1998	Veterans Affairs Ad Hoc Therapeutic Advisory Committee of the AIDS Program Office
1987-1990	Vice-Chair, Primary Infection Committee, NIAID AIDS Clinical Treatment Group
1991-1993	Chair, Primary Infection Committee, NIAID AIDS Clinical Treatment Group
1990-2006	Advisory Panel on Infectious Diseases Therapy, United States Pharmacopeial Convention
1991-1994	Member, AIDS Clinical Drug Development Committee, National Institute of Allergy and Infectious Diseases
1991-1995	Member and Chair (1994-5), Steering Committee on Research and Drug Development, Global Programme on AIDS, World Health Organization
1991-1998	Advisory Board, International AIDS Society
1992-1995	Member, Viral Resistance Working Group AIDS Clinical Trials Group, NIAID
1992-1996	Member, Virology Core Committee, AIDS Clinical Trials Group, NIAID
1993-1995	Co-Chair Combination Therapy Working Group AIDS Clinical Trials Group, NIAID
1992-1993	Co-Chair, Track B (Clinical Sciences) IX th International Conference on AIDS
1992-2002	Member, External Advisory Committee, University of Alabama Birmingham, Center for AIDS Research
1992-	Vice President, Board of Directors, International AIDS Society-USA
1993-1996	Member, Herpes Simplex Encephalitis Subcommittee, NIAID Collaborative Antiviral Study Group
1993-1996	State of California AIDS Drug Assistance Program Advisory Committee
1993-	Program Committee, National Conferences on Human Retroviruses and Related Infections, Member Program Committee (1993-1993, Vice-Chair); Chair (1996-1999),
1994-1997	Member, Gene Therapy Core Committee, NIAID AIDS Clinical Treatment Group

1994-2000	Member, External Advisory Committee, Center for AIDS Research, University of California San Francisco
1994-1996	Member, Scientific Advisory Board, University of Colorado National Cooperative Drug Development Group for HIV
1994-1996	Member, Resistance Genotype Committee, NIAID AIDS Clinical Trials Group
1995-1996	Chair, Steering Committee on Research and Drug Development, Global Programme on AIDS, World Health Organization
1995-1999	Member, HIV/Virology Research Agenda Committee, NIAID AIDS Clinical Treatment Group
1995-1996	Member, Resistance Subcommittee, International Virology Committee, NIAID AIDS Clinical Trials Group
1995-1996	Member, Area Review Panel on Clinical Trials, Office of AIDS Research, National Institutes of Health
1996-2000	Member, National Cancer Institute AIDS Malignancies Working Group
1996-2005	Member, Virology Committee, AIDS Clinical Trials Group
1996-2003	Scientific Advisory Board, Aaron Diamond AIDS Research Center
1997-	Organizing Committee, Annual Meeting HIV Drug Resistance and Treatment Strategies
1997-2000	Member, Executive Committee, NIAID Adult AIDS Clinical Trials Group
1997-2004	Member, AIDS Vaccine Research Committee of the National Institutes of Health
1997-	Board of Directors, Foundation for Human Retrovirology
1998-2001	Member, Executive Committee on HIV for Veterans Affairs Quality Enhancement Research Initiative (VA QUERI)
1998- 2012	Advisory Board, Elisabeth Glaser Scientist Award of the Pediatric AIDS Foundation
1998	Co-Chair, Keystone Symposium on Molecular Approaches to Human Viral Vaccines
1998-2000	Chair, HIV Drug Resistance Collaborative Group (Academic Investigators, Industry, FDA)
1999-2005	Review Panel, Cancer Research Fund of the Damon Runyon-Walter Winchell Foundation
1999-2003	Scientific Committee, SHARE: The International AIDS Society Educational Program on

	HIV Clinical Program on HIV Clinical Care and Prevention
2001-2006	VA QUERI-HIV Steering Committee
2002- 2013	Scientific Advisory Board, Vaccine Research Center (NIAID/NIH)
2002-2007	Chair, Pathogenesis Working Group, Acute Infection and Early Disease Research Program
2003-2004	Co-Chair, Dept of Veterans Affairs Blue Ribbon Committee on Laboratory Science
2003- 2013	Scientific Advisory Committee, New England Regional Primate Center
2004	HIV Vaccine Enterprise Vaccine Discovery Working Group
2004-	Executive Scientific Advisory Panel of the AIDS Research Institute irsi Caixa, Barcelona, Spain
2004-2007	External Advisory Committee, North-Central California Center for AIDS Research
2004	Institute of Medicine Committee on Antiviral Drug Use in Resource Constrained Settings
2004-2007	Vice-chair (2004-2005) and Chair (2005-), Executive Committee, NIH/NIAID Acute Infection and Early Disease Research Program
2004- 2013	External Advisory Committee, Case Western Reserve University Center for AIDS Research
2005-2008	Executive Committee, NIH Centers for AIDS Research, Directors
2005-2009	Scientific Advisory Board, International AIDS Vaccine Initiative
2007- 2012	Scientific Advisory Board, Gates Vaccine Harvard Discovery T-Cell Consortium
2009- 2013	Institute of Medicine and National Academy of Science's Committee on Planning the Assessment/Evaluation of HIV/AIDS Programs Implemented Under the U.S. Global Leadership Against HIV/AIDS, Tuberculosis and Malaria Reauthorization Act of 2008
2010- 2018	Scientific Advisory Board, UCSD Translational Methamphetamine AIDS Research Center (TMAR)
2011- 2014	American Association for the Advancement of Science Electorate Nominating Committee of the Section of Medical Sciences
2011- 2014	Scientific Advisory Board, University of Minnesota Reservoir PO1
2011	National Cancer Institute Board of Scientific Counselors for Basic Sciences
2012- 2017	Executive Committee for NIH Martin Delaney Collaboratory of AIDS Researchers for

Eradication (CARE)

- 2012- Scientific Advisory Committee, NIGMS Structural Biology of AIDS Center, the HIV Interaction and Viral Evolution Center; Art Olson PhD, the Scripps Research Institute, PI
- 2013- 2016 City of Hope California Institute for Regenerative Medicine (CIRM) Disease Team External Advisory Board
- 2014- Scientific Advisory Board, HIV Immunotherapeutics Institute
- 2014- 2018 Scientific Advisory Committee, Advancing Broad Spectrum Host-Targeting Antiviral Strategies to the Clinic, Stanford Center of Excellence for Translational Research
- 2014-2017 Scientific Advisory Board, HIV Vaccine Research and Design (HIVRAD) Program, The Scripps Research Institute and IAVI Neutralizing Antibody Center at TSRI
- 2015- Scientific Advisory Board, Evaluation of an Intensified Treatment Monitoring Strategy to Prevent Accumulation and Spread of HIV-1 Drug Resistance in Low- and Middle-Income Countries; The University of Utrecht ITREMA Project
- 2016- Center for AIDS Research Executive Committee
- 2016- 2019 Scientific Leadership Group, Human Vaccine Project
- 2016- Board of Directors, Human Vaccine Project

BIBLIOGRAPHY

1. Richman DD, Wong KT, Robinson WS, Merigan TC. Effect of Interferon on the Replication of Sendai Virus. *J Gen Virol* 9: 141-150, 1970.
2. Richman DD, Zamvil L, Remington JS. Recurrent Pneumocystis Carinii Pneumonia in a Child with Hypogammaglobulinemia. *Am J Dis Child* 125:102-103, 1973.
3. Richman DD, Murphy BR, Tierney EL, Chanock RM. Specificity of the Local Secretory Antibody to Influenza a Virus Infection. *J Immunol* 113: 1654-1656,1974.
4. Chanock RM, Richman DD, Murphy BR, Spring SB, Schnitzer TS, Richardson LS. Current Approaches to Viral Immunoprophylaxis. In: *Viral Immunology and Immunopathology*. Edited by AL Notkins, New York, Academic Press; pp. 291-316, 1975.
5. Murphy BR, Richman DD, Chalhub EG, Uhendorf CP, Baron S, Chanock RM. Failure of Attenuated Temperature Sensitive Influenza a (H3N2) Virus to Induce Heterologous Interference in Human to Parainfluenza Type 1 Virus. *Infect Immun* 12: 62-68, 1975.
6. Murphy BR, Spring SB, Richman DD, Tierney EL, Kasel JR, Chanock RM. Temperature Sensitive Mutants of Influenza Virus. VII. Transfer of the Ts-1 [E] Lesions to a Wild Type of Influenza a Virus with the HON1 Surface Antigens. *Virology* 66: 533-541, 1975.
7. Richman DD, Murphy BR, Cline WL, Alling DW. Determination of Influenza Virus Neuraminidase Inhibition Titers. *Bull WHO* 52: 233-234, 1975.
8. Richman DD, Murphy BR, Spring SB, Coleman MT, Chanock RM. Temperature Sensitive Mutants of Influenza Virus. IX. Genetic and Biological Characterization of Ts-1 [E] Lesions When Transferred to a 1972 (H3N2) Influenza a Virus. *Virology* 66:551-562, 1975.
9. Spring SB, Nusinoff S, Mills J, Richman DD, Tierney EL, Murphy BR, Chanock RM. Temperature Sensitive Mutants of Influenza Virus. VI. Transfer of Ts Lesions From the Asian Subtype of Influenza a Virus (H2N2) to the Hong Kong Subtype (H3N2). *Virology* 66: 522-532, 1975.
10. Spring SB, Nusinoff S, Tierney EL, Richman DD, Murphy BR, Chanock RM. Temperature Sensitive Mutants of Influenza Virus. VIII. Genetic and Biological Characterization of Ts Mutants of Influenza a Virus (H3N2) and Their Assignment to Complementation Groups. *Virology* 66: 542-550, 1975.
11. Hall WJ, Douglas RG, Zaky DA, Hyde RW, Richman DD, Murphy BR. Attenuated Influenza Virus in Normal Adults. Role of Pulmonary Function Studies in Vaccine Trials. *J Infect Dis* 133: 145-151, 1976.
12. Kim HW, Arrobo JO, Brandt CD, Parrott RH, Murphy BR, Richman DD, Chanock RM. Temperature Sensitive Mutants of Influenza a Virus. X. Response of Children to the Influenza A/Hong Kong/68-Ts-1 [E] (H3N2) and A/Udorn/72-Ts-1 [E] (H3N2) Candidate Vaccine Viruses and Significance of Immunity to Neuraminidase Antigen. *Pediatr Res* 10: 238-242, 1976.
13. Murphy BR, Richman DD, Spring SB, Chanock RM. The Use of Temperature Sensitive Mutants of Influenza a Virus As Live Virus Vaccine Strains. *Postgrad Med J* 52: 381-388, 1976.

14. Richman DD, Murphy BR, Baron S, Uhlendorf C. Three Strains of Influenza a Virus (H3N2): Interferon Sensitivity In Vitro and Interferon Production in Volunteers. *J Clin Microbiol* 3: 223-226, 1976.
15. Richman DD, Murphy BR, Chanock RM, Gwaltney JM, Douglas RG, Betts RF, Blacklow NR, Rose RB, Parrino TA, Levine MM, and Caplan ES. Temperature Sensitive Mutants of Influenza a Virus. XII. Safety, Antigenicity, Transmissibility and Efficacy of Influenza A/Udorn/72-Ts-1 [E] Recombinant Temperature Sensitive Viruses in Adults. *J Infect Dis* 134: 585-593, 1976.
16. Dolin R, Richman DD, Murphy BR, Fauci AS. Cell-Mediated Immune Responses in Humans After Induced Infection with Influenza a Virus. *J Infect Dis* 135: 714-719, 1977.
17. Richman DD, Breton SJ, Goldmann DA. Scarlet Fever and Group a Streptococcal Surgical Wound Infection Traced to an Anal Carrier. *J Pediatr* 90: 387-390, 1977.
18. Richman DD, Murphy BR, Belshe RB, Rusten HM, Chanock RM, Blacklow NR, Parrino TA, Rose FB, Levine MM, Caplan E. Temperature Sensitive Mutants of Influenza a Virus. XIV. Production and Evaluation of Influenza A/Georgia/74-Ts-1 [E] Recombinant Viruses in Human Adults. *J Infect Dis* 136: 256-262, 1977.
19. Richman DD, Murphy BR, Chanock RM. Demonstration of a Non-Temperature-Sensitive Growth-Restricting Mutation in a Ts Mutant of Influenza a Virus: Implications for Live Virus Vaccine Development. *Virology* 83:356-364, 1977.
20. Chanock RM, Murphy BR, Spring SB, Richman DD. Live Virus Vaccines for Use in Humans: Strategies and Problems. In: *Microbiology-1977* Edited by D. Schlessinger, American Society for Microbiology, pp. 512-520, 1977.
21. Richman DD, Oxman MN. Antiviral Agents. In: *Seminars in Infectious Diseases*. Edited by L Weinstein, BN Fields, New York, Stratton Intercontinental Medical Board Corporation; pp. 200-255, 1978.
22. Catalano MA, Carson DA, Slovin SF, Richman DD, Vaughan JH. Antibodies to Epstein-Barr Virus-Determined Antigens in Normal Subjects and in Patients with Seropositive Rheumatoid Arthritis. *Proc Natl Acad Sci USA* 76: 5825-5828, 1979.
23. George WL, Volpicelli NA, Stiner DB, Richman DD, Liechty EJ, Mok HY, Rolfe RD, Finegold SM. Relapse of Pseudomembranous Colitis after Vancomycin Therapy. *New England Journal of Medicine* 301(8):414-5, 1979. Epub 1979/08/23. doi: 10.1056/nejm197908233010806. PubMed PMID: 460343.
24. Richman DD, Murphy BR. The Association of the Temperature Sensitive Phenotype and Viral Attenuation in Animals and Humans. Implications for development and use of live virus vaccines. *Rev Infect Dis* 1:413-433, 1979.
25. Richman DD. The Use of Temperature Sensitive Mutants for Live, Attenuated Influenza Vaccines. (editorial) *New Engl J Med* 300:137-138, 1979
26. Cleveland PH, Richman DD, Oxman MN, Wickham MG, Binder PS, Worthen DM. Immobilization of Viral Antigens on Filter Paper for [¹²⁵I] Staphylococcal Protein a Immunoassay: A Rapid and

- Sensitive Technique for the Detection of Herpes Simplex Virus Antigens and Viral Antibodies. *J Immunol Methods* 29: 369-386, 1979.
27. Brautigam AR, Richman DD, Oxman MN. Rapid Typing of Herpes Simplex Virus Isolates by Deoxyribonucleic Acid: Deoxyribonucleic Acid Hybridization. *J Clin Microbiol* 12: 226-234, 1980.
 28. Petru MA, Richman DD. Arizona Hinshawii Infection of an Atherosclerotic Abdominal Aorta. *Arch Int Med* 141: 537-538, 1981.
 29. Redfield D, Richman DD, Oxman MN, Kronenberg L. Psoralen Inactivation of Influenza and Herpes Simplex Viruses and of Virus-Infected Cells. *Infect and Immun* 32: 1216-1226, 1981.
 30. Richman DD, Cleveland PH, Oxman MN, Zaia JA. A Rapid Radioimmunoassay Using ^{125}I -Labeled Staphylococcal Protein A for Antibody to Varicella-Zoster Virus. *J Infect Dis* 143:693-699, 1981.
 31. Richman DD, Yazaki P, Hostetler KY. The Intracellular Distribution and Antiviral Activity of Amantadine. *Virology* 112: 81-90, 1981.
 32. Richman DD. Orthomyxoviruses and Paramyxoviruses. In: International Textbook of Medicine, (Vol. II), Medical Microbiology and Infectious Diseases, Edited by AI Braude, Philadelphia, WB Saunders Co.; Chapter 59, 569-584, 1981
 33. Richman DD. Tuberculoma of the Brain. In: International Textbook of Medicine, (Vol. II), Medical Microbiology and Infectious Diseases, Edited by AI Braude, Philadelphia, WB Saunders Co, Chapter 154, 1246-1247, 1981
 34. Richman DD. Viral Respiratory Infections. In: Current Therapy 1981, Edited by HF Conn, WB Sanders Co, Chapter 153, 1981
 35. Whitley RJ and NIAID Collaborative Antiviral Study Group. Herpes Simplex Encephalitis. Vidarabine Therapy and Diagnostic Problems. *New Engl J Med* 304:313-318, 1981.
 36. Hostetler KY, Richman DD. Studies on the Mechanism of Phospholipid Storage Induced by Amantadine and Chloroquine in Madin Darby Canine Kidney Cells. *Biochem Pharmacol* 31: 3795-3799, 1982.
 37. Nahmias AJ, et al and NIAID Collaborative Antiviral Study Group. Herpes Simplex Encephalitis: Laboratory Evaluations and Their Diagnostic Significance. *J Infect Dis* 145: 829-836, 1982.
 38. Reichman RC, Ginsberg M, Barrett-Connor E, Wyborny C, Connor JD, Redfield DC, Savoia MC, Richman DD, Oxman MN, Dandliker PS, Badger GJ, Ashikaga T, Dolin R. A Controlled Trial of Oral Acyclovir in the Therapy of Recurrent Herpes Simplex Genitalis: A Preliminary Report. *Amer J Med* 73 (Supplement): 338-341, 1982.
 39. Richman DD, Cleveland PH, Oxman MN, Johnson KM. The Binding of Staphylococcal Protein a by the Sera of Different Animal Species. *J Immunol* 128: 2300-2305, 1982.
 40. Richman DD, Cleveland PH, Oxman MN. A Rapid Enzyme Immunofiltration Technique Using Monoclonal Antibodies to Serotype Herpes Simplex Virus. *J Med Virol* 9: 299-305, 1982.
 41. Whitley RJ, et al and NIAID Collaborative Antiviral Study Group. Vidarabine Therapy of Varicella in Immunosuppressed Patients. *J Pediatr* 101: 125-131, 1982.

42. Whitley RJ, et al and NIAID Collaborative Antiviral Study Group. Early Vidarabine Therapy to Control the Complications of Herpes Zoster in Immunosuppressed Patients. *New Engl J Med* 307: 971-976, 1982.
43. Whitley RJ, et al and NIAID Collaborative Antiviral Study Group. Herpes Simplex Virus Encephalitis: Clinical Assessment. *JAMA* 247: 317-320, 1982.
44. Cleveland PH, Richman DD, Redfield DC, Disharoon DR, Binder PS, Oxman MN. An Enzyme Immunofiltration Technique for Rapid Diagnosis of Herpes Simplex Virus Eye Infections in a Rabbit Model. *J Clin Microbiol* 16: 676-685, 1982.
45. Oxman MN, Richman DD, and Spector S. Management at Delivery of Mother and Infant When Herpes Simplex, Varicella-Zoster, Hepatitis or Tuberculosis Have Occurred During Pregnancy. In: *Current Clinical Topics in Infectious Diseases*, Volume 4, Edited by JS Remington and MN Swartz, McGraw-Hill, Boston, 1983
46. Redfield DC, Richman DD, Albanil S, Oxman MN, Wahl GM. Detection of Herpes Simplex Virus in Clinical Specimens by DNA Hybridization. *Diagn Microbiol and Infect Dis* 1: 117-128, 1983.
47. Richman DD, Cleveland PH, McCormick JB, Johnson KM. Antigenic Analysis of Strains of Ebola Virus: Identification of Two Ebola Serotypes. *J Infect Dis* 147: 268-271, 1983.
48. Richman DD. The Use of Staphylococcal Protein A in Diagnostic Virology. *Current Topics in Microbiol Immunol* 104: 159-176, 1983
49. Whitley RJ and the NIAID Collaborative Antiviral Study Group. Interim Summary of Mortality in Herpes Simplex Encephalitis and Neonatal Herpes Simplex Virus Infections: Vidarabine Versus Acyclovir. *J Antimicrobial Chemotherapy* 12 (Suppl B): 105-112, 1983.
50. Mertz GJ, Critchlow CW, Benedetti J, Reichman R, Dolin R, Connor J, Redfield DC, Savoia MC, Richman DD, Tyrell DL, Mimedzinski L, Portnoy J, Keeney RE, Corey L. Double Blind Placebo-Controlled Trial of Oral Acyclovir in First Episode Genital Herpes Simplex Virus Infection. *JAMA* 232: 1147-1151, 1984.
51. Reichman RC, Badger GJ, Mertz CJ, Corey L, Richman DD, Connor JD, Redfield D, Savoia MC, Oxman MN, Bryson Y, Tyrell L, Portnoy J, Creagh-Kirk T, Keeney RE, Ashikaga T, Dolin R. Treatment of Recurrent Genital Herpes Simplex Infections with Oral Acyclovir: A Controlled Trial. *JAMA* 251: 2103-2107, 1984.
52. Richman DD, Redfield DC, Cleveland PH, Oxman MN, Wahl GM. Rapid Viral Diagnosis. *J Infect Dis* 149: 298-310, 1984.
53. Richman DD, Schmidt N, Plotkin S, Yolken R, Chernesky M, McIntosh K and Mattheis M. Summary of a Workshop on New and Useful Methods in Rapid Viral Diagnosis. *J Infect Dis* 150: 941-951, 1984.
54. Richman DD. Viral Respiratory Infections. In: *Emergency Medical Therapy - 1984*, Edited by RF Edlich and DA Spyker, Appleton-Century-Crofts, pp. 869-872, 1984.
55. Harris JP, Woolf NK, Ryan AF, Butler DM, Richman DD. Immunologic and Electrophysiologic Response to Cytomegalovirus Inner Ear Infection in the Guinea Pig. *J Infect Dis* 150: 523-530, 1985.

56. Richman DD, Cleveland PH, Wopschall LJ. Immunoenzymatic Staining of Viral and Chlamydial Antigens in Cell Culture. *Diagn Microbiol Infect Dis* 3: 353-358, 1985.
57. Richman DD. Promising New Approaches for the Diagnosis and Therapy of Virus Infections. In: *Microbiology - 85*. Edited by L. Lieve, American Society for Microbiology, Washington, D.C., pp. 153-156, 1985
58. Richman DD. Viral Respiratory Infections. In: *Current Emergency Therapy '85*, Edited by RF Edlich and DA Spyker, Aspen Publications, Rockville, MD; pp. 979-982, 1985
59. Wahl GM, Albalil S, Ignacio K, Richman DD. Nucleic Acid Hybridization: A Powerful Technology Useful for Medical Diagnosis. In: *Medical Virology IV*, edited by L.M. de la Maza and E.M. Peterson, L. Erlbaum Assoc., Hillsdale, N.J.; 37-64, 1985.
60. Woolf NK, Harris JP, Ryan AF, Butler DM, Richman DD. Hearing Loss in Experimental Cytomegalovirus Infection of the Guinea Pig Inner Ear: Prevention by Systemic Immunity. *Ann. Otology, Rhinology and Laryngology* 94: 350-356, 1985.
61. Cueva RA, Davidson TM, Richman DD. Pasteurella Infections of the Head and Neck. *Arch Otolaryngology* 112:207-209, 1986.
62. Richman DD, Buckmaster A, Bell S, Hodgman C, Minson AC. Identification of a New Glycoprotein of Herpes Simplex Virus Type 1 and Genetic Mapping of the Gene That Codes for It. *J Virol* 57: 647-655, 1986.
63. Richman DD, Hostetler KY, Yazaki PJ, Clark S. Fate of Influenza a Virion Proteins After Entry Into Subcellular Fractions of LLC Cells and the Effect of Amantadine. *Virology* 151: 200-210, 1986.
64. Richman DD, Wahl GM. Nucleic acid probes to detect viral diseases. In: *Concepts in Viral Pathogenesis, II*. Edited by AL Notkins and MBA Oldstone, Springer-Verlag, New York; 301-309, 1986.
65. Richman DD. Nucleic Acid Hybridization. In: *Clinical Virology Manual*, Edited by S. Specter and G.J. Lancz, New York, Elsevier Science Publishing Co.; 251-260, 1986
66. Richman DD. Paramyxoviruses. In: *International Textbook of Medicine (Vol. II)*, Medical Microbiology and Infectious Diseases, 2nd ed., Edited by A. Braude, Philadelphia, WB Saunders Co, 514-521, 1986
67. Richman DD. Use of Viral Probes for Diagnosis of HSV Infections. In: *Human Herpesvirus Infections*, edited by C. Lopez and B. Roizman, New York, Raven Press; 221-226, 1986
68. Richman DD. Viral Respiratory Infections. In: *Current Emergency Therapy*, Third Edition, Edited by RF Edlich and D Spyker, Aspen Publications, Rockville, MD; 525-528, 1986
69. Richman DD. Tuberculoma of the brain. In: *International Textbook of Medicine (vol. II)*, Medical Microbiology and Infectious Diseases, 2nd ed., Edited by A. Braude, Philadelphia, WB Saunders Co; 1070-1072, 1986
70. Richman DD. Infectious Disease Problems in Cosmetic Surgery. In: *Problems in Aesthetic Surgery: Biological Causes and Clinical Solutions*. Edited by R. Rudolph, C.V. Mosby, St. Louis; 181-188, 1986.

71. Richman DD. Orthomyxoviruses. In: International Textbook of Medicine (Vol. II), Medical Microbiology and Infectious Diseases, 2nd ed., Edited by A. Braude, Philadelphia, WB Saunders Co; 507-514, 1986.
72. Whitley RJ, et al and NIAID Collaborative Antiviral Study Group. Vidarabine Versus Acyclovir Therapy in Herpes Simplex Virus Encephalitis. *New Engl J Med* 314:144-149, 1986.
73. WHO Working Group. Extra-Ocular Chlamydial Infection. *Bull World Health Organ* 64: 481-492, 1986.
74. Cleveland PH, Richman DD, Oxman MN, Worthen DM. A Rapid Serologic Technique for Typing Herpes Simplex Viruses. *J Clin Microbiol* 15: 402- 407, 1982.
75. Fischl MA, Richman DD, Grieco MH, Gottlieb MS, Volberding PA, Laskin OL, Leedom JM, Groopman JE, Mildvan D, Schooley RT, Jackson GG, Durack DT, King D and the AZT Collaborative Working Group. The Efficacy of 3'-Azido- 3'-Deoxythymidine (Azidothymidine) in the Treatment of Patients with AIDS and AIDS-Related Complex: A Double-Blind Placebo-Controlled Trial. *New Engl J Med* 317: 185-191, 1987.
76. Grant I, Atkinson JH, Hesselink JR, Kennedy CJ, Richman DD, Spector SA, McCutchan JA. Evidence for early central nervous system involvement in the acquired immunodeficiency syndrome (AIDS) and other human immunodeficiency virus (HIV) infections. *Ann Int Med* 107: 828-836, 1987.
77. Laskin OL, Cederberg DM, Mills J, Eron LJ, Mildvan D, Spector SA, and the Ganciclovir Study Group. Ganciclovir for the Treatment and Suppression of Serious Infections Caused by Cytomegalovirus. *Amer J Med* 83: 201-207, 1987.
78. Richman DD, Fischl MA, Grieco MH, Gottlieb MS, Volberding PA, Laskin OL, Leedom JM, Groopman JE, Mildvan D, Hirsch MS, Jackson GG, Durack DT, Nusinoff-Lehrman S, and the AZT Collaborative Working Group. The Toxicity of 3'-Azido-3'-Deoxythymidine (Azidothymidine) in the Treatment of Patients with AIDS and AIDS-Related Complex: A Double-Blind, Placebo-Controlled Trial. *New Engl J Med* 317: 192-197, 1987.
79. Richman DD, Kornbluth RS, Carson DA. Failure of Dideoxynucleosides to Inhibit HIV Replication in Cultured Human Macrophages. *J Exp Med* 166: 1144-1149, 1987.
80. Richman DD, McCutchan JA, Spector SA. Detecting Human Immunodeficiency Virus RNA in Peripheral Blood Mononuclear Cells by Nucleic Acid Hybridization. *J Infect Dis* 156: 823-827, 1987.
81. Richman DD. Rapid Diagnosis of Infectious Diseases Using Nucleic Acid Technology, In: Contributions of Chemistry to Health, Volume 2, Proceedings of the Fifth CHEMRAWN Conference, Heidelberg, 1986. Edited by H. Machleidt, VCH Verlagsgesellshaft mbH, Weinheim; pages 33-46, 1987
82. Richman DD. Developments in Rapid viral Dagnosis. *Infectious Disease Clinics of North America* 1: 311-322, 1987.
83. Richman DD. Dideoxynucleosides Are Less Inhibitory Invitro Against HIV-2 Than HIV-1. *Antimicrob Agents Chemotherapy* 31: 1879-1881, 1987.

84. Smith RS, Naso RB, Rosen J, Whalley A, Hom Y, Hoey K, Kennedy CJ, McCutchan JA, Spector SA, Richman DD. Antibody to a Synthetic Oligopeptide in Subjects at Risk for Human Immunodeficiency Virus Infection. *J Clin Microbiol* 25: 1498-1504, 1987.
85. Smith RS, Viel SB, Fong SS, Westrick S, Richman DD. Simultaneous Detection of Antibody to Human Immunodeficiency Virus and Hepatitis Surface Antigen. In: *Hepadna Viruses, Symposia on Molecular and Cellular Biology, New Series, Volume 70*, Edited by WS Robinson, K Koike, and H Will, AR Liss, Inc., New York, 451-459, 1987.
86. Cleveland PH, Richman DD. Enzyme Immunofiltration Staining Assay for Immediate Diagnosis of Herpes Simplex Virus and Varicella-Zoster Virus Directly From Clinical Specimens. *J Clin Micro* 25: 416-420, 1987.
87. Carson DA, Haertle T, Wasson B, Richman DD. Biochemical Genetic Analysis of 2', 3'-Dideoxyadenosine Metabolism in Human T Lymphocytes. *Biochem Biophysical Res Commun* 151:788-793, 1988.
88. Atkinson JH, Grant I, Kennedy CJ, Richman DD, Spector SA, McCutchan JA. Prevalence of Psychiatric Disorders Among Men Infected with Human Immunodeficiency Virus: A Controlled Study. *Arch of Gen Psychiatry* 45:859-864, 1988.
89. Firestein GS, Reifler DR, Richman DD, Gruber HE. Rapid and Reversible Modulation of T4 (CD4) on Monocytoid Cells by Phorbol Myristate Acetate: Effect on HIV Susceptibility. *Cellular Immunol* 113:63-69, 1988.
90. Grant I, Atkinson JH, Hesselink JR, Kennedy CJ, Richman DD, Spector SA, McCutchan JA. Human Immunodeficiency Virus-Associated Neurobehavioral Disorder. *J Royal Coll of Phys of London* 22:149-157, 1988.
91. Haertle T, Carrera CJ, McDougal JS, Sowers LC, Richman DD, Carson DA. Metabolism and Anti-HIV Activity of 2-Halo-2', 3'-Dideoxyadenosine Derivatives. *J Biol Chem* 263:5870-5875, 1988.
92. Jarvik JG, Hesselink JR, Kennedy C, Teschke R, Wiley C, Spector S, Richman DD, McCutchan JA. Acquired Immunodeficiency Syndrome: Magnetic Resonance Patterns of Brain Involvement with Pathologic Correlation. *Arch Neurol* 45:731-738, 1988.
93. Kiley MP, Cox NJ, Elliott LH, Defries R, Buchmeier MJ, Richman DD, McCormick JB. Physicochemical Properties of Marburg Virus: Evidence for Three Unique Virus Strains and Their Relationship to Ebola Virus. *J Gen Virol* 69:1957-1967, 1988.
94. Pauza CD, Galindo J, Richman DD. Human Immunodeficiency Virus Infection of Monoblastoid Cells: Cellular Differentiation Determines the Pattern of Virus Replication. *J Virol* 62:3558-3564, 1988.
95. Richman DD, Andrews J, The AZT Collaborative Working Group. Results of Continued Monitoring of Participants in the Placebo-Controlled Trial of Zidovudine for Serious Human Immunodeficiency Virus Infection. *Amer J Med* 85 (suppl 2A):208-213, 1988.
96. Richman DD, Mitsuya H, Broder S, Hostetler KY. Fusidic Acid, HIV, and Host Cell Toxicity. (Letter) *Lancet* i:1051-1052, 1988.

97. Richman DD. The Treatment of HIV Infection: Azidothymidine (AZT) and Other New Antiviral Drugs. In: The Medical Management of AIDS, edited by Sande MA and Volberding PA. Philadelphia, WB Saunders Co., 1988
98. Richman DD. The Treatment of HIV Infection: Azidothymidine (AZT) and Other New Antiviral Drugs. Infectious Disease Clinics of North America 2:397-407, 1988
99. Richman DD. The Treatment of HIV Infection. AIDS 2 (suppl 1): S137-S142, 1988
100. Schmitt FA, Bigley JW, McKinnis R, Logue PE, Evans RW, Drucker JL, The AZT Collaborative Working Group. Neuropsychological Outcome of Zidovudine (AZT) Treatment of Patients with AIDS and AIDS-Related Complex. N Engl J Med 319: 1573-1578, 1988.
101. Smith RS, Viel SB, Fong SS, Parks DE, Westrick S, Richman DD. Simultaneous Detection of Antibody to the Human Immunodeficiency Virus and of the Surface Antigen of Hepatitis B Virus in Human Serum. J Infect Dis 157:812-816, 1988.
102. Woolf NF, Ochi JW, Silva EL, Sharp PA, Harris JP, Richman DD. Impairment in T-Lymphocyte Responses During Early Infection with the Human Immunodeficiency Virus. Antimicrob Agents and Chemother 32:865-872, 1988.
103. Bentin J, Tsoukas CD, McCutchan JA, Spector SA, Richman DD, Vaughan JH. Impairment in T-Lymphocyte Responses During Early Infection with the Human Immunodeficiency Virus. J Clin Immunol 9:159-168, 1989.
104. Fischl MA, Richman DD, Causey DM, Grieco MH, Bryson JDY, Mildvan D, Laskin OL, Groopman JE, Volberding PA, Schooley RT, Jackson GG, Durack DT, Andrews JC, Nusinoff-Lehrman S, Barry DW, and the AZT Collaborative Working Group. Prolonged Zidovudine Therapy in Patients with AIDS and Advanced AIDS-Related Complex. JAMA 262:2405-2410, 1989.
105. Guatelli JC, Gingeras TR, Richman DD. Nucleic Acid Amplification In Vitro: The Detection of Sequences with Low Copy Numbers and the Amplification to the Diagnosis of HIV-1 Infection. Clin Microbiol Rev 2:217-226, 1989.
106. Heyman RA, Borrelli E, Lesley J, Anderson D, Richman DD, Baird SM, Hyman R, Evans RM. Thymidine Kinase Obliteration (TKO): Creation of Transgenic Mice with Controlled Immune-Deficiency. Proc Natl Acad Sci 86:2698-2702, 1989.
107. Kornbluth RS, Oh PS, Munis JR, Cleveland PH, Richman DD. HIV with Reduced Sensitivity to Zidovudine (AZT) Isolated During Prolonged Therapy. J Exp Med 169:1137-1151, 1989
108. Larder B, Darby G, Richman DD. HIV with Reduced Sensitivity to Zidovudine (AZT) Isolated During Prolonged Therapy. Science 243:1731-1734, 1989.
109. Larsen RA, Bozzette S, McCutchan JA, Chiu J, Leal MA, Richman DD and The California Collaborative Treatment Group. Persistent Cryptococcus Neoformans Infection of the Prostate After Successful Treatment of Meningitis. Ann Int Med 111:125-128, 1989
110. Merigan TC, Skowron G, Bozzette S, Richman DD, Uttamchandani R, Schooley R, Hirsch M, Soo W, Pettinelli C, Schaumburg H, ddC Study Group of the AIDS Clinical Trials Group. Circulating p24

- Antigen Levels and Responses to Dideoxycytidine in Human Immunodeficiency Virus (HIV) Infections. Ann Int Med 110:189-194, 1989.
111. Mildvan D, Richman DD. Strategies for the Treatment of Human Immunodeficiency Virus Infection. In: Current Topics in AIDS, Volume 2, ed. M.S. Gottlieb, et al., J. Wiley & Sons, Chichester, England, pgs. 235-262, 1989.
 112. Mosier DE, Gulizia RJ, Baird SM, Spector S, Spector D, Kipps TJ, Fox RI, Carson DA, Cooper N, Richman DD, Wilson DB. Studies of HIV Infection and the Development of Epstein-Barr Virus-Related B Cell Lymphomas Following Transfer of Human Lymphocytes to Mice with Severe Combined Immunodeficiency. Current Topics in Microbiol and Immunol 152, M.J. Bosma, R.A. Phillips and W. Schuler, eds. Springer-Verlag, Heidelberg, 195-199, 1989.
 113. Mosier DE, Gulizia RJ, Wilson DB, Baird SM, Spector SA, Spector DH, Richman DD, Fox RI, Kipps TJ. Elements of the Human Immune System: Studies of Mature Lymphoid Cells Following Xenotransplantation to SCID Mice. In: Progress in Immunology VII. F. Melchers, et al., eds. Springer-Verlag, Berlin; 1264-1271, 1989.
 114. Richman DD, Cleveland PH. Public Access to Experimental Drug Therapy: AIDS Raises Yet Another Conflict Between Freedom of the Individual and Welfare of the Individual and the Public. Edited by A. Balows, R.C. Tilton, A. Turano. Brescia, Italy, Brixia Academic Press; 360-364, 1989
 115. Richman DD. Public Access to Experimental Drug Therapy: AIDS Raises Yet Another Conflict Between Freedom of the Individual and Welfare of the Individual and the Public. J Infect Dis 159:412-415, 1989
 116. Schrier RD, Gnann Jr JW, Landes R, Lockshin C, Richman DD, McCutchan JA, Kennedy CJ, Oldstone MB, Nelson JA. T Cell Recognition of HIV Synthetic Peptides in a Natural Infection. J Immunol 142:1166-1176, 1989.
 117. Spector SA, Kennedy C, McCutchan JA, Bozzette SA, Straube RC, Connor JD, Richman DD. The Antiviral Effect of Zidovudine and Ribavirin in Clinical Trials and the Use of p24 Antigen Levels as a Virologic Marker. J Infect Dis 159:822-828, 1989.
 118. Whitley RJ, Cobbs CG, Alford CA, Jr., Soong S-J, Hirsch MS, Connor JD, Corey L, Hanley DF, Levin M, Powell DA, NIAID Collaborative Antiviral Study Group. Diseases That Mimic Herpes Simplex Encephalitis. JAMA 262:234-239, 1989.
 119. Woolf NK, Koehrn FJ, Harris JP, Richman DD. Congenital Cytomegalovirus Labyrinthitis and Sensironeural Hearing Loss in Guinea Pigs. J Infect Dis 160:929-937, 1989.
 120. Carson DA, Haertle T, Carrera CJ, Willis EH, Wasson DB, Richman DD. 2-Halo- 2', 3'-Dideoxyadenosines: Metabolically Stable Dideoxynucleosides with Activity Against the Human Immunodeficiency Virus (HIV). In: Purine and Pyrimidine Metabolism in Man, vol 4, eds. Kiyonobu Mikanagi, Kusuki Nishioka and William N. Kelley, Plenum Publishing, New York, 1989.
 121. Richman DD. HIV Drug Resistance Retroviruses of Human AIDS and Related Animal Diseases "Colloque Des Cent Gardes," October, 1989, Quatrième Des Cent Gardes 4:295-298, 1989.
 122. Bozzette SA, Richman DD. Salvage Therapy for Zidovudine-Intolerant HIV-Infected Patients with Alternating and Intermittent Regimens of AZT and ddC. Amer J Med 88(suppl 5B):24S-26S, 1990.

123. Bozzette SA, Sattler FR, Chiu J, Wu AW, Gluckstein D, Kemper C, Bartok A, Niosi J, Abramson I, Coffman J, Hughlett C, Loya R, Cassens B, Akil B, Meng T-C, Boylen CT, Nielson D, Richman DD, Tilless JG, Leedom J, McCutchan JA, The California Collaborative Treatment Group. A Controlled Trial of Early Adjunctive Treatment with Corticosteroids for Pneumocystis Carinii: Pneumonia in the Acquired Immunodeficiency Syndrome. *New Engl J Med* 323:1451-1457, 1990.
124. Collier AC, Bozzette S, Coombs RW, Causey DM, Schoenfeld DA, Spector SA, Pettinelli CM, Davies G, Richman DD, Leedom JM, Kidd P, Corey L. A Pilot Study of Low Dose Zidovudine in Human Immunodeficiency Virus Infection. *New Engl J Med* 323:1015-1021, 1990.
125. Dankner WM, McCutchan JA, Richman DD, Hirata K, Spector SA. Localization of Human Cytomegalovirus in Peripheral Blood Leukocytes By In Situ Hybridization. *J Infect Dis* 161:131-136, 1990.
126. Davis GR, Blumeyer K, DiMichele LJ, Whitfield KM, Chappelle H, Riggs N, Ghosh SS, Kao PM, Fahey E, Kwoh DY, Guatelli JC, Spector, Richman DD, Gingeras TR. Detection of HIV-1 in AIDS Patients Using Amplification-Mediated Hybridization Analyses: Reproducibility and Quantitative Limitations. *J Infect Dis* 162:13-20, 1990.
127. Fischl MA, Parker CB, Pettinelli C, Wulfsohn M, Hirsch MS, Collier AC, Antoniskis D, Ho M, Richman DD, Fuchs E, Merigan TC, Reichman RC, Gold J, Steigbigel N, Leoung GS, Rasheed S, Tsiantis A, AIDS Clinical Trials Group. A Randomized Controlled Trial of a Reduced Daily Dose of Zidovudine in Patients with the Acquired Immunodeficiency Syndrome. *New Engl J Med* 323:1009-1014, 1990.
128. Fischl MA, Richman DD, Hansen N, Collier AC, Carey JT, Para MF, Hardy WD, Dolin R, Powderly WG, Allan JD, Wong B, Merigan TC, McAuliffe VJ, Hyslop NE, Rhame FS, Volberding P, Pettinelli C, Anderson J, AIDS Clinical Trials Group. The Safety and Efficacy of Zidovudine (AZT) in the Treatment of Subjects with Mildly Symptomatic HIV Infection: A Double-Blind Placebo-Controlled Trial. *Ann Int Med* 112:727-737, 1990.
129. Gingeras TR, Richman DD, Kwoh DY, Guatelli JC. Methodologies for In Vitro Nucleic Acid Amplification and Their Applications. *Vet Microbiol* 24:235-251, 1990.
130. Guatelli JC, Gingeras TR, Richman DD. Alternative Splice Acceptor Utilization During HIV-1 Infection of Cultured Cells. *J Virol* 64:4093-4098, 1990.
131. Guatelli JC, Whitfield KM, Kwoh DY, Barringer KJ, Richman DD, Gingeras TR. Isothermal, In Vitro Amplification of Nucleic Acids by a Multi-Enzyme Reaction Modeled After Retroviral Replication. *Proc Natl Acad Sci* 87:1874-1878, 1990.
132. Hochster H, Dieterich D, Bozzette S, Reichman RC, Connor JD, Liebes L, Sonke RL, Spector SA, Valentine F, Pettinelli C, Richman DD. Toxicity of Combined Ganciclovir (DHPG) and Zidovudine (AZT) with the Therapy of AIDS-Related CMV Disease: Results of a NIAID AIDS Clinical Trials Group Phase I Study (ACTG 004). *Ann Int Med* 113:111-117, 1990.
133. Hostetler KY, Stuhmiller LM, Lenting HBM, van den Bosch H, Richman DD. Synthesis and Antiretroviral Activity of Phospholipid Analogs of Azidothymidine and Other Antiviral Nucleosides. *J Biol Chem* 265:6112-6117, 1990.

134. Kornbluth RS, Munis JR, Oh PS, Meylan PR, Richman DD. Characterization of a Macrophage-Tropic HIV Strain That Does Not Alter Macrophage Cytokine Production Yet Protects Macrophages From Superinfection by Vesicular Stomatitis Virus. *AIDS Res Human Retroviruses*. 6:1023-1026, 1990.
135. Kornbluth RS, Oh PS, Munis JR, Cleveland PH, Richman DD. The Role of Interferons in the Control of HIV Replication in Macrophages. *Clin Immunol Immunopathol* 54:200-219, 1990.
136. Larder BA, Chesebro B, Richman DD. Susceptibilities of Zidovudine-Susceptible and -Resistant Human Immunodeficiency Virus Isolates to Antiviral Agents Determined by Using a Quantitative Plaque Reduction Assay. *Antimicrob Agents Chemotherap* 34:436-441, 1990.
137. Meng TC, Fischl MA, Richman DD. ACTG 106. Phase I/II Study of ddC and AZT Combination in Patients with AIDS and Advanced ARC. *Amer J Med* 88(suppl 5B):27S-30S, 1990.
138. Merigan TC, Skowron G, ddC Study Group of the AIDS Clinical Trials Group of the National Institute of Allergy and Infectious Diseases. Safety and Tolerance of Dideoxycytidine as a Single Agent. *Amer J Med* 88(suppl 5B):11S-15S, 1990.
139. Meylan PR, Richman DD, Kornbluth, RS. Characterization and Growth in Human Macrophages of Mycobacterium Avium Complex Isolated From the Blood of Patients with AIDS. *Infect Immun* 58:2564-2568, 1990.
140. Munis JR, Richman DD, Kornbluth RS. HIV-1 Infection of Macrophages In Vitro Neither Induces TNF/Cachectin Gene Expression nor Alters TNF/Cachectin Induction by Lipopolysaccharide. *J Clin Invest* 85:591-596, 1990.
141. NIH State-Of-The-Art Conference. State-Of-The Art Conference on Azidothymidine Therapy for Early HIV Infection. *Amer J Med*:89, 335-344, 1990.
142. O'Shea S, Cordery M, Barrett WY, Richman DD, Bradbeer C, Banatvala JE. HIV Excretion Patterns and Specific Antibody Responses in Body Fluids. *J Med Virol* 31:291-296, 1990.
143. Pauza CD, Galindo JE, Richman DD. Reinfection Results in Accumulation of Unintegrated Viral DNA in Cytopathic and Persistent HIV-1 Infection of CEM Cells. *J Exp Med* 172:1035-1042, 1990.
144. Richman DD, Grimes JM, Lagakos SW. Effect of Stage of Disease and Drug Dose on Zidovudine Susceptibilities of Isolates of Human Immunodeficiency Virus. *J AIDS* 3:743-746, 1990.
145. Richman DD. HIV and Other Human Retroviruses. In: *Antiviral Agents and Viral Diseases of Man*. 3rd Edition, eds. GJ Galasso, RJ Whitley, TC Merigan, Raven Press, New York, pp 581-647, 1990
146. Richman DD. The Clinical use of Anti-HIV Agents. In: *Design of Anti-AIDS Drugs*, eds. E. deClercq, vol. 14, Elsevier, Amsterdam, pp 339-367, 1990.
147. Richman DD. Therapy - HIV. In: *Control Of Virus Diseases*. Eds., N.J. Dimmock, P.D. Griffiths, C. R. Madeley. Cambridge University Press, Cambridge, pages 261-313, 1990.
148. Richman DD. Susceptibility to Nucleoside Analogues of Zidovudine-Resistant Isolates of Human Immunodeficiency Virus. *Amer J Med* 88 (suppl 5B): 85-105, 1990.
149. Richman DD. Viral Drug Resistance. *Current Opinion in Infectious Diseases* 3:819-823, 1990.

150. Richman DD. Zidovudine Resistance of Human Immunodeficiency Virus. *Reviews of Infectious Diseases* 12 Suppl 5: S507-10; discussion S10-2, 1990. Epub 1990/07/01. PubMed PMID: 2201072.
151. Volberding PA, Lagakos SW, Koch MA, Pettinelli C, Myers MW, Booth DK, Balfour DH, Reichman RC, Bartlett JA, Hirsch MS, Murphy RL, Hardy WD, Soeiro R, Fischl MA, Bartlett JG, Merigan TC, Hyslop NE, Richman DD, Valentine FT, Corey L, AIDS Clinical Trials Group. Zidovudine in Asymptomatic HIV Infection. A Controlled Trial in Persons with Fewer Than 500 CD4+ Cells/mm³. *New Engl J Med* 322: 941-949, 1990.
152. Wu AW, Mathews WC, Brysk LT, Atkinson JH, Grant I, Abramson I, Kennedy CJ, McCutchan JA, Spector SA, Richman DD. Quality of Life in a Placebo-Controlled Trial of Zidovudine in Patients with AIDS and AIDS-Related Complex. *J AIDS* 3: 683-690, 1990.
153. Zarling JM, Moran PA, Haffar O, Slas J, Richman DD, Spina CA, Myers DE, Kuebelback V, Lendbetter JA, Uckun AFM. Inhibition of HIV replication by pokeweed antiviral protein targeted to CD4+ cells by monoclonal antibodies. *Nature* 347: 92-95, 1990.
154. Richman DD. Prospects for Antiretroviral Therapy. *Retroviruses of Human AIDS and Related Animal Diseases. "Colloque Des Cent Gardes," October, Cinquième Des Cent Gardes* 5: 271-273, 1990.
155. Bozzette SA, Arcia J, Bartok AE, McGlynn LM, McCutchan JA, Richman DD, Spragg R, Spector SA. The Impact of Concomitant Viral Pathogens on the Course of Pneumocystis Carinii Pneumonia. *J Protozool* 38:183S-184S, 1991.
156. Bozzette SA, Larsen RA, Chiu J, Leal MAE, Jacobsen J, Rothman P, Robinson P, Gilbert G, McCutchan JA, Tilles J, Leedom JM, Richman DD and The California Collaborative Treatment Group. A Placebo-Controlled Trial of Maintenance Therapy with Fluconazole After Treatment of Cryptococcal Meningitis in the Acquired Immunodeficiency Syndrome. *New Engl J Med* 324: 580-584:1991.
157. Bozzette SA, Larsen RA, Chiu J, Leal MAE, Tilles JG, Richman DD, Leedom JM, McCutchan JA, The California Collaborative Treatment Group. Fluconazole Treatment of Persistent Cryptococcus Neoformans Prostatic Infection in AIDS. *Ann Int Med* 115: 285-286, 1991.
158. Bozzette SA, Santangelo J, Villasana D, Fraser A, Wright B, Jacobsen C, Hayden E, Schnack J, Spector S, Richman DD. Peripheral Nerve Function in Persons with Asymptomatic or Minimally Symptomatic HIV Disease: Absence of Zidovudine Neurotoxicity. *J AIDS* 4:851-855, 1991.
159. D'Souza MP, Durda P, Hanson CV, Milman G, and Collaborating Investigators. Evaluation of monoclonal antibodies to HIV-1 by neutralization and serological assays: an international collaboration. *AIDS* 5:1061-1070, 1991.
160. Dueck R, Prutow RJ, Richman DD. Effect of Parainfluenza Infection on Gas Exchange and FRC Response to Anesthesia in Sheep. *Anesthesiology* 74:1044-1051, 1991.
161. Easterbrook PH, Keruly JC, Creagh-Kirk T, Richman DD, Chaisson RE, Moore RD, the Zidovudine Epidemiology Study Group. Racial and Ethnic Differences in Outcome in Zidovudine Treated Patients with Advanced HIV Disease. *JAMA* 266: 2713-2718, 1991.
162. Frank KB, Connel EV, Holman MJ, Huryn DM, Sluboski BC, Tam SY, Todaro LJ, Weigel M, Richman DD, Mitsuya H, Broder S, Sim IS. Anabolism and Mechanism of Action of R024-5098, an Isomer of 2', 3'-Dideoxyadenosine (ddA) with Anti-HIV Activity. *Ann N Y Acad Sci* 616: 408-414:1991.

163. Gingeras TR, Prodanovich P, Latimer T, Guatelli JC, Richman DD, Barringer KJ. Use of self-sustained sequence replication (3SR) amplification reaction to analyze and detect mutations in zidovudine-resistant human immunodeficiency virus. *J Infect Dis* 164:1066-1074, 1991.
164. Hostetler KY, Carson DA, Richman DD: Phosphatidylazidothymidine: Mechanism of antiretroviral action in CEM cells. *J Biol Chem* 266:11714-11717, 1991.
165. Hsu M-C, Schutt AD, Holly M, Slice LW, Sherman MI, Richman DD, Potash MJ, Volsky DJ. Inhibition of HIV Replication in Acute and Chronic Infection In Vitro by a Tat Antagonist. *Science* 254:1799-1802, 1991.
166. Huryn DM, Sluboski BC, Tam SY, Todaro LJ, Weigele M, Sim IS, Frank KB, Richman DD, Mitsuya H Broder S. Synthesis and Anti-HIV Activity of a Novel Series of "Isomeric" Dideoxynucleosides. *Ann NY Acad Sci* 616:530-534, 1991.
167. Jacobson DL, McCutchan JA, Speckho PL, Abramson I, Smith RS, Bartok A, Boss GR, Durand D, Bozzette SA, Spector SA, Richman DD. The Evolution of Lymphadenopathy and Hypergammaglobulinimia Are Evidence for Early and Sustained Polyclonal B Lymphocyte Activation During Human Immunodeficiency Virus Infection. *J Infect Dis* 163: 240-246, 1991.
168. Kagnoff MF, Omari MB, deGrandpre LY, Roebuck KA, Richman DD, Brenner DA. Expression of Human Immunodeficiency Virus-1 in Human Colonic Cells. *Immunol Res* 10: 452-455, 1991.
169. Lopez-Galindez C, Rojas JM, N era R, Richman DD, Perucho M. Characterization of Genetic Variation and AZT Resistance Mutations of HIV by the RNase a Mismatch Cleavage Method. *Proc Natl Acad Sci USA* 88:4280-4284, 1991.
170. Merigan TC, et al and the NHFACTG 036 Study Group. Placebo-controlled trial to evaluate zidovudine in treatment of human immunodeficiency virus infection in asymptomatic patients with hemophilia. *Blood* 78: 900-906, 1991.
171. Moore RD, Creagh-Kirk T, Keruly J, Link G, Wang M-C, Richman DD, Chaisson RE, Zidovudine Epidemiology Study Group. Long-Term Safety and Efficacy of Zidovudine in Patients with Advanced Human Immunodeficiency Virus Disease. *Arch Intern Med* 151: 981-986, 1991.
172. Moore RD, Kessler H, Richman DD, Flexner C, Chaisson RE. Non-Hodgkin's Lymphoma in Patients with Advanced HIV-Infection Treated with Zidovudine. *JAMA* 265: 2208-2211, 1991.
173. Omari MB, Brenner DA, de Grandpre LY, Roebuck KA, Richman DD, Kagnoff MF. HIV-1 Infection and Expression in Human Colonic Cells: Infection and Expression in CD4+ and CD4- Cell Lines. *AIDS* 5: 275-283, 1991.
174. Richman DD, Guatelli JC, Grimes J, Tsiatis A, Gingeras TR. Detection of Mutations Associated with Zidovudine Resistance in Human Immunodeficiency Virus by Use of the The Polymerase Chain Reaction. *J Infect Dis* 164:1075-1081, 1991.
175. Richman DD, Rosenthal AS, Skoog M, Eckner RJ, Chou T-C, Sabo JP, Merluzzi VJ. BI-RG-587 Is Active Against Zidovudine-Resistant Human Immunodeficiency Virus Type 1 and Synergistic with Zidovudine. *Antimicrob Agents Chemotherap* 35: 305-308, 1991.

176. Richman DD, Shih C-K, Lowy I, Rose J, Prodanovich P, Goff S, Griffin J. Human Immunodeficiency Virus Type 1 Mutants Resistant to Nonnucleoside Inhibitors of Reverse Transcriptase Arise in Tissue Culture. *Proc Natl Acad Sci USA* 88: 11241-11245, 1991.
177. Richman DD. Antiretroviral Drug Resistance. *AIDS-91* 5(suppl 2): S189-S194, 1991.
178. Richman DD. AZT Resistance in Isolates of HIV. *Immunodef Rev* 2: 315-318, 1991.
179. Richman DD. HIV Drug Resistance. In: *AIDS Research Reviews*, Volume 2, eds. R Kennedy, F Wong-Staal and W Koff; Marcel Dekker, New York 237-248, 1991.
180. Richman DD. Selection of AZT-Resistant Variants of HIV by Therapy. *J NIH Res* 3: 83-87, 1991.
181. Richman DD. Antiviral Therapy of HIV Infection. *Ann Rev Med* 42: 69-90. 1991
182. Richman DD. Normal Physiology and HIV Pathophysiology of Human T-Cell Dynamics. *Taking Sides: Clashing Views on Controversial Issues*. Ed. Carol Levine, 4th Ed, Dushkin Publishing Group, Guilford, Connecticut; 350-354, 1991.
183. Terai C, Kornbluth RS, Pauza CD, Richman DD, Carson DA. Apoptosis as a Mechanism of Cell Death in Cultured T Lymphoblasts Acutely Infected with HIV. *J Clin Invest* 87:1710-1715, 1991.
184. Wu AW, Rubin HR, Mathews WC, Ware JE Jr, Brysk LT, Hardy WD, Bozzette SA, Spector SA, Richman DD. A Health Status Questionnaire Using 30 Items From the Medical Outcomes Study: Preliminary Validation in Persons with Early HIV Infection. *Medical Care* 29:786-798, 1991.
185. Chaisson RE, Moore RD, Richman DD, Keruly J, Creagh-Kirk T, the ZDV Epidemiology Study Group. Incidence and Natural History of Mycobacterium Avium-Complex Infections in Patients with Advanced HIV Disease Treated with Zidovudine. *Amer Rev Resp Dis* 146: 285-289, 1992.
186. Bass HZ, Hardy WD, Mitsuyasu RT, Taylor JMG, Wang YX, Fischl MA, Spector SA, Richman DD, Fahey JL. The Effect of Zidovudine Treatment on Serum Neopterin and $\beta 2$ -Microglobulin Levels in Mildly Symptomatic, HIV Type 1 Seropositive Individuals. *J AIDS* 5: 215-221, 1992.
187. Bozzette SA, Arcia J, Bartok AE, McGlynn LM, McCutchan JA, Richman DD, Spector SA. Impact of *Pneumocystis Carinii* and Cytomegalovirus on the Course and Outcome of Atypical Pneumonia in Advanced Human Immunodeficiency Virus Disease. *J Infect Dis* 165:93-98, 1992.
188. Day JJ, Grant I, Atkinson JH, Brysk LT, McCutchan JA, Hesselink JR, Heaton RK, Weinrich JD, Spector SA, Richman DD. Incidence of AIDS Dementia in a Two-Year Follow-Up of AIDS and ARC Patients on an Initial Phase II AZT Placebo-Controlled Study: San Diego Cohort. *J Neuropsychiatry Clin Neurosciences* 4:15-20, 1992.
189. Gallant JE, Moore RD, Richman DD, Keruly J, Chaisson RE and the Zidovudine Epidemiology Study Group. Incidence and Natural History of Cytomegalovirus Disease in Patients with Advanced HIV Disease Treated with Zidovudine. *J Infect Dis* 166:1223-1227, 1992.
190. Hostetler KY, Richman DD, Carson DA, Stuhmiller LM, van Wijk GMT, van den Bosch H. Greatly Enhanced Inhibition of Human Immunodeficiency Virus Type 1 Replication in CEM and HT4-6C Cells by 3'-Deoxythymidine Diphosphate Dimyristoylglycerol, a Lipid Prodrug of 3'-Deoxythymidine. *Antimicrob Agents Chemother* 36: 2025-2029, 1992.

191. Kahn JO, Lagakos SW, Richman DD, Cross A, Pettinelli C, Liou S-H, Brown M, Volberding PA, Crumpacker CS, Beall G, Sacks HS, Merigan TC, Beltangady M, Smaldone L, Dolin R, the NIAID AIDS Clinical Trials Group. A Controlled Trial Comparing Continued Zidovudine with Didanosine in Human Immunodeficiency Virus Infection. *New Engl J Med* 327: 581-587, 1992.
192. Kumar R, Gardner MF, Kaliman A, Richman DD, Hostetler KY. Equal Inhibition of HIV Replication by Stereoisomers of Phosphatidyl-AZT: Lack of Stereospecificity of Lysosomal Phospholipase A1. *J Biol Chem* 267: 20288-20292, 1992.
193. Mayers DL, McCutchan FE, Sanders-Buell EE, Merritt LI, Dilworth S, Fowler AK, Marks CA, Ruiz NM, Richman DD, Roberts CR, Burke DS. Characterization of HIV Isolates Arising After Prolonged Zidovudine Therapy. *J AIDS* 5: 749-759, 1992.
194. Meng T-C, Fischl MA, Boota AM, Spector SA, Bennett D, Bassiakos Y, Lai S, Wright B, Richman DD. Combination Therapy with Zidovudine and Dideoxycytidine in Patients with Advanced Human Immunodeficiency Virus Infection. *Ann Intern Med* 116: 13-20, 1992.
195. Meylan PR, Richman DD, Kornbluth RS. Reduced Intracellular Growth of Mycobacteria in Human Macrophages Cultivated at Physiologic Oxygen Pressure. *Amer Rev Resp Dis* 145: 947-953, 1992.
196. Meylan PR, Munis JR, Richman DD, Kornbluth RS. Concurrent Human Immunodeficiency Virus and Mycobacterial Infection of Macrophages In Vitro Does Not Reveal Any Reciprocal Effect. *J Infect Dis* 165: 80-86, 1992.
197. Meylan PRA, Richman DD, Kornbluth RS. Oxygen Tensions and Mycobacterial Infections (letter). *Clin Infect Dis* 15: 372, 1992.
198. Meylan PRA, Tam EK, Kornbluth RS, Richman DD. HIV Infectivity Is Not Augmented by Treatment with Trypsin, Factor Xa, or Human Mast Cell Tryptase. *AIDS* 6:128-130, 1992.
199. Moore RD, Keruly J, Richman DD, Creagh-Kirk T, Chaisson RE, the Zidovudine Epidemiology Study Group. Natural History of Advanced HIV Disease in Patients Treated with Zidovudine. *AIDS* 6: 671-677, 1992.
200. Munis JR, Kornbluth RS, Guatelli JC, Richman DD. Ordered Appearance of HIV-1 Nucleic Acids Following High Multiplicity Infection of Macrophages. *J Gen Virol* 73:1899-1906, 1992.
201. Richman DD. Azidothymidine and Other Deoxynucleoside Analogs. In: AIDS 3rd edition, Eds., DeVita, Hellman, Rosenberg. Lippincott, Philadelphia 373-394, 1992.
202. Richman DD. Emergence of Mutant HIV Reverse Transcriptase Conferring Resistance to AZT. *J Enzyme Inhibition* 6: 55-64, 1992.
203. Richman DD. HIV Drug Resistance. *AIDS Res Hum Retrovir* 8: 655-660, 1992.
204. Richman DD. Human Immunodeficiency Virus - Antiviral Therapy. In: Infectious Diseases. 1st Edition, eds. SL Gorbach, JG Bartlett, NR Blacklow, W.B. Saunders, Philadelphia, 977-998, 1992.
205. Richman DD. Selection of Zidovudine-Resistant Variants of Human Immunodeficiency Virus by Therapy. *Current Topics Microbiol Immunol* 176:131-142, 1992.

206. Richman DD. The Clinical Significance of Drug-Resistant Mutants of Human Immunodeficiency Virus. *Res Virol* 143:130-131, 1992.
207. Richman DD. Virus detection systems. In: Emerging Viruses. Ed., S. S. Morse. Oxford University Press, pp. 91-99, 1992.
208. Woolf NK, Koehrn FJ, Gompers-Foster H, Richman DD. Fibronectin in the Inner Ear During Experimental Guinea Pig Cytomegalovirus Labyrinthitis. In: Immunobiology in Otology, Rhinology and Laryngology, Eds., McCabe BF, Veldman JE, Mogi G. Kugler Publications, Amsterdam/New York, pp 329-330, 1992.
209. Bacolla A, Shih C-K, Rose JM, Piras G, Warren TC, Grygon CA, Ingraham TH, Cousins RC, Greenwood DJ, Richman DD, Cheng Y-C, Griffin JA. Amino Acid Substitutions in HIV-1 Reverse Transcriptase with Corresponding Residues From HIV-2. *J Biol Chem* 268:16571-16577, 1993.
210. Berger AR, Arezzo JC, Schaumburg HH, Skowron G, Merigan T, Bozzette S, Richman DD, Soo W. 2', 3'-Dideoxycytidine (ddC) Toxic Neuropathy: A Study of 52 Patients. *Neurology* 43:358-362, 1993.
211. Bozzette SA, McCutchan JA, Spector SA, Wright B, Richman DD. A Cross-Sectional Comparison of Persons with Syncytium- and Non-Syncytium-Inducing Human Immunodeficiency Virus. *J Infect Dis* 168:1374-1379, 1993.
212. Glesby MJ, Moore RD, Chaisson RE, the Zidovudine Epidemiology Study Group. Herpes zoster in patients with advanced human immunodeficiency virus infection treated with zidovudine. *J Infect Dis* 168:1264-1268, 1993.
213. Havlir D, Richman DD. Antiviral Therapy for HIV and Resistance. *Medicine International* 21: 61-64, 1993.
214. Hostetler KY, Parker S, Sridhar CN, Martin MJ, Li J-L, Stuhmiller LM, van Wijk GMT, van den Bosch H, Gardner MF, Aldern KA, Richman DD. Acyclovir Diphosphate Dimyristoylglycerol: A Novel Phospholipid Prodrug with Activity Against Acyclovir-Resistant Herpes Simplex Virus. *Proc Natl Acad Sci USA* 90:11835-11839, 1993.
215. Hsu M-C, Dhingra U, Earley JV, Holly M, Keith D, Nalin CV, Richou AR, Schutt AD, Tam SY, Potash MJ, Volsky DJ, Richman DD. Inhibition of HIV-1 Replication by a Tat Antagonist to Which the Virus Remains Sensitive After Prolonged Exposure In Vitro. *Proc Natl Acad Sci USA* 90: 6395-6399, 1993.
216. Hsu M-C, Schutt AD, Holly M, Slice LW, Sherman MI, Richman DD, Potash MJ, Volsky DJ. Human Immunodeficiency Virus Tat Inhibitor. In: Antiviral Chemotherapy, Vol 3, Eds., Mills J, Corey L. PTR Prentice Hall, Englewood Cliffs, NJ, pp. 289-300, 1993.
217. Kohsaka H, Taniguchi A, Richman D, Carson D. Microtiter Format Gene Quantification by Covalent Capture of Competitive PCR Products: Application to HIV-1 Detection. *Nucleic Acids Res* 21: 3469-3472, 1993.
218. Kuppermann BD, Petty JG, Richman DD, Mathews WC, Fullerton SC, Rickman LS, Freeman WR. Correlation Between CD4+ Counts and Prevalence of Cytomegalovirus Retinitis and Human Immunodeficiency Virus-Related Noninfectious Retinal Vasculopathy in Patients with Acquired Immunodeficiency Syndrome. *Amer J Ophthal* 115: 575-582, 1993.

219. Meylan PRA, Guatelli JC, Munis JR, Richman DD, Kornbluth RS. Mechanisms for the Inhibition of HIV Replication by Interferons- α , - β and - γ in Primary Human Macrophages. *Virology* 193:138-148, 1993.
220. Meylan PRA, Spina CA, Richman DD, Kornbluth RS. in vitro differentiation of monocyteoid THP-1 cells affects their permissiveness for HIV strains: a model system for studying the cellular basis of HIV differential tropism. *Virology* 193:256-267, 1993.
221. Pauza CD, Kornbluth RS, Emau, Richman DD, Deftos LJ. Vitamin D3 Compounds Regulate Human Immunodeficiency Virus Type 1 Replication in U937 Monoblastoid Cells and in Monocyte-Derived Macrophages. *J Leukocyte Biol* 53:157-164, 1993.
222. Richman DD, Johnson VA, Mayers DL, Shirasaka T, O'Brien MC, Mitsuya H. In Vitro Evaluation of Experimental Agents for Anti-HIV Activity. In: *Current Protocols in Immunology*, Eds. Coligan JE, Kruisbeek Am, Margulies DH, Shevach EM, Strober W; John Wiley & Sons, Inc., Brooklyn, NY, Suppl 8, Unit 12.9, pp. 1-21, 1993.
223. Richman DD. Drug Resistance in Isolates of HIV. In: *Immunodeficiencies*, Eds., Rosen FS, Seligmann M. Harwood Academic Publishers, Switzerland, Ch 32, pp. 537-543, 1993.
224. Richman DD. Drug Resistance of HIV. In: *Antiviral Chemotherapy*, Vol 3, Eds., Mills J, Corey L. PTR Prentice Hall, Englewood Cliffs, NJ, pp. 373-384, 1993.
225. Richman DD. HIV and Other Human Retroviruses. In: *Practical Diagnosis of Viral Infections*, Eds., Galasso GJ, Whitley RJ, Merigan TC. Raven Press, New York, pp. 243-252, 1993.
226. Richman DD. HIV Drug Resistance. In: *Ann Rev Pharmacol Toxicol*, Vol. 33. Eds Cho AK, Blaschke TF, Loh HH, Way JL. Annual Reviews, Palo Alto, pp 149-164, 1993.
227. Richman DD. Playing Chess with Reverse Transcriptase. *Nature* 361:588-589, 1993.
228. Richman DD. Resistance of Clinical Isolates of Human Immunodeficiency Virus to Antiretroviral Agents. *Antimicrob Agents Chemother* 37:1207-1213, 1993.
229. Richman DD. Virus Detection Systems. In: *Emerging Viruses*, Ed., Morse SS. Oxford University Press, New York, pp. 91-99, 1993.
230. Schoenfeld DA, Finkelstein DM, Richman DD. Designing Phase II Studies of Chemotherapy for HIV Infection Using CD4 as an End-Point. *AIDS* 7: 955-958, 1993.
231. Sido JJ, Gatsonis C, Price RW, Singer EJ, Collier AC, Richman DD, Hirsch MS, Schaerf, FW, Fischl MA, Kieburtz K, Simpson D, Koch MA, Feinberg J, Dafni O, the AIDS Clinical Trials Group. Zidovudine Treatment of the AIDS Dementia Complex: Results of a Placebo-Controlled Trial. *Ann Neurology* 33: 343-349, 1993.
232. Skowron G, Bozzette SA, Lim L, Pettinelli CB, Schaumburg HH, Arezzo J, Fischl MA, Powderly WG, Gocke DJ, Richman DD, Pottage JC, Jr, Antoniskis, D, McKinley GF, Hyslop NE, Jr, Ray G, Simon G, Reed N, LoFaro ML, Uttamchandani RB, Gelb LD, Sperber SJ, Murphy RL, Leedom JM, Grieco MH, Zachary J, Hirsch MS, Spector SA, Bigley J, Soo W, Merigan TC. Alternating and Intermittant Regimens of Zidovudine and Dideoxycytidine in Patients with AIDS or AIDS-Related Complex. *Ann Intern Med* 118: 321-330, 1993.

233. Spector SA, Weingeist T, Pollard RB, Dieterich DT, Samo T, Benson CA, Busch DF, Freeman WR, Montague P, Kaplan HJ, Kellerman L, Crager M, De Armond B, Buhles W, Feinberg J, AIDS Clinical Trials Group, Cytomegalovirus Cooperative Study Group. A Randomized, Controlled Study of Intravenous Ganciclovir Therapy for Cytomegalovirus Peripheral Retinitis in Patients with AIDS. *J Infect Dis* 168: 557-563, 1993.
234. Wu AW, Rubin HR, Mathews WC, Brysk LM, Bozzette SA, Hardy WD, Atkinson JH, Grant I, Spector SA, McCutchan JA, Richman DD. Functional Status and Well-Being in Placebo-Controlled Trial of Zidovudine in Early Symptomatic HIV Infection. *J AIDS* 6:452-458, 1993.
235. Chowers MY, Spina CA, Kwok TJ, Fitch NJS, Richman DD, Guatelli JC. Optimal Infectivity In Vitro of HIV-1 Requires an Intact Nef Gene. *J Virol* 68: 2906-2914, 1994.
236. Broor S, Kusari AB, Zhang B, Seth P, Richman DD, Carson DA, Wachsmann W, Lotz, M. Stimulation of HIV Replication in Mononuclear Phagocytes by Leukemia Inhibitory Factor. *JAIDS* 7: 647-654, 1994.
237. Connell EV, Hsu M-C, Richman DD. Combinative Interactions of a Human Immunodeficiency Virus (HIV) Tat Antagonist with HIV Reverse Transcriptase Inhibitors and an HIV Protease Inhibitor. *Antimicrob Agents Chemother* 38: 348-352, 1994.
238. Corbeil J, Rapaport E, Richman DD, Looney DJ. Antiproliferative Effect of Retinoid Compounds on Kaposi's Sarcoma Cells. *J Clin Invest* 93:1981-1986, 1994.
239. Corbeil J, Richman DD, Wrasidlo W, Nicolaou KC, Looney DJ. Antiproliferative Effects of Enediynes on AIDS-Derived Kaposi's Sarcoma Cells. *Cancer Res* 54: 4270-4273, 1994.
240. D'Souza MP, Geyer SJ, Hanson CV, Hendry RM, Milman G, Collaborating Investigators. Evaluation of Monoclonal Antibodies to HIV-1 Envelope by Neutralization and Binding Assays: An International Collaboration. *AIDS* 8:169-181, 1994.
241. Gallant JE, Moore RD, Richman DD, Keruly J, Chaisson RE, the Zidovudine Epidemiology Study Group. Risk Factors for Kaposi's Sarcoma in Patients with Advanced Human Immunodeficiency Virus Disease Treated with Zidovudine. *Arch Int Med* 154: 566-572, 1994.
242. Havlir D, Richman DD. Zidovudine should be given before HIV-positive individuals develop symptoms. *Reviews Med Virol* 4:75-80, 1994.
243. Hostetler KY, Richman DD, Forssen EA, Selk L, Basava R, Gardner MF, Parker S, Basava C. Phospholipid Prodrug Inhibitors of the HIV Protease: Antiviral Activity and Pharmacokinetics in Rats. *Biochemical Pharm* 48:1399-1404, 1994.
244. Hostetler KY, Richman DD, Sridhar CN, Felgner PL, Felgner J, Ricci J, Gardner MF, Selleseth DW, Ellis MN. Phosphatidylazidothymidine and Phosphatidyl-ddC: Assessment of Uptake in Mouse Lymphoid Tissues and Antiviral Activities in Human Immunodeficiency Virus-Infected Cells and in Rauscher Leukemia Virus-Infected Mice. *Antimicrob Agents Chemother* 38:2792-2797, 1994.
245. Little SJ, Riggs NL, Chowers MY, Fitch NJS, Richman DD, Spina CA, Guatelli JC. Cell Surface CD4 Downregulation and Resistance to Superinfection Induced by a Defective Proivirus of HIV-1. *Virology* 205: 578-582, 1994.

246. Maruyama T, Utzumi K, Sato Y, Richman DD. Synthesis and Anti-HIV Activity of 6-Substituted Purine 2'-Deoxy-2'-Fluororibosides. *Nucleosides and Nucleotides* 13: 527-537, 1994.
247. Meylan PRA, Kornbluth RS, Zbinden R, Richman DD. Influence of Host Cell Type and V3 Loop of the Surface Glycoprotein on Susceptibility of Human Immunodeficiency Virus Type 1 to Polyanion Compounds. *Antimicrob Agents Chemother* 38: 2910-2916, 1994.
248. Nájera I, Richman DD, Olivares I, Rojas JM, Peinado MA, Perucho M, Nájera R, López-Galíndez C. Natural Occurrence of Drug Resistance Mutations in the Reverse Transcriptase of Human Immunodeficiency Virus Type 1 Isolates. *AIDS Res Hum Retroviruses* 10:1479-1488, 1994.
249. Pauza CD, Trivedi P, McKechnie TS, Richman DD, Graziano FM. 2-LTR Circular Viral DNA as a Marker for Human Immunodeficiency Virus Type 1 Infection In Vivo. *Virology* 205: 470-478, 1994.
250. Richman DD, Bozzette SA. The Impact of Syncytium-Inducing Phenotype of Human Immunodeficiency Virus on Disease Progression. *J Infect Dis* 169: 968-974, 1994.
251. Richman DD, Havlir D, Corbeil J, Looney D, Ignacio C, Spector SA, Sullivan J, Cheeseman S, Barringer K, Pauletti D, Shih C-K, Myers M, Griffin J. Nevirapine Resistance Mutations of HIV-1 Selected During Therapy. *J Virol* 68:1660-1666, 1994.
252. Richman DD, Meng TC, Spector SA, Fischl MA, Resnick L, Lai S. Resistance to AZT and ddC During Long-Term Combination Therapy in Patients with Advanced Infection with Human Immunodeficiency Virus. *JAIDS* 7:135-138, 1994.
253. Richman DD. Drug Resistance in viruses. *Trends in Microbiol* 2: 401-407, 1994.
254. Richman DD. Resistance, Drug Failure, and Disease Progression. *AIDS Res Human Retrovir* 10: 901-905, 1994.
255. Richman DD. Viral Resistance to Antiretroviral Therapy. In: *Textbook of AIDS Medicine*, eds. S Broder, T Merigan and D Bolognesi; Williams & Wilkins, Baltimore, Ch 51, pp.795-805, 1994
256. Riggs NL, Little SJ, Richman DD, Guatelli JC. Biological Importance and Cooperativity of HIV-1 Regulatory Gene Splice Acceptors. *Virology* 202: 264-271, 1994.
257. Sato Y, Utsumi K, Maruyama T, Kimura T, Yamamoto I, Richman DD. Synthesis and Hypnotic and Anti-Human Immunodeficiency Virus-1 Activities of N3-Substituted 2'-Deoxy-2'-Fluorouridines. *Chem Pharm Bull* 42: 595-598, 1994.
258. Spina CA, Kwoh TJ, Chowers MY, Guatelli JC, Richman DD. The Importance of Nef in the Induction of Human Immunodeficiency Virus Type 1 Replication From Primary Quiescent CD4 Lymphocytes. *J Exp Med* 179:115-123, 1994.
259. van Wijk GMT, Hostetler KY, Kroneman E, Richman DD, Sridhar CN, Kumar R, van den Bosch H. Synthesis and Antiviral Activity of 3'-Azido-3'-Deoxythymidine Triphosphate Distearoylglycerol: A Novel Phospholipid Conjugate of the Anti-HIV Agent AZT. *Chem Phys Lipids* 70: 213-222, 1994.
260. Chowers MY, Pandori MW, Spina CA, Richman DD, Guatelli JC. The Growth Advantage Conferred by HIV-1 Nef Is Determined at the Level of Viral DNA Formation and Is Independent of CD4 Downregulation. *Virology* 212: 451-457, 1995.

261. Richman DD, Havlir D. Early Versus Delayed Treatment of HIV Infection: Zidovudine Should be Given Before Symptoms Develop. *Drugs* 49 (Suppl 1): 9-16, 1995.
262. Bozzette S, Forthal D, Sattler F, Kempter C, Richman DD, Tilles J, Leedom J, McCutchan A, The California Collaborative Treatment Group. The Tolerance for Zidovudine Plus Thrice Weekly or Daily Trimethoprin-Sulfamethoxazole with and without Leucovorin for Primary Prophylaxis in Advanced HIV Disease. *Amer J Med* 98:177-182, 1995.
263. Cheeseman SH, Havlir D, McLaughlin MM, Greenough TC, Sullivan JL, Hall D, Hattox SE, Spector SA, Stein DS, Myers M, Richman DD. Phase I/II Evaluation of Nevirapine Alone and in Combination with Zidovudine for Infection with Human Immunodeficiency Virus. *JAIDS* 8:141-151, 1995.
264. Corbeil J, Richman DD. Productive Infection and Subsequent Interaction of CD4-gp120 at the Cellular Membrane Is Required for HIV-Induced Apoptosis of CD4+ T Cells. *J Gen Virol* 76: 681-690, 1995.
265. Corbeil J, Evans L, McQueen PW, Vasak E, Edward PD, Richman DD, Penny R, Cooper DA. Productive In Vitro Infection of Human Umbilical Vein Endothelial Cells and Three Colon Carcinoma Cell Lines with HIV-1. *Immunol Cell Biol* 73:140-145, 1995.
266. Corbeil J, Richman DD. The Role of Surface CD4 in HIV-Induced Apoptosis. In: *Cell Activation and Apoptosis in HIV Infection*. Eds: Andrieu J-M, Lu W. Plenum Press London, Ch 8, pp 91-99, 1995.
267. D'Aquila RT, Johnson VA, Welles SL, Japour AJ, Kuritzkes DR, DeGruttola V, Reichelderfer PS, Coombs RW, Crumpacker CS, Kahn JO, Richman DD. Zidovudine resistance and HIV-1 disease progression during antiretroviral therapy. *Ann Intern Med* 122: 401-408, 1995.
268. Dolin R, Amato DA, Fischl MA, Pettinelli C, Beltangady M, Liou S-H, Brown MJ, Cross AP, Hirsch MS, Hardy WD, Mildvan D, Blair DC, Powderly WG, Para MF, Fife KH, Steigbigel RT, Smaldone L, the AIDS Clinical Trials Group. Zidovudine Compared with Didanosine in Patients with Advanced HIV Type 1 Infection and Little or No Previous Experience with Zidovudine. *Arch Intern Med* 155: 961-974, 1995.
269. D'Souza MP, Milman G, Bradac JA, McPhee D, Hanson CV, Hendry RM, Collaborating Investigators. Neutralization of primary HIV-1 isolates by anti-envelope monoclonal antibodies. *AIDS* 9: 867-874, 1995.
270. Gallant JE, Moore RD, Keruly J, Richman DD, Chaisson RE, the Zidovudine Epidemiology Study Group. Lack of Association Between Acyclovir Use and Survival in Patients with Advanced HIV Disease Treated with Zidovudine. *J Infect Dis* 172: 346-352, 1995.
271. Haubrich RH, Flexner C, Lederman MM, Hirsch M, Pettinelli CP, Ginsberg R, Lietman P, Hamzeh FM, Spector SA, Richman DD, the AIDS Clinical Trials Group 213 Team. A Randomized Trial of the Activity and Safety of Ro 24-7429 (Tat Antagonist) Versus Nucleoside for Human Immunodeficiency Virus Infection. *J Infect Dis* 172:1246-1252, 1995.
272. Havlir D, Cheeseman SH, McLaughlin M, Murphy R, Erice A, Spector SA, Greenough TC, Sullivan JL, Hall D, Myers M, Lamson M, Richman DD. High Dose Nevirapine: Safety, Pharmacokinetics, and Antiviral Effect in Patients with Human Immunodeficiency Virus Infection. *J Infect Dis* 171: 537-545, 1995.

273. Havlir D, McLaughlin MM, Richman DD. A Pilot Study to Evaluate the Development of Resistance to Nevirapine in Asymptomatic Human Immunodeficiency Virus-Infected Patients with CD4 Cell Counts of >500/mm³. *J Infect Dis* 172:1379-1383, 1995.
274. Havlir D, Richman DD. Antiretroviral Therapy. *Curr Opinion Dis* 8: 66-73, 1995.
275. Japour AJ, Welles S, D'Aquila RT, Johnson VA, Richman DD, Coombs R, Reichelderfer P, Kahn J, Crumpacker CS, Kuritzkes DR. Prevalence and Clinical Significance of Zidovudine Resistance Mutations in Human Immunodeficiency Virus Isolated From Patients Following Long-Term Zidovudine Treatment. *J Infect Dis* 171:1172-1179, 1995.
276. Jault FM, Jault J-M, Ruchti F, Fortunato EA, Clark C, Corbeil J, Richman DD, Spector DH. Cytomegalovirus Infection Induces High Levels of Cyclins, Phosphorylated Rb, and p53, Leading to Cell Cycle Arrest. *J Virol* 69: 6697-6704, 1995.
277. Kimberlin DW, Couch RB, Galasso GJ, Richman DD, Whitley RJ. Research Initiatives in Studies of Antiviral Resistance and Consensus Points and Recommendations. *Antiviral Res* 26: 439-452, 1995.
278. Kimberlin DW, Crumpacker CS, Straus SE, Biron KK, Drew WL, Hayden FG, McKinlay M, Richman DD, Whitley RJ. Antiviral Resistance in Clinical Practice. *Antiviral Res* 26: 423-438, 1995.
279. Kornbluth RS, Matsuzaki H, Meylan PRA, Richman DD. Interferon Interactions with HIV-1 in Macrophages. *Res Immunol* 145: 664-668, 1995.
280. Luznik L, Kraus G, Guatelli J, Richman DD, Wong-Staal F. Tat-Independent Replication of Human Immunodeficiency Viruses. *J Clin Invest* 95:328-332, 1995.
281. Meng T-C, Fischl MA, Cheeseman SH, Spector SA, Resnick L, Boota A, Petrakis T, Wright B, Richman DD. Combination Therapy with Recombinant Human Soluble CD4-Immunoglobulin G and Zidovudine in Patients with HIV Infection: A Phase I Study. *JAIDS* 8:152-160, 1995.
282. Pillay D, Bryant M, Getman D, Richman DD. HIV-1 Protease Inhibitors: Their Development, Mechanism of Action and Clinical Potential. *Rev Med Virol* 5:23-33, 1995.
283. Proudfoot JR, Hargrave KD, Kapadia SR, Patel UR, Grozinger KG, McNeil DW, Cullen E, Cardozo M, Tong L, Kelly TA, Rose J, David E, Mauldin SC, Fuchs VU, Vitous J, Hoermann M, Klunder JM, Raghavan P, Skiles JW, Mui P, Richman DD, Sullivan JL, Shih C-K, Grob PM, Adams J. Novel Non-Nucleoside Inhibitors of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. 4. 2-Substituted Dipyridodiazepinones As Patent Inhibitors of Both Wild-Type and Cysteine-181 HIV-1 Reverse Transcriptase Enzymes. *J Med Chem* 38:4830-4838, 1995.
284. Richman DD. Clinical Significance of Drug Resistance in Human Immunodeficiency Virus. *Clin Infect Dis* 21 (Suppl 2): S166-169, 1995.
285. Richman DD. Drug Resistance in Relation to Pathogenesis. *AIDS* 1995, (suppl A): S49-S53, 1995.
286. Richman DD. Protease Uninhibited. *Nature* 374: 494-494, 1995.
287. Richman DD. Resistance to Anti-HIV Agents for Anti-AIDS Drug Development. In: *Anti AIDS Drug Development: Challenges, Strategies and Prospects*, eds. P Mohan and M Baba; Harwood Academic Publishers GMBH, Chur, Switzerland, Ch 8, pp. 163-183, 1995.

288. Spina CA, Guatelli JC, Richman DD. Establishment of a stable, inducible form of human immunodeficiency virus type 1 DNA in quiescent CD4 lymphocytes in vitro. *J Virol* 69: 2977-2988, 1995.
289. Tierney M, Pottage J, Kessler H, Fischl M, Richman D, Merigan T, Powderly W, Smith S, Karim A, Sherman J, Hirsch M. The Tolerability and Pharmacokinetics of N-Butyl-Deoxynojirimycin in Patients with Advanced HIV Disease (ACTG 100). *J AIDS* 10: 549-553, 1995.
290. Volberding PA, Lagakos SW, Grimes JM, Stein DS, Rooney J, Meng T-C, Fischl MA, Collier AC, Phair JP, Hirsch MS, Hardy WD, Balfou HH, Jr, Reichman RC for the AIDS Clinical Trials Group. A Comparison of Immediate with Deferred Zidovudine Therapy for Asymptomatic HIV-Infected Adults with CD4 Cell Counts of 500 or More per Cubic Millimeter. *N Engl J Med* 333: 401-407, 1995.
291. Xie H, Voronkov M, Liotta DC, Korba BA, Schinazi RF, Richman DD, Hostetler KY. Phosphatidyl-2', 3'-Dideoxy-3'-Thiacytidine: Synthesis and Antiviral Activity in Hepatitis B- and HIV-1-Infected Cells. *Antiviral Res* 28:113-120, 1995.
292. Richman DD. Antiviral Chemotherapy: New Drugs and New Perspectives. Retroviruses of Human AIDS and Related Animal Diseases. *Dixième Colloque des Cent Gardes*, pp 337-342, 1995.
293. A Color Atlas of Herpesviruses Infections. Edited by Whitley RJ, Hayden FG, Richman DD. Churchill Communications, Japan, (Vol 1) 1996 (Japanese edition).
294. A Color Atlas of Herpesviruses Infections. Edited by Whitley RJ, Hayden FG, Richman DD. Churchill Communications, Japan, (Vol 3) 1996 (Japanese edition).
295. A Color Atlas of Herpesviruses Infections. Edited by Whitley RJ, Hayden FG, Richman DD. Churchill Communications, Japan, (Vol 4) 1996 (Japanese edition).
296. A Color Atlas of Herpesviruses Infections. Edited by Whitley RJ, Hayden FG, Richman DD. Churchill Communications, Japan, (Vol 2) 1996 (Japanese edition).
297. Antiviral Drug Resistance, edited by Richman DD. John Wiley & Sons, Chichester, 314 pp, 1996.
298. Richman DD. Antiviral Drug Resistance: Issues and Challenges. In Antiviral Drug Resistance, edited by Richman DD. John Wiley & Sons, Chinchester, pp 1-10, 1996.
299. Bozzette SA, Kanouse DE, Duan N, Berry S, Richman DD. The Impact of Zidovudine Compared with Didanosine on Health Status and Functioning in Persons with Advanced HIV Infection and a Varying Duration of Prior Zidovudine Therapy. *Antiviral Therapy* 1: 21-32, 1996.
300. Carpenter CCJ, Fischl MA, Hammer SM, Hirsch MS, Jacobsen DM, Katzenstein DA, Montaner JSG, Richman DD, Saag MS, Schooley RT, Thompson MA, Vella S, Yeni PG, Volberding PA. Antiretroviral Therapy for HIV Infection in 1996: Recommendations of an International Panel. *JAMA* 276:146-154, 1996.
301. Coombs RW, Welles SL, Hooper C, Reichelderfer PS, D'Aquila RT, Japour AJ, Johnson VA, Kuritzkes DR, Richman DD, Kwok S, Todd J, Jackson JB, DeGruttola V, Crumpacker CS, Kahn J. Association of Plasma Human Immunodeficiency Virus Type 1 RNA Level with Risk of Clinical Progression in Patients with Advanced Infection. *J Infect Dis* 174:704-712, 1996.

302. Corbeil J, Tremblay M, Richman DD. HIV-Induced Apoptosis Requires the CD4 Receptor Cytoplasmic Tail and Is Accelerated by Interaction of CD4 with p56lck. *J Exp Med* 183: 39-48, 1996.
303. de Jong MD, Boucher CAB, Galasso GJ, Hirsch MS, Kern ER, Lange JMA, Richman DD. Consensus Symposium on Combined Antiviral Therapy. *Antiviral Res* 29: 5-29, 1996.
304. Havlir D, Richman DD. Nonnucleoside Reverse Transcriptase Inhibitors: Clinical Aspects. In: *Antiviral Drug Resistance*, edited by Richman DD. John Wiley and Sons, Chichester, pp.241-260, 1996.
305. Havlir DV, Eastman S, Gamst A, Richman DD. Nevirapine-Resistant Human Immunodeficiency Virus: Kinetics of Replication and Estimated Prevalence in Untreated Patients. *J Virology* 70: 7894-7899, 1996.
306. Havlir DV, Richman DD. The Role of Viral Dynamics in the Pathogenesis of HIV Disease and Implications for Antiviral Therapy. *Seminars in Immunopathology* 18:1-17, 1996.
307. Havlir DV, Richman DD. Viral Dynamics of HIV: Implications for Drug Development and Therapeutic Strategies. *Ann Intern Med* 124: 984-994, 1996.
308. Hostetler KY, Kini GD, Beadle JR, Aldern KA, Gardner MF, Border R, Kumar R, Barshak L, Sridhar CN, Wheeler CJ, Richman DD. Lipid Prodrugs of Phosphonoacids: Greatly Enhanced Antiviral Activity of 1-O-Octadecyl-Sn-Glycero-3-Phosphonoformate in HIV-1, HSV-1 and HCMV-Infected Cells, *in Vitro*. *Antiviral Res* 31: 59-67, 1996.
309. Kozal MJ, Shah N, Shen N, Yang R, Fucini R, Merigan TC, Richman DD, Morris D, Hubbell E, Chee M, Gingeras TR. Extensive Polymorphisms Observed in HIV-1 Clade B Protease Gene Using High-Density Oligonucleotide Arrays. *Nature Medicine* 2: 753-759, 1996.
310. Lange JMA, Richman DD. Antiretroviral Therapy and Clinical Trials: What Now? *Antiviral Ther* 1: 69-70, 1996 (Editorial).
311. Moutouh L, Corbeil J, Richman DD. Recombination Leads to the Rapid Emergence of HIV-1 Dually Resistant Mutants Under Selective Drug Pressure. *Proc Natl Acad Sci USA* 93: 6106-6111, 1996.
312. Pandori MW, Fitch NJS, Craig HM, Richman DD, Spina CA, Guatelli JC. Producer-Cell Modification of Human Immunodeficiency Virus Type I: Nef Is a Virion Protein. *J Virol* 70: 4283-4290, 1996.
313. Richman DD, Lange JMA. Playing with Evolution Requires Planning [Editorial]. *Antiviral Therapy* 1: 208-209, 1996.
314. Richman DD. Antiretroviral Drug Resistance: Mechanisms, Pathogenesis, Clinical Significance. In: *Antiviral Chemotherapy* 4, edited by Mills J, Volberding PA, Corey L. Plenum Press, New York, pp 383-395, 1996.
315. Richman DD. Can HIV Infection be Cured? [Editorial] *Antiviral Therapy* 1:126-127, 1996.
316. Richman DD. HIV Therapeutics. *Science* 272:1886-1888, 1996.
317. Richman DD. New Strategies Combat HIV Drug Resistance. *Hospital Practice* 31:47-58, 1996.
318. Richman DD. The Implications of Drug Resistance for Strategies of Combination Antiviral Chemotherapy. *Antiviral Res* 29: 31-33, 1996.

319. Richman DD. The Implications of Drug Resistance for Strategies of Combination Antiviral Chemotherapy. Hellenic Archives of AIDS 4: 76-78, 1996.
320. Sanchez-Palomino S, Olivares I, Yuste E, Richman DD, Lopez-Galindez C. Random Important Alterations in HIV-1 Viral Quasispecies After Antiviral Treatment. Antiviral Therapy 1:225-236, 1996.
321. Saag MS, Holodniy M, Kuritzkes DR, O'Brien WA, Coombs R, Poscher ME, Jacobsen DM, Shaw GM, Richman DD, Volberding PA. HIV Viral Load Markers in Clinical Practice. Nature Medicine 2: 625-629, 1996.
322. Sato Y, Ueyama K, Maruyama T, Richman DD. Synthesis of the Fluoromethyl Derivatives of Carbocyclic Oxetanocin A. Nucleosides & Nucleotides 15:109-119, 1996.
323. Welles SL, Jackson JB, Yen-Lieberman B, Demeter L, Japour AJ, Smeaton LM, Johnson VA, Kuritzkes DR, D'Aquila RT, Reichelderfer PA, Richman DD, Reichman R, Fischl M, Dolin R, Coombs RW, Kahn JO, McLaren C, Todd J, Kwok S, Crumpacker CS. Prognostic Value of Plasma Human Immunodeficiency Virus Type 1 (HIV-1) RNA Levels in Patients with Advanced HIV-1 Disease and with Little or No Prior Zidovudine Therapy. J Infect Dis 174: 696-703, 1996.
324. Zhang H, Dornadula G, Wu Y, Havlir D, Richman DD, Pomerantz RJ. Kinetic Analysis of Intravirion Reverse Transcriptase in the Blood Plasma of Human Immunodeficiency Virus Type 1-Infected Individuals: Direct Assessment of Resistance to Reverse Transcriptase Inhibitors In Vivo. J Virol 70:628-634, 1996.
325. de Jong MD, Boucher CAB, Cooper DA, Galasso GJ, Gazzard B, Lange JMA, Montaner JS, Richman DD, Thomas HC. Summary of the II International Consensus Symposium on Combined Antiviral Therapy and Implications for Future therapies. Antiviral Res 35: 65-82, 1997.
326. Finzi D, Hermankova M, Pierson T, Carruth LM, Buck C, Chaisson RE, Quinn TC, Chadwick K, Margolick J, Brookmeyer R, Gallant J, Markowitz M, Ho DD, Richman DD, Siliciano RF. Identification of a Reservoir for HIV-1 in Patients on Highly Active Antiretroviral Therapy. Science 278(5341):1295-300, 1997. Epub 1997/11/21. PubMed PMID: 9360927.
327. Fischl MA, Richman DD, Flexner C, Para MF, Haubrich R, Karim A, Yeramian P, Holden-Wiltse J, Meehan PM. Phase I/II Study of the Toxicity, Pharmacokinetics, and Activity of the HIV Protease Inhibitor SC-52151. Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology 15(1):28-34, 1997. Epub 1997/05/01. PubMed PMID: 9215651.
328. Fischl MA, Richman DD, Saag M, Meng TC, Squires KE, Holden-Wiltse J, Meehan PM. Safety and Antiviral Activity of Combination Therapy with Zidovudine, Zalcitabine, and Two Doses of Interferon-Alpha2a in Patients with HIV. AIDS Clinical Trials Group Study 197. Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology 16(4):247-53, 1997. Epub 1997/12/24. PubMed PMID: 9402071.
329. Gervais A, West D, Leoni LM, Richman DD, Wong-Staal F, Corbeil J. A New Reporter Cell Line to Monitor HIV Infection and Drug Susceptibility in Vitro. Proceedings of the National Academy of Sciences of the United States of America 94(9):4653-8, 1997. Epub. doi: 10.1073/pnas.94.9.4653. PubMed PMID: 9114046.
330. Gulick RM, Mellors JW, Havlir D, Eron JJ, Gonzalez C, McMahon D, Richman DD, Valentine FT, Jonas L, Meibohm A, Emini EA, Chodakewitz JA. Treatment with Indinavir, Zidovudine, and Lamivudine in

Adults with Human Immunodeficiency Virus Infection and Prior Antiretroviral Therapy. New England Journal of Medicine 337(11):734-9, 1997. Epub 1997/09/11. doi: 10.1056/nejm199709113371102. PubMed PMID: 9287228.

331. Kini GD, Beadle JR, Xie H, Aldern KA, Richman DD, Hostetler KY. Alkoxy Propane Prodrugs of Foscarnet: Effect of Alkyl Chain Length on in Vitro Antiviral Activity in Cells Infected with HIV-1, Hsv-1 and Hcmv. Antiviral Research 36(1):43-53, 1997. Epub 1997/10/23. PubMed PMID: 9330760.
332. Lange JMA, Richman DD. The First Blow Is Half the Battle [Editorial]. Antiviral Therapy 2:132-133, 1997.
333. Lange JMA, Richman DD. Reflecting on a Decade of Progress [Editorial]. Antiviral Therapy 2 (Suppl 4): 4-5, 1997.
334. Leigh Brown AJ, Richman DD. HIV-1: Gambling on the Evolution of Drug Resistance? Nature Medicine 3(3):268-71, 1997. Epub 1997/03/01. PubMed PMID: 9055846.
335. Marschner IC, Mayers DL, Erice A, Smeaton L, Johnson VA, Richman DD, Reichelderfer P, Japour AJ. Standardized Peripheral Blood Mononuclear Cell Culture Assay for Zidovudine Susceptibility Testing of Clinical Human Immunodeficiency Virus Type 1 Isolates: Effect of Reducing the Numbers of Replicates and Concentrations. Journal of Clinical Microbiology 35(3):756-8, 1997. Epub 1997/03/01. PubMed PMID: 9041428; PMCID: PMC229666.
336. Richman DD. Drug Resistance and Its Implications in the Management of HIV Infection. Antiviral Therapy 2 (Suppl 4): 41-58, 1997.
337. Clinical Virology. Edited by Richman DD, Whitley RJ, Hayden FG. Churchill Livingstone, New York; 1355 pages, 1997.
338. Richman DD, Whitley RJ, Hayden FG. Introduction. In Clinical Virology, Edited by Richman DD, Whitley RJ, Hayden FG. Churchill Livingstone, New York; pages 1-4, 1997.
339. Connor R, Ho D, Kuritzkes D, Richman DD. In Clinical Virology. Edited by Richman DD, Whitley RJ, Hayden FG. Churchill Livingstone, New York; pages 707-754, 1997.
340. Richman DD. The Impact of Human Immunodeficiency Virus Drug Resistance on Treatment Efficacy. Antiviral Therapy 2(Suppl. 2):11-15, 1997.
341. Roman M, Martin-Orozco E, Goodman JS, Nguyen MD, Sato Y, Ronaghy A, Kornbluth RS, Richman DD, Carson DA, Raz E. Immunostimulatory DNA Sequences Function as T Helper-1-Promoting Adjuvants. Nature Medicine 3(8):849-54, 1997. Epub 1997/08/01. PubMed PMID: 9256274.
342. Rosowsky A, Fu H, Pai N, Mellors J, Richman DD, Hostetler KY. Synthesis and in Vitro Activity of Long-Chain 5'-O-[(Alkoxy carbonyl)Phosphinyl]-3'-Azido-3'-Deoxythymidines against Wild-Type and AZT- and Foscarnet-Resistant Strains of HIV-1. Journal of Medicinal Chemistry 40(16):2482-90, 1997. Epub 1997/08/01. doi: 10.1021/jm970172f. PubMed PMID: 9258355.
343. Smidt ML, Potts KE, Tucker SP, Blystone L, Stiebel TR, Jr., Stallings WC, McDonald JJ, Pillay D, Richman DD, Bryant ML. A Mutation in Human Immunodeficiency Virus Type 1 Protease at Position 88, Located Outside the Active Site, Confers Resistance to the Hydroxyethylurea Inhibitor SC-

- 55389A. *Antimicrobial Agents and Chemotherapy* 41(3):515-22, 1997. Epub 1997/03/01. PubMed PMID: 9055985; PMCID: PMC163743.
344. Spina CA, Prince HE, Richman DD. Preferential Replication of HIV-1 in the CD45RO Memory Cell Subset of Primary CD4 Lymphocytes in Vitro. *Journal of Clinical Investigation* 99(7):1774-85, 1997. Epub 1997/04/01. doi: 10.1172/jci119342. PubMed PMID: 9120023; PMCID: PMC507999.
345. Wong JK, Gunthard HF, Havlir DV, Zhang ZQ, Haase AT, Ignacio CC, Kwok S, Emini E, Richman DD. Reduction of HIV-1 in Blood and Lymph Nodes Following Potent Antiretroviral Therapy and the Virologic Correlates of Treatment Failure. *Proceedings of the National Academy of Sciences of the United States of America* 94(23):12574-9, 1997. Epub 1997/11/14. doi: 10.1073/pnas.94.23.12574. PubMed PMID: 9356491; PMCID: PMC25043.
346. Wong JK, Hezareh M, Gunthard HF, Havlir DV, Ignacio CC, Spina CA, Richman DD. Recovery of Replication-Competent HIV Despite Prolonged Suppression of Plasma Viremia. *Science* 278(5341):1291-5, 1997. Epub 1997/11/21. PubMed PMID: 9360926.
347. Wong JK, Ignacio CC, Torriani F, Havlir D, Fitch NJ, Richman DD. In Vivo Compartmentalization of Human Immunodeficiency Virus: Evidence from the Examination of Pol Sequences from Autopsy Tissues. *Journal of Virology* 71(3):2059-71, 1997. Epub 1997/03/01. PubMed PMID: 9032338; PMCID: PMC191294.
348. Carpenter CC, Fischl MA, Hammer SM, Hirsch MS, Jacobsen DM, Katzenstein DA, Montaner JS, Richman DD, Saag MS, Schooley RT, Thompson MA, Vella S, Yeni PG, Volberding PA. Antiretroviral Therapy for HIV Infection in 1997. Updated Recommendations of the International AIDS Society-USA Panel. *JAMA* 277(24):1962-9, 1997. Epub 1997/06/25. PubMed PMID: 9200638.
349. Carpenter CC, Fischl MA, Hammer SM, Hirsch MS, Jacobsen DM, Katzenstein DA, Montaner JS, Richman DD, Saag MS, Schooley RT, Thompson MA, Vella S, Yeni PG, Volberding PA. Antiretroviral Therapy for HIV Infection in 1998: Updated Recommendations of the International AIDS Society-USA Panel. *JAMA* 280(1):78-86, 1998. Epub 1998/07/11. PubMed PMID: 9660368.
350. Beadle JR, Kini GD, Aldern KA, Gardner MF, Wright KN, Richman DD, Hostetler KY. Alkylthioglycerol Prodrugs of Foscarnet: Synthesis, Oral Bioavailability and Structure-Activity Studies in Human Cytomegalovirus-, Herpes Simplex Virus Type 1- and Human Immunodeficiency Virus Type 1-Infected Cells. *Antiviral Chemistry & Chemotherapy* 9(1):33-40, 1998. Epub 1999/01/06. doi: 10.1177/095632029800900104. PubMed PMID: 987537
351. Bessudo A, Rassenti L, Havlir D, Richman D, Feigal E, Kipps TJ. Aberrant and Unstable Expression of Immunoglobulin Genes in Persons Infected with Human Immunodeficiency Virus. *Blood* 92(4):1317-23, 1998. Epub 1998/08/08. PubMed PMID: 9694720.
352. Bozzette SA, Berry SH, Duan N, Frankel MR, Leibowitz AA, Lefkowitz D, Emmons CA, Senterfitt JW, Berk ML, Morton SC, Shapiro MF. The Care of HIV-Infected Adults in the United States. HIV Cost and Services Utilization Study Consortium. *New England Journal of Medicine* 339(26):1897-904, 1998. Epub 1998/12/24. doi: 10.1056/nejm199812243392606. PubMed PMID: 9862946.
353. de Jong MD, Boucher CA, Danner SA, Gazzard B, Griffiths PD, Katlama C, Lange JM, Richman DD, Vella S. Summary of the International Consensus Symposium on Management of HIV, CMV and Hepatitis Virus Infections. *Antiviral Research* 37(1):1-16, 1998. Epub 1998/03/13. PubMed PMID: 9497068.

354. Demeter LM, D'Aquila R, Weislow O, Lorenzo E, Erice A, Fitzgibbon J, Shafer R, Richman D, Howard TM, Zhao Y, Fisher E, Huang D, Mayers D, Sylvester S, Arens M, Sannerud K, Rasheed S, Johnson V, Kuritzkes D, Reichelderfer P, Japour A. Interlaboratory Concordance of DNA Sequence Analysis to Detect Reverse Transcriptase Mutations in HIV-1 Proviral DNA. *Actg Sequencing Working Group. AIDS Clinical Trials Group. Journal of Virological Methods* 75(1):93-104, 1998. Epub 1998/11/20. PubMed PMID: 9820578.
355. Gulick RM, Mellors JW, Havlir D, Eron JJ, Gonzalez C, McMahon D, Jonas L, Meibohm A, Holder D, Schleif WA, Condra JH, Emini EA, Isaacs R, Chodakewitz JA, Richman DD. Simultaneous Vs Sequential Initiation of Therapy with Indinavir, Zidovudine, and Lamivudine for HIV-1 Infection: 100-Week Follow-Up. *JAMA* 280(1):35-41, 1998. Epub 1998/07/11. PubMed PMID: 9660361.
356. Gunthard HF, Wong JK, Ignacio CC, Guatelli JC, Riggs NL, Havlir DV, Richman DD. Human Immunodeficiency Virus Replication and Genotypic Resistance in Blood and Lymph Nodes after a Year of Potent Antiretroviral Therapy. *Journal of Virology* 72(3):2422-8, 1998. Epub 1998/03/14. PubMed PMID: 9499103; PMCID: PMC109542.
357. Gunthard HF, Wong JK, Ignacio CC, Havlir DV, Richman DD. Comparative Performance of High-Density Oligonucleotide Sequencing and Dideoxynucleotide Sequencing of HIV Type 1 Pol from Clinical Samples. *AIDS Research and Human Retroviruses* 14(10):869-76, 1998. Epub 1998/07/22. PubMed PMID: 9671215.
358. Haubrich R, Lalezari J, Follansbee SE, Gill M, Hirsch M, Richman D, Mildvan D, Burger HU, Beattie D, Donatacci L, Salgo MP. Improved Survival and Reduced Clinical Progression in HIV-Infected Patients with Advanced Disease Treated with Saquinavir Plus Zalcitabine. *Anitviral Therapy*. 33-42 p., 1998.
359. Havlir DV, Haubrich R, Hwang J, Dunne MW, Currier J, Forthal D, Torriani F, Richman DD, McCutchan JA. Human Immunodeficiency Virus Replication in AIDS Patients with Mycobacterium Avium Complex Bacteremia: A Case Control Study. California Collaborative Treatment Group. *Journal of Infectious Diseases* 177(3):595-9, 1998. Epub 1998/03/14. doi: 10.1086/514220. PubMed PMID: 9498437.
360. Havlir DV, Marschner IC, Hirsch MS, Collier AC, Tebas P, Bassett RL, Ioannidis JP, Holohan MK, Leavitt R, Boone G, Richman DD. Maintenance Antiretroviral Therapies in HIV-Infected Subjects with Undetectable Plasma HIV RNA after Triple-Drug Therapy. AIDS Clinical Trials Group Study 343 Team. *New England Journal of Medicine* 339(18):1261-8, 1998. Epub 1998/10/29. doi: 10.1056/nejm199810293391801. PubMed PMID: 9791141.
361. Hirsch MS, Conway B, D'Aquila RT, Johnson VA, Brun-Vezinet F, Clotet B, Demeter LM, Hammer SM, Jacobsen DM, Kuritzkes DR, Loveday C, Mellors JW, Vella S, Richman DD. Antiretroviral Drug Resistance Testing in Adults with HIV Infection: Implications for Clinical Management. International AIDS Society--USA Panel. *JAMA* 279(24):1984-91, 1998. Epub 1998/06/27. PubMed PMID: 9643863.
362. HIV Resistance and Implications for Therapy. Edited by Larder B, Richman D, Vella S. MediCom Inc., Atlanta, 1998 [Monograph].
363. Kornbluth RS, Kee K, Richman DD. Cd40 Ligand (Cd154) Stimulation of Macrophages to Produce HIV-1-Suppressive Beta-Chemokines. *Proceedings of the National Academy of Sciences of the United States of America* 95(9):5205-10, 1998. Epub 1998/06/06. doi: 10.1073/pnas.95.9.5205. PubMed PMID: 9560254; PMCID: PMC20239.

364. Lange JMA, Richman DD. The Limitations of Simplicity [Editorial]. *Antiviral Therapy*, 3: 4-6 1998.
365. Marschner IC, Collier AC, Coombs RW, D'Aquila RT, DeGruttola V, Fischl MA, Hammer SM, Hughes MD, Johnson VA, Katzenstein DA, Richman DD, Smeaton LM, Spector SA, Saag MS. Use of Changes in Plasma Levels of Human Immunodeficiency Virus Type 1 RNA to Assess the Clinical Benefit of Antiretroviral Therapy. *Journal of Infectious Diseases* 177(1):40-7, 1998. Epub 1998/01/07. doi: 10.1086/513823. PubMed PMID: 9419168.
366. Moutouh L, Estaquier J, Richman DD, Corbeil J. Molecular and Cellular Analysis of Human Immunodeficiency Virus-Induced Apoptosis in Lymphoblastoid T-Cell-Line-Expressing Wild-Type and Mutated CD4 Receptors. *Journal of Virology* 72(10):8061-72, 1998. Epub 1998/09/12. PubMed PMID: 9733846; PMCID: PMC110143.
367. Richman DD. Combination Antiretroviral Therapy: Each Answer Raises Many Questions. *AIDS* 12:6-7, 1998.
368. Richman DD. How Drug Resistance Arises. *Scientific American* 279(1):88, 1998. Epub 1998/07/02. PubMed PMID: 9648301.
369. Richman DD. Nailing Down Another HIV Target. *Nature Medicine* 4(11):1232-3, 1998. Epub 1998/11/11. doi: 10.1038/3209. PubMed PMID: 9809537.
370. Riggs NL, Little SJ, Richman DD, Guatelli JC. Cell-Associated Viral RNA Expression During Acute Infection with HIV Type 1. *AIDS Research and Human Retroviruses* 14(13):1141-9, 1998. Epub 1998/09/16. doi: 10.1089/aid.1998.14.1141. PubMed PMID: 9737585.
371. Cohen Stuart JW, Boucher CA, Cooper DA, Galasso GJ, Richman DD, Thomas HC, Whitley RJ. Summary of the III International Consensus Symposium on Combined Antiviral Therapy. *Antiviral Research* 38(2):75-93, 1998. Epub 1998/08/26. PubMed PMID: 9707371.
372. The NIH Panel. Report of the NIH Panel to Define Principles of Therapy of HIV Infection. *Annals of Internal Medicine* 128(12_Part_2):1057-78, 1998. Epub. doi: 10.7326/0003-4819-128-12_Part_2-199806151-00002.
373. Richman DD. Resistance to Drugs for HIV Infection. What you can do to Keep your HIV Treatment Working. International Association of Physician's in AIDS Care (monograph for lay readers), 31 pages, 1998.
374. Brodine SK, Shaffer RA, Starkey MJ, Tasker SA, Gilcrest JL, Louder MK, Barile A, VanCott TC, Vahey MT, McCutchan FE, Birx DL, Richman DD, Mascola JR. Drug Resistance Patterns, Genetic Subtypes, Clinical Features, and Risk Factors in Military Personnel with HIV-1 Seroconversion. *Annals of Internal Medicine* 131(7):502-6, 1999. Epub 1999/10/03. PubMed PMID: 10507958.
375. Craig HM, Pandori MW, Riggs NL, Richman DD, Guatelli JC. Analysis of the Sh3-Binding Region of HIV-1 Nef: Partial Functional Defects Introduced by Mutations in the Polyproline Helix and the Hydrophobic Pocket. *Virology* 262(1):55-63, 1999. Epub 1999/09/18. doi: 10.1006/viro.1999.9897. PubMed PMID: 10489340.
376. Günthard HF, Frost SD, Leigh-Brown AJ, Ignacio CC, Kee K, Perelson AS, Spina CA, Havlir DV, Hezareh M, Looney DJ, Richman DD, Wong JK. Evolution of Envelope Sequences of Human

- Immunodeficiency Virus Type 1 in Cellular Reservoirs in the Setting of Potent Antiviral Therapy. Journal of Virology 73(11):9404-12, 1999. Epub. PubMed PMID: 10516049.
377. Guia Practica para el Manejo Clinico de las Resistencias al VIH. Edited by Clotet B, Ruiz L, Martinez-Picado J, Gatell JM, Richman DD, Barcelona, Merck Sharp & Dohme de Espana, S.A.; pp. 302 pp, 1999.
378. Gunthard HF, Frost SD, Leigh-Brown AJ, Ignacio CC, Kee K, Perelson AS, Spina CA, Havlir DV, Hezareh M, Looney DJ, Richman DD, Wong JK. Evolution of Envelope Sequences of Human Immunodeficiency Virus Type 1 in Cellular Reservoirs in the Setting of Potent Antiviral Therapy. Journal of Virology 73(11):9404-12, 1999. Epub 1999/10/09. PubMed PMID: 10516049; PMCID: PMC112975.
379. Gunthard HF, Leigh-Brown AJ, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD, Wong JK. Higher Selection Pressure from Antiretroviral Drugs in Vivo Results in Increased Evolutionary Distance in HIV-1 Pol. Virology 259(1):154-65, 1999. Epub 1999/06/12. doi: 10.1006/viro.1999.9774. PubMed PMID: 10364500.
380. Haubrich R, Richman D. Nevirapine, Didanosine, and Zidovudine for Patients with HIV: The Incas Trial. JAMA 281(2):130-1, 1999. Epub. doi: 10-1001/pubs.JAMA-ISSN-0098-7484-281-2-jac80019.
381. Haubrich R, Thompson M, Schooley R, Lang W, Stein A, Sereni D, van der Ende ME, Antunes F, Richman D, Pagano G, Kahl L, Fetter A, Brown DJ, Clumeck N. A Phase II Safety and Efficacy Study of Amprenavir in Combination with Zidovudine and Lamivudine in HIV-Infected Patients with Limited Antiretroviral Experience. Amprenavir Proab2002 Study Team. AIDS 13(17):2411-20, 1999. Epub 1999/12/22. PubMed PMID: 10597783.
382. HIV Trialists Collaborative Group. Zidovudine, Didanosine, and Zalcitabine in the Treatment of HIV Infection: Meta-Analyses of the Randomised Evidence. HIV Trialists' Collaborative Group. Lancet 353(9169):2014-25, 1999. Epub 1999/06/22. PubMed PMID: 10376616.
383. Lange JM, Richman DD. Retroviruses Et Opportunistic Infections '99. Antiviral Therapy 4(1):5-6, 1999. Epub 2000/02/22. PubMed PMID: 10682122.
384. Brown AJ, Gunthard HF, Wong JK, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD. Sequence Clusters in Human Immunodeficiency Virus Type 1 Reverse Transcriptase Are Associated with Subsequent Virological Response to Antiretroviral Therapy. Journal of Infectious Diseases 180(4):1043-9, 1999. Epub 1999/09/09. doi: 10.1086/315017. PubMed PMID: 10479129.
385. Little SJ, Daar ES, D'Aquila RT, Keiser PH, Connick E, Whitcomb JM, Hellmann NS, Petropoulos CJ, Sutton L, Pitt JA, Rosenberg ES, Koup RA, Walker BD, Richman DD. Reduced Antiretroviral Drug Susceptibility among Patients with Primary HIV Infection. JAMA 282(12):1142-9, 1999. Epub. doi: 10.1001/jama.282.12.1142.
386. Little SJ, McLean AR, Spina CA, Richman DD, Havlir DV. Viral Dynamics of Acute HIV-1 Infection. Journal of Experimental Medicine 190(6):841-50, 1999. Epub 1999/09/28. doi: 10.1084/jem.190.6.841. PubMed PMID: 10499922; PMCID: PMC2195636.
387. Richman D, Crowe S, Harvey K. HIV Viral Load Monitoring. In: Antiviral Chemotherapy 5: New Directions for Clinical Application and Research. Edited by Mills J, Volberding PA, Corey L. New York, Kluwer Academic/Plenum Publishers; pp. 199-212, 1999.

388. Richman DD. Implications of Resistance Testing for Management: Role in Selecting an Initial Regimen and Use of Resistance Testing when Changing Therapy. In: Guia Practica para el Manejo Clinico de las Resistencias al VIH. Edited by Clotet B, Ruiz L, Martinez-Picado J, Gatell JM, Richman DD, Barcelona. Merck Sharp & Dohme de Espana, S.A.; pp. 135-144, 1999.
389. Richman D. The Challenge of Immune Control of Immunodeficiency Virus. *The Journal of clinical investigation* 104(6):677-8, 1999. Epub. doi: 10.1172/JCI8242. PubMed PMID: 10491402.
390. Richman DD. Viral Resistance to Antiviral Drugs. In: Textbook of AIDS Medicine, 2nd Edition, edited by Merigan TC, Jr, Bartlett JG, Bolognesi D. Williams & Wilkins, Baltimore, MD; pp. 891-901, 1999.
391. Ruiz L, van Lunzen J, Arno A, Stellbrink HJ, Schneider C, Rull M, Castella E, Ojanguren I, Richman DD, Clotet B, Tenner-Racz K, Racz P. Protease Inhibitor-Containing Regimens Compared with Nucleoside Analogues Alone in the Suppression of Persistent HIV-1 Replication in Lymphoid Tissue. *AIDS* 13(1):F1-8, 1999. Epub 1999/04/20. PubMed PMID: 10207538.
392. Vazquez-Rosales G, Garcia Lerma JG, Yamamoto S, Switzer WM, Havlir D, Folks TM, Richman DD, Heneine W. Rapid Screening of Phenotypic Resistance to Nevirapine by Direct Analysis of HIV Type 1 Reverse Transcriptase Activity in Plasma. *AIDS Research and Human Retroviruses* 15(13):1191-200, 1999. Epub 1999/09/10. doi: 10.1089/088922299310287. PubMed PMID: 10480632.
393. Zhang ZQ, Schuler T, Cavert W, Notermans DW, Gebhard K, Henry K, Havlir DV, Gunthard HF, Wong JK, Little S, Feinberg MB, Polis MA, Schrager LK, Schacker TW, Richman DD, Corey L, Danner SA, Haase AT. Reversibility of the Pathological Changes in the Follicular Dendritic Cell Network with Treatment of HIV-1 Infection. *Proceedings of the National Academy of Sciences of the United States of America* 96(9):5169-72, 1999. Epub 1999/04/29. doi: 10.1073/pnas.96.9.5169. PubMed PMID: 10220437; PMCID: PMC21835.
394. Zhang Z, Schuler T, Zupancic M, Wietgrefe S, Staskus KA, Reimann KA, Reinhart TA, Rogan M, Cavert W, Miller CJ, Veazey RS, Notermans D, Little S, Danner SA, Richman DD, Havlir D, Wong J, Jordan HL, Schacker TW, Racz P, Tenner-Racz K, Letvin NL, Wolinsky S, Haase AT. Sexual Transmission and Propagation of SIV and HIV in Resting and Activated CD4+ T cells. *Science* 286(5443):1353-7, 1999. Epub 1999/11/13. PubMed PMID: 10558989.
395. Appay V, Nixon DF, Donahoe SM, Gillespie GM, Dong T, King A, Ogg GS, Spiegel HM, Conlon C, Spina CA, Havlir DV, Richman DD, Waters A, Easterbrook P, McMichael AJ, Rowland-Jones SL. HIV-Specific CD8(+) T cells Produce Antiviral Cytokines but Are Impaired in Cytolytic Function. *The Journal of experimental medicine* 192(1):63-75, 2000. Epub. doi: 10.1084/jem.192.1.63. PubMed PMID: 10880527.
396. Binley JM, Trkola A, Ketas T, Schiller D, Clas B, Little S, Richman D, Hurley A, Markowitz M, Moore JP. The Effect of Highly Active Antiretroviral Therapy on Binding and Neutralizing Antibody Responses to Human Immunodeficiency Virus Type 1 Infection. *Journal of Infectious Diseases* 182(3):945-9, 2000. Epub 2000/08/19. doi: 10.1086/315774. PubMed PMID: 10950795.
397. Gifford AL, Bormann JE, Shively MJ, Wright BC, Richman DD, Bozzette SA. Predictors of Self-Reported Adherence and Plasma HIV Concentrations in Patients on Multidrug Antiretroviral Regimens. *Journal of Acquired Immune Deficiency Syndromes* 23(5):386-95, 2000. Epub 2000/06/24. PubMed PMID: 10866231.

398. Gilbert PB, Hanna GJ, De Gruttola V, Martinez-Picado J, Kuritzkes DR, Johnson VA, Richman DD, D'Aquila RT. Comparative Analysis of HIV Type 1 Genotypic Resistance across Antiretroviral Trial Treatment Regimens. *AIDS Research and Human Retroviruses* 16(14):1325-36, 2000. Epub 2000/10/06. doi: 10.1089/08892220050140874. PubMed PMID: 11018852.
399. Gulick RM, Mellors JW, Havlir D, Eron JJ, Meibohm A, Condra JH, Valentine FT, McMahon D, Gonzalez C, Jonas L, Emini EA, Chodakewitz JA, Isaacs R, Richman DD. 3-Year Suppression of HIV Viremia with Indinavir, Zidovudine, and Lamivudine. *Annals of Internal Medicine* 133(1):35-9, 2000. Epub 2000/07/06. PubMed PMID: 10877738.
400. Gunthard HF, Wong JK, Spina CA, Ignacio C, Kwok S, Christopherson C, Hwang J, Haubrich R, Havlir D, Richman DD. Effect of Influenza Vaccination on Viral Replication and Immune Response in Persons Infected with Human Immunodeficiency Virus Receiving Potent Antiretroviral Therapy. *Journal of Infectious Diseases* 181(2):522-31, 2000. Epub 2000/02/11. doi: 10.1086/315260. PubMed PMID: 10669335.
401. Hanna GJ, Johnson VA, Kuritzkes DR, Richman DD, Brown AJ, Savara AV, Hazelwood JD, D'Aquila RT. Patterns of Resistance Mutations Selected by Treatment of Human Immunodeficiency Virus Type 1 Infection with Zidovudine, Didanosine, and Nevirapine. *Journal of Infectious Diseases* 181(3):904-11, 2000. Epub 2000/03/18. doi: 10.1086/315329. PubMed PMID: 10720511.
402. Hanna GJ, Johnson VA, Kuritzkes DR, Richman DD, Martinez-Picado J, Sutton L, Hazelwood JD, D'Aquila RT. Comparison of Sequencing by Hybridization and Cycle Sequencing for Genotyping of Human Immunodeficiency Virus Type 1 Reverse Transcriptase. *Journal of Clinical Microbiology* 38(7):2715-21, 2000. Epub 2000/07/06. PubMed PMID: 10878069; PMCID: PMC87006.
403. Havlir DV, Hellmann NS, Petropoulos CJ, Whitcomb JM, Collier AC, Hirsch MS, Tebas P, Sommadossi JP, Richman DD. Drug Susceptibility in HIV Infection after Viral Rebound in Patients Receiving Indinavir-Containing Regimens. *JAMA* 283(2):229-34, 2000. Epub 2000/01/14. PubMed PMID: 10634339.
404. Havlir DV, Tierney C, Friedland GH, Pollard RB, Smeaton L, Sommadossi JP, Fox L, Kessler H, Fife KH, Richman DD. In Vivo Antagonism with Zidovudine Plus Stavudine Combination Therapy. *Journal of Infectious Diseases* 182(1):321-5, 2000. Epub 2000/07/07. doi: 10.1086/315683. PubMed PMID: 10882616.
405. Hirsch MS, Brun-Vézinet F, D'Aquila RT, Hammer SM, Johnson VA, Kuritzkes DR, Loveday C, Mellors JW, Clotet B, Conway B, Demeter LM, Vella S, Jacobsen DM, Richman DD. Antiretroviral Drug Resistance Testing in Adult HIV-1 Infectionrecommendations of an International AIDS Society–USA Panel. *JAMA* 283(18):2417-26, 2000. Epub. doi: 10.1001/jama.283.18.2417.
406. Human Immunodeficiency Virus Type 1 RNA Level and CD4 Count as Prognostic Markers and Surrogate End Points: A Meta-Analysis. HIV Surrogate Marker Collaborative Group. *AIDS Research and Human Retroviruses* 16(12):1123-33, 2000. Epub 2000/08/24. doi: 10.1089/088922200414965. PubMed PMID: 10954887.
407. Hostetler KY, Hammond JL, Kini GD, Hostetler SE, Beadle JR, Aldern KA, Chou T-C, Richman DD, Mellors JW. In Vitro Anti-HIV-1 Activity of Sn-2-Substituted 1-O-Octadecyl-Sn-Glycero-3-Phosphonoformate Analogues and Synergy with Zidovudine. *Antiviral Chemistry and Chemotherapy* 11(3):213-9, 2000. Epub. doi: 10.1177/095632020001100304.

408. Ioannidis JP, Havlir DV, Tebas P, Hirsch MS, Collier AC, Richman DD. Dynamics of HIV-1 Viral Load Rebound among Patients with Previous Suppression of Viral Replication. *AIDS* 14(11):1481-8, 2000. Epub 2000/09/13. PubMed PMID: 10983634.
409. Brown AJ, Precious HM, Whitcomb JM, Wong JK, Quigg M, Huang W, Daar ES, D'Aquila RT, Keiser PH, Connick E, Hellmann NS, Petropoulos CJ, Richman DD, Little SJ. Reduced Susceptibility of Human Immunodeficiency Virus Type 1 (HIV-1) from Patients with Primary HIV Infection to Nonnucleoside Reverse Transcriptase Inhibitors Is Associated with Variation at Novel Amino Acid Sites. *Journal of Virology* 74(22):10269-73, 2000. Epub 2000/10/24. doi: 10.1128/jvi.74.22.10269-10273.2000. PubMed PMID: 11044070; PMCID: PMC110900.
410. Martinez-Picado J, DePasquale MP, Kartsonis N, Hanna GJ, Wong J, Finzi D, Rosenberg E, Günthard HF, Sutton L, Savara A, Petropoulos CJ, Hellmann N, Walker BD, Richman DD, Siliciano R, Aquila RT. Antiretroviral Resistance During Successful Therapy of HIV Type 1 Infection. *Proceedings of the National Academy of Sciences* 97(20):10948, 2000. Epub. doi: 10.1073/pnas.97.20.10948.
411. O'Brien TR, McDermott DH, Ioannidis JP, Carrington M, Murphy PM, Havlir DV, Richman DD. Effect of Chemokine Receptor Gene Polymorphisms on the Response to Potent Antiretroviral Therapy. *AIDS* 14(7):821-6, 2000. Epub 2000/06/06. PubMed PMID: 10839590.
412. Pillay D, Taylor S, Richman DD. Incidence and Impact of Resistance against Approved Antiretroviral Drugs. *Reviews in Medical Virology* 10(4):231-53, 2000. Epub 2000/07/13. PubMed PMID: 10891871.
413. Precious HM, Gunthard HF, Wong JK, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD, Leigh Brown AJ. Multiple Sites in HIV-1 Reverse Transcriptase Associated with Virological Response to Combination Therapy. *AIDS* 14(1):31-6, 2000. Epub 2000/03/14. PubMed PMID: 10714565.
414. Richman D and Staszewski S. A Practical Guide to HIV Drug Resistance and its Implications for Antiretroviral Treatment Strategies [monograph, 2nd Edition]. International Medical Press, London; 42 pp, 2000.
415. Richman D. Emergence of Human Immunodeficiency Virus Drug Resistance. In: Emerging Infections 4, edited by Scheld WM, Craig WA, Hughes JM. ASM Press, Washington DC; pp 17-21, 2000.
416. Richman DD. Principles of HIV Resistance Testing and Overview of Assay Performance Characteristics. *Antiviral Therapy* 5(1):27-31, 2000. Epub 2000/06/10. PubMed PMID: 10846590.
417. Richman DD. Biology of Hepatitis: Similarities to HIV and Implications for Treatment. *Topics in HIV Medicine* 8: 17-20, 2000.
418. Richman DD. Normal Physiology and HIV Pathophysiology of Human T-Cell Dynamics. *The Journal of Clinical Investigation* 105(5):565-6, 2000. Epub. doi: 10.1172/JCI9478. PubMed PMID: 10712427.
419. Richman DD. The Impact of Drug Resistance on the Effectiveness of Chemotherapy for Chronic Hepatitis B. *Hepatology* 32(4 Pt 1):866-7, 2000. Epub 2000/09/26. doi: 10.1053/jhep.2000.18194. PubMed PMID: 11003636.
420. Schacker T, Little S, Connick E, Gebhard-Mitchell K, Zhang ZQ, Krieger J, Pryor J, Havlir D, Wong JK, Richman D, Corey L, Haase AT. Rapid Accumulation of Human Immunodeficiency Virus (HIV) in Lymphatic Tissue Reservoirs During Acute and Early HIV Infection: Implications for Timing of

- Antiretroviral Therapy. *Journal of Infectious Diseases* 181(1):354-7, 2000. Epub 1999/12/23. doi: 10.1086/315178. PubMed PMID: 10608788.
421. Tighe H, Takabayashi K, Schwartz D, Marsden R, Beck L, Corbeil J, Richman DD, Eiden JJ, Jr., Spiegelberg HL, Raz E. Conjugation of Protein to Immunostimulatory DNA Results in a Rapid, Long-Lasting and Potent Induction of Cell-Mediated and Humoral Immunity. *European Journal of Immunology* 30(7):1939-47, 2000. Epub 2000/08/15. doi: 10.1002/1521-4141(200007)30. PubMed PMID: 10940883.
422. Zhou XJ, Havlir DV, Richman DD, Acosta EP, Hirsch M, Collier AC, Tebas P, Sommadossi JP. Plasma Population Pharmacokinetics and Penetration into Cerebrospinal Fluid of Indinavir in Combination with Zidovudine and Lamivudine in HIV-1-Infected Patients. *AIDS* 14(18):2869-76, 2000. Epub 2001/01/12. PubMed PMID: 11153668.
423. Clotet B, Menéndez-Arias L, Ruiz L, Tural C, Vandamme A, Burger D, Schapiro J, Boucher C, D'Aquila R, Richman D (editors). Guide to Management of HIV Resistance and Pharmacokinetics of Drug Therapy, Barcelona, Editorial TAISA, S.L., 123 pp, 2000.
424. Clotet B, Menéndez-Arias L, Ruiz L, Tural C, Vandamme A, Burger D, Schapiro J, Boucher C, D'Aquila R, Richman D (editors). Guía Para el Manejo de las Resistencias al VIH y de la Farmacocinética de los Antirretrovirales, Barcelona, Editorial TAISA, S.L., 123 pp, 2000 (Spanish Edition).
425. (Writing Committee). The Durban Declaration. *Nature* 406:15-16, 2000.
426. Brooun A, Richman DD, Kornbluth RS. HIV-1 Preintegration Complexes Preferentially Integrate into Longer Target DNA Molecules in Solution as Detected by a Sensitive, Polymerase Chain Reaction-Based Integration Assay. *Journal of Biological Chemistry* 276(50):46946-52, 2001. Epub 2001/10/12. doi: 10.1074/jbc.M108000200. PubMed PMID: 11595745.
427. Buhler B, Lin YC, Morris G, Olson AJ, Wong CH, Richman DD, Elder JH, Torbett BE. Viral Evolution in Response to the Broad-Based Retroviral Protease Inhibitor TI-3. *Journal of Virology* 75(19):9502-8, 2001. Epub 2001/09/05. doi: 10.1128/jvi.75.19.9502-9508.2001. PubMed PMID: 11533212; PMCID: PMC114517.
428. Corbeil J, Sheeter D, Genini D, Rought S, Leoni L, Du P, Ferguson M, Masys DR, Welsh JB, Fink JL, Sasik R, Huang D, Drenkow J, Richman DD, Gingeras T. Temporal Gene Regulation During HIV-1 Infection of Human CD4+ T cells. *Genome Research* 11(7):1198-204, 2001. Epub 2001/07/04. doi: 10.1101/gr.gr-1802r. PubMed PMID: 11435401; PMCID: PMC311116.
429. Daar ES, Little S, Pitt J, Santangelo J, Ho P, Harawa N, Kerndt P, Glorgi JV, Bai J, Gaut P, Richman DD, Mandel S, Nichols S. Diagnosis of Primary HIV-1 Infection. Los Angeles County Primary HIV Infection Recruitment Network. *Annals of Internal Medicine* 134(1):25-9, 2001. Epub 2001/02/24. PubMed PMID: 11187417.
430. Douek DC, Betts MR, Hill BJ, Little SJ, Lempicki R, Metcalf JA, Casazza J, Yoder C, Adelsberger JW, Stevens RA, Baseler MW, Keiser P, Richman DD, Davey RT, Koup RA. Evidence for Increased T Cell Turnover and Decreased Thymic Output in HIV Infection. *Journal of Immunology* 167(11):6663-8, 2001. Epub 2001/11/21. doi: 10.4049/jimmunol.167.11.6663. PubMed PMID: 11714838.

431. Frost SD, Gunthard HF, Wong JK, Havlir D, Richman DD, Leigh Brown AJ. Evidence for Positive Selection Driving the Evolution of HIV-1 Env under Potent Antiviral Therapy. *Virology* 284(2):250-8, 2001. Epub 2001/06/01. doi: 10.1006/viro.2000.0887. PubMed PMID: 11384224.
432. Genini D, Sheeter D, Rought S, Zaunders JJ, Susin SA, Kroemer G, Richman DD, Carson DA, Corbeil J, Leoni LM. HIV Induces Lymphocyte Apoptosis by a P53-Initiated, Mitochondrial-Mediated Mechanism. *FASEB Journal* 15(1):5-6, 2001. Epub 2000/12/02. doi: 10.1096/fj.00-0336fje. PubMed PMID: 11099484.
433. Gunthard HF, Havlir DV, Fiscus S, Zhang ZQ, Eron J, Mellors J, Gulick R, Frost SD, Brown AJ, Schleif W, Valentine F, Jonas L, Meibohm A, Ignacio CC, Isaacs R, Gamagami R, Emini E, Haase A, Richman DD, Wong JK. Residual Human Immunodeficiency Virus (HIV) Type 1 RNA and DNA in Lymph Nodes and HIV RNA in Genital Secretions and in Cerebrospinal Fluid after Suppression of Viremia for 2 Years. *Journal of Infectious Diseases* 183(9):1318-27, 2001. Epub 2001/04/11. doi: 10.1086/319864. PubMed PMID: 11294662.
434. Hale P, Makgoba MW, Merson MH, Quinn TC, Richman DD, Vella S, Wabwire-Mangen F, Wain-Hobson S, Weiss RA. Mission Now Possible for AIDS Fund. *Nature* 412(6844):271-2, 2001. Epub 2001/07/19. doi: 10.1038/35085650. PubMed PMID: 11460133.
435. Hale P, Makgoba MW, Merson MH, Quinn TC, Richman DD, Vella S, Wabwire-Mangen F, Wain-Hobson S, Weiss RA. Success Hinges on Support for Treatment. *Nature* 412(6844):272, 2001. Epub 2001/07/19. doi: 10.1038/35085656. PubMed PMID: 11460135.
436. Hammond JL, Koontz DL, Bazmi HZ, Beadle JR, Hostetler SE, Kini GD, Aldern KA, Richman DD, Hostetler KY, Mellors JW. Alkylglycerol Prodrugs of Phosphonoformate Are Potent in Vitro Inhibitors of Nucleoside-Resistant Human Immunodeficiency Virus Type 1 and Select for Resistance Mutations that Suppress Zidovudine Resistance. *Antimicrobial Agents and Chemotherapy* 45(6):1621-8, 2001. Epub 2001/05/17. doi: 10.1128/aac.45.6.1621-1628.2001. PubMed PMID: 11353603; PMCID: PMC90523.
437. Havlir DV, Bassett R, Levitan D, Gilbert P, Tebas P, Collier AC, Hirsch MS, Ignacio C, Condra J, Gunthard HF, Richman DD, Wong JK. Prevalence and Predictive Value of Intermittent Viremia with Combination Hiv Therapy. *JAMA* 286(2):171-9, 2001. Epub 2001/07/13. PubMed PMID: 11448280.
438. Havlir DV, Gilbert PB, Bennett K, Collier AC, Hirsch MS, Tebas P, Adams EM, Wheat LJ, Goodwin D, Schnittman S, Holohan MK, Richman DD. Effects of Treatment Intensification with Hydroxyurea in HIV-Infected Patients with Virologic Suppression. *AIDS* 15(11):1379-88, 2001. Epub 2001/08/16. PubMed PMID: 11504959.
439. Horner AA, Datta SK, Takabayashi K, Belyakov IM, Hayashi T, Cinman N, Nguyen MD, Van Uden JH, Berzofsky JA, Richman DD, Raz E. Immunostimulatory DNA-Based Vaccines Elicit Multifaceted Immune Responses against HIV at Systemic and Mucosal Sites. *Journal of Immunology* 167(3):1584-91, 2001. Epub 2001/07/24. doi: 10.4049/jimmunol.167.3.1584. PubMed PMID: 11466380.
440. Huang W, De Gruttola V, Fischl M, Hammer S, Richman D, Havlir D, Gulick R, Squires K, Mellors J. Patterns of Plasma Human Immunodeficiency Virus Type 1 RNA Response to Antiretroviral Therapy. *Journal of Infectious Diseases* 183(10):1455-65, 2001. Epub 2001/04/25. doi: 10.1086/320192. PubMed PMID: 11319681.

441. Kemper CA, Witt MD, Keiser PH, Dube MP, Forthal DN, Leibowitz M, Smith DS, Rigby A, Hellmann NS, Lie YS, Leedom J, Richman D, McCutchan JA, Haubrich R. Sequencing of Protease Inhibitor Therapy: Insights from an Analysis of HIV Phenotypic Resistance in Patients Failing Protease Inhibitors. *AIDS* 15(5):609-15, 2001. Epub 2001/04/24. PubMed PMID: 11316998.
442. Richman DD. Antiretroviral Activity of Emtricitabine, a Potent Nucleoside Reverse Transcriptase Inhibitor. *Antiviral Therapy* 6(2):83-8, 2001. Epub 2001/08/09. PubMed PMID: 11491420.
443. Richman DD. Mechanisms, Emergence, and Epidemiology of Resistance in the Nucleoside-Experienced HIV-Infected Population. *The AIDS Reader International Supplement*: S13-S20, 2001.
444. Schacker T, Little S, Connick E, Gebhard K, Zhang ZQ, Krieger J, Pryor J, Havlir D, Wong JK, Schooley RT, Richman D, Corey L, Haase AT. Productive Infection of T cells in Lymphoid Tissues During Primary and Early Human Immunodeficiency Virus Infection. *Journal of Infectious Diseases* 183(4):555-62, 2001. Epub 2001/02/15. doi: 10.1086/318524. PubMed PMID: 11170980.
445. Stuyver LJ, Locarnini SA, Lok A, Richman DD, Carman WF, Dienstag JL, Schinazi RF. Nomenclature for Antiviral-Resistant Human Hepatitis B Virus Mutations in the Polymerase Region. *Hepatology* 33(3):751-7, 2001. Epub 2001/03/07. doi: 10.1053/jhep.2001.22166. PubMed PMID: 11230757.
446. Casimiro DR, Tang A, Perry HC, Long RS, Chen M, Heidecker GJ, Davies ME, Freed DC, Persaud NV, Dubey S, Smith JG, Havlir D, Richman D, Chastain MA, Simon AJ, Fu TM, Emini EA, Shiver JW. Vaccine-Induced Immune Responses in Rodents and Nonhuman Primates by Use of a Humanized Human Immunodeficiency Virus Type 1 Pol Gene. *Journal of Virology* 76(1):185-94, 2002. Epub 2001/12/12. doi: 10.1128/jvi.76.1.185-194.2002. PubMed PMID: 11739684; PMCID: PMC135696.
447. Clotet B, Menéndez-Arias L, Ruiz L, Tural C, Brun-Vezinet F, Loveday C, Burger D, Schapiro J, Boucher C, D'Aquila R, Richman D (editors). *Guide to Management of HIV Resistance and Pharmacokinetics of Drug Therapy* (Second edition). Barcelona. Editorial TAISA, S.L. 268 pp, 2002.
448. Appay V, Dunbar PR, Callan M, Klennerman P, Gillespie GM, Papagno L, Ogg GS, King A, Lechner F, Spina CA, Little S, Havlir DV, Richman DD, Gruener N, Pape G, Waters A, Easterbrook P, Salio M, Cerundolo V, McMichael AJ, Rowland-Jones SL. Memory CD8+ T cells Vary in Differentiation Phenotype in Different Persistent Virus Infections. *Nature Medicine* 8(4):379-85, 2002. Epub 2002/04/03. doi: 10.1038/nm0402-379. PubMed PMID: 11927944.
449. Appay V, Hanssuta P, Sutton J, Schrier RD, Wong JK, Furtado M, Havlir DV, Wolinsky SM, McMichael AJ, Richman DD, Rowland-Jones SL, Spina CA. Persistent HIV-1-Specific Cellular Responses Despite Prolonged Therapeutic Viral Suppression. *AIDS* 16(2):161-70, 2002. Epub 2002/01/25. PubMed PMID: 11807299.
450. Appay V, Papagno L, Spina CA, Hanssuta P, King A, Jones L, Ogg GS, Little S, McMichael AJ, Richman DD, Rowland-Jones SL. Dynamics of T Cell Responses in HIV Infection. *Journal of Immunology* 168(7):3660-6, 2002. Epub 2002/03/22. PubMed PMID: 11907132.
451. Bennett KK, DeGruttola VG, Marschner IC, Havlir DV, Richman DD. Baseline Predictors of CD4 T-Lymphocyte Recovery with Combination Antiretroviral Therapy. *Journal of Acquired Immune Deficiency Syndromes* 31(1):20-6, 2002. Epub 2002/09/28. PubMed PMID: 12352146.

452. D'Aquila RT, Schapiro JM, Brun-Vezinet F, Clotet B, Conway B, Demeter LM, Grant RM, Johnson VA, Kuritzkes DR, Loveday C, Shafer RW, Richman DD. Drug Resistance Mutations in HIV-1. *Topics in HIV Medicine* 10(5):21-5, 2002. Epub 2003/04/30. PubMed PMID: 12717052.
453. Deeks SG, Wagner B, Anton PA, Mitsuyasu RT, Scadden DT, Huang C, Macken C, Richman DD, Christopherson C, June CH, Lazar R, Broad DF, Jalali S, Hege KM. A Phase II Randomized Study of HIV-Specific T-Cell Gene Therapy in Subjects with Undetectable Plasma Viremia on Combination Antiretroviral Therapy. *Molecular Therapy* 5(6):788-97, 2002. Epub 2002/05/25. doi: 10.1006/mthe.2002.0611. PubMed PMID: 12027564.
454. Estaquier J, Lelievre JD, Petit F, Brunner T, Moutouh-De Parseval L, Richman DD, Ameisen JC, Corbeil J. Effects of Antiretroviral Drugs on Human Immunodeficiency Virus Type 1-Induced CD4(+) T-Cell Death. *Journal of Virology* 76(12):5966-73, 2002. Epub 2002/05/22. PubMed PMID: 12021329; PMCID: PMC136220.
455. Guatelli JC, Siliciano RF, Kuritzkes DR, Richman DD, Human Immunodeficiency Virus. In: *Clinical Virology*. Edited by Richman DD, Whitley RJ, Hayden, FG. ASM Press, Washington: 2nd Edition, pp 685-730, 2002.
456. Haubrich RH, Kemper CA, Hellmann NS, Keiser PH, Witt MD, Forthal DN, Leedom J, Leibowitz M, Whitcomb JM, Richman D, McCutchan JA. The Clinical Relevance of Non-Nucleoside Reverse Transcriptase Inhibitor Hypersusceptibility: A Prospective Cohort Analysis. *AIDS* 16(15):F33-40, 2002. Epub 2002/10/09. PubMed PMID: 12370520.
457. Little SJ, Holte S, Routy JP, Daar ES, Markowitz M, Collier AC, Koup RA, Mellors JW, Connick E, Conway B, Kilby M, Wang L, Whitcomb JM, Hellmann NS, Richman DD. Antiretroviral-Drug Resistance among Patients Recently Infected with HIV. *New England Journal of Medicine* 347(6):385-94, 2002. Epub 2002/08/09. doi: 10.1056/NEJMoa013552. PubMed PMID: 12167680.
458. Pollard RB, Tierney C, Havlir D, Tebas P, Fox L, Smeaton L, Richman D, Friedland GH. A Phase II Randomized Study of the Virologic and Immunologic Effect of Zidovudine + Stavudine Versus Stavudine Alone and Zidovudine + Lamivudine in Patients with >300 CD4 Cells Who Were Antiretroviral Naive (Actg 298). *AIDS Research and Human Retroviruses* 18(10):699-704, 2002. Epub 2002/08/09. doi: 10.1089/088922202760072311. PubMed PMID: 12167276.
459. Richman DD, Whitley RJ, Hayden FG. Introduction. In: *Clinical Virology*. Edited by Richman DD, Whitley RJ, Hayden, FG. ASM Press, Washington; 2nd Edition, pp 1-4, 2002.
460. Richman DD. Limitations of Current Therapies for HIV-1 infection. In: *Chemokine Receptors and AIDS*. Edited by O'Brien TR. Marcel Dekker, New York; pp. 189-201. 2002.
461. Strain MC, Richman DD, Wong JK, Levine H. Spatiotemporal Dynamics of HIV Propagation. *Journal of Theoretical Biology* 218(1):85-96, 2002. Epub 2002/09/26. PubMed PMID: 12297072.
462. Uckun FM, Pendergrass S, Venkatachalam TK, Qazi S, Richman D. Stampidine Is a Potent Inhibitor of Zidovudine- and Nucleoside Analog Reverse Transcriptase Inhibitor-Resistant Primary Clinical Human Immunodeficiency Virus Type 1 Isolates with Thymidine Analog Mutations. *Antimicrobial Agents and Chemotherapy* 46(11):3613-6, 2002. Epub 2002/10/18. PubMed PMID: 12384373; PMCID: PMC128707.

463. Yeni PG, Hammer SM, Carpenter CC, Cooper DA, Fischl MA, Gatell JM, Gazzard BG, Hirsch MS, Jacobsen DM, Katzenstein DA, Montaner JS, Richman DD, Saag MS, Schechter M, Schooley RT, Thompson MA, Vella S, Volberding PA. Antiretroviral Treatment for Adult HIV Infection in 2002: Updated Recommendations of the International AIDS Society-USA Panel. *JAMA* 288(2):222-35, 2002. Epub 2002/07/04. PubMed PMID: 12095387.
464. Clinical Virology. Edited by Richman DD, Whitley RJ, Hayden FG. ASM Press, Washington. 2nd Edition, 1262 pp., 2002.
465. Ali A, Pillai S, Ng H, Lubong R, Richman DD, Jamieson BD, Ding Y, McElrath MJ, Guatelli JC, Yang OO. Broadly Increased Sensitivity to Cytotoxic T Lymphocytes Resulting from Nef Epitope Escape Mutations. *Journal of Immunology* 171(8):3999-4005, 2003. Epub 2003/10/08. PubMed PMID: 14530319.
466. Anton PA, Mitsuyasu RT, Deeks SG, Scadden DT, Wagner B, Huang C, Macken C, Richman DD, Christopherson C, Borellini F, Lazar R, Hege KM. Multiple Measures of HIV Burden in Blood and Tissue Are Correlated with Each Other but Not with Clinical Parameters in Aviremic Subjects. *AIDS* 17(1):53-63, 2003. Epub 2002/12/13. PubMed PMID: 12478069.
467. Gallant JE, Gerondelis PZ, Wainberg MA, Shulman NS, Haubrich RH, St Clair M, Lanier ER, Hellmann NS, Richman DD. Nucleoside and Nucleotide Analogue Reverse Transcriptase Inhibitors: A Clinical Review of Antiretroviral Resistance. *Antiviral Therapy* 8(6):489-506, 2003. Epub 2004/02/06. PubMed PMID: 14760883.
468. Gulick RM, Meibohm A, Havlir D, Eron JJ, Mosley A, Chodakewitz JA, Isaacs R, Gonzalez C, McMahon D, Richman DD, Robertson M, Mellors JW. Six-Year Follow-up of HIV-1-Infected Adults in a Clinical Trial of Antiretroviral Therapy with Indinavir, Zidovudine, and Lamivudine. *AIDS* 17(16):2345-9, 2003. Epub 2003/10/23. doi: 10.1097/01.aids.0000076346.42412.97. PubMed PMID: 14571186.
469. Haas DW, Wilkinson GR, Kuritzkes DR, Richman DD, Nicotera J, Mahon LF, Sutcliffe C, Siminski S, Andersen J, Coughlin K, Clayton EW, Haines J, Marshak A, Saag M, Lawrence J, Gustavson J, Anne Bennett J, Christensen R, Matula MA, Wood AJ. A Multi-Investigator/Institutional DNA Bank for AIDS-Related Human Genetic Studies: AACTG Protocol A5128. *HIV Clinical Trials* 4(5):287-300, 2003. Epub 2003/10/30. doi: 10.1310/muqc-qxbc-8118-bpm5. PubMed PMID: 14583845.
470. Hirsch MS, Brun-Vezinet F, Clotet B, Conway B, Kuritzkes DR, D'Aquila RT, Demeter LM, Hammer SM, Johnson VA, Loveday C, Mellors JW, Jacobsen DM, Richman DD. Antiretroviral Drug Resistance Testing in Adults Infected with Human Immunodeficiency Virus Type 1: 2003 Recommendations of an International AIDS Society-USA Panel. *Clinical Infectious Diseases* 37(1):113-28, 2003. Epub 2003/06/28. doi: 10.1086/375597. PubMed PMID: 12830416.
471. Hirsch MS, Brun-Vezinet F, Clotet B, Conway B, Kuritzkes DR, D'Aquila RT, Demeter LM, Hammer SM, Johnson VA, Loveday C, Mellors JW, Richman DD. Questions to and Answers from the International AIDS Society-USA Resistance Testing Guidelines Panel. *Topics in HIV Medicine* 11(4):150-4, 2003. Epub 2003/07/24. PubMed PMID: 12876334.
472. Human Immunodeficiency Virus. Richman DD (Editor). International Medical Press, London; 2003.
473. Johnson VA, Brun-Vezinet F, Clotet B, Conway B, D'Aquila RT, Demeter LM, Kuritzkes DR, Pillay D, Schapiro JM, Telenti A, Richman DD. Drug Resistance Mutations in HIV-1. *Topics in HIV Medicine* 11(6):215-21, 2003. Epub 2004/01/16. PubMed PMID: 14724329.

474. Koelsch KK, Smith DM, Little SJ, Ignacio CC, Macaranas TR, Brown AJ, Petropoulos CJ, Richman DD, Wong JK. Clade B HIV-1 Superinfection with Wild-Type Virus after Primary Infection with Drug-Resistant Clade B Virus. *AIDS* 17(7):F11-6, 2003. Epub 2003/04/18. doi: 10.1097/01.aids.0000060361.78202.4c. PubMed PMID: 12700477.
475. Leigh Brown AJ, Frost SD, Mathews WC, Dawson K, Hellmann NS, Daar ES, Richman DD, Little SJ. Transmission Fitness of Drug-Resistant Human Immunodeficiency Virus and the Prevalence of Resistance in the Antiretroviral-Treated Population. *Journal of Infectious Diseases* 187(4):683-6, 2003. Epub 2003/02/25. doi: 10.1086/367989. PubMed PMID: 12599087.
476. Pillai S, Good B, Richman D, Corbeil J. A New Perspective on V3 Phenotype Prediction. *AIDS Research and Human Retroviruses* 19(2):145-9, 2003. Epub 2003/03/20. doi: 10.1089/088922203762688658. PubMed PMID: 12643277.
477. Richman D. Rapid Evolution of the Neutralizing Antibody Response to Human Immunodeficiency Virus Type 1 Infection and Viral Escape. In: *Retroviruses of Human AIDS and Related Animal Diseases (From the XIIIth Cent Gardes Symposium, Annecy, France, Oct 27-29, 2002)*. Edited by Girard M, Vicari M, Dodet B. Elsevier Editions Scientifiques, Paris; pp. 65-66, 2003.
478. Richman DD, Wrin T, Little SJ, Petropoulos CJ. Rapid Evolution of the Neutralizing Antibody Response to HIV Type 1 Infection. *Proceedings of the National Academy of Sciences of the United States of America* 100(7):4144-9, 2003. Epub 2003/03/20. doi: 10.1073/pnas.0630530100. PubMed PMID: 12644702; PMCID: PMC153062.
479. Strain MC, Gunthard HF, Havlir DV, Ignacio CC, Smith DM, Leigh-Brown AJ, Macaranas TR, Lam RY, Daly OA, Fischer M, Opravil M, Levine H, Bachelier L, Spina CA, Richman DD, Wong JK. Heterogeneous Clearance Rates of Long-Lived Lymphocytes Infected with HIV: Intrinsic Stability Predicts Lifelong Persistence. *Proceedings of the National Academy of Sciences of the United States of America* 100(8):4819-24, 2003. Epub 2003/04/10. doi: 10.1073/pnas.0736332100. PubMed PMID: 12684537; PMCID: PMC153639.
480. Wong JK, Smith D, Richman D. HIV Drug Susceptibility Testing in AIDS and Other Manifestations of HIV Infection, Fourth Edition. Wormser GP (editor). Elsevier Science, St. Louis; pp 869-889, 2003.
481. Zaunders JJ, Moutouh-de Parseval L, Kitada S, Reed JC, Rought S, Genini D, Leoni L, Kelleher A, Cooper DA, Smith DE, Grey P, Estaquier J, Little S, Richman DD, Corbeil J. Polyclonal proliferation and apoptosis of CCR5+ T lymphocytes during primary human immunodeficiency virus type 1 infection: Regulation by interleukin (IL)-2, IL-15, and Bcl-2. *Journal of Infectious Diseases* 187(11):1735-47, 2003. Epub 2003/05/17, PubMed PMID: 12751031.
482. Clotet B, Menéndez-Arias L, Ruiz L, Tural C, Brun-Vezinet F, Loveday C, Burger D, Schapiro J, Boucher C, D'Aquila R, Richman D (editors). *Guide to Management of HIV Resistance and Pharmacokinetics of Drug Therapy (Third Edition)*, Fundació de Lluita contra la SIDA, Badalona, Catalonia, Spain; 325 pp, 2003.
483. Richman DD. Rapid Evolution of the Neutralizing Antibody Response to Human Immunodeficiency Virus Type 1 Infection and Viral Escape. In: *Retroviruses of Human AIDS and Related Animal Diseases (From the XIIIth Cent Gardes Symposium, Annecy, France, Oct 27-29, 2003)*. Edited by Girard M, Vicari M, Dodet B. Elsevier Editions Scientifiques, Paris; pp 65-66, 2003.

484. Burton DR, Desrosiers RC, Doms RW, Feinberg MB, Gallo RC, Hahn B, Hoxie JA, Hunter E, Korber B, Landay A, Lederman MM, Lieberman J, McCune JM, Moore JP, Nathanson N, Picker L, Richman D, Rinaldo C, Stevenson M, Watkins DI, Wolinsky SM, Zack JA. Public Health. A Sound Rationale Needed for Phase III HIV-1 Vaccine Trials. *Science* 303(5656):316, 2004. Epub 2004/01/17. doi: 10.1126/science.1094620. PubMed PMID: 14726576.
485. Burton DR, Desrosiers RC, Doms RW, Feinberg MB, Gallo RC, Hahn B, Hoxie JA, Hunter E, Korber BTM, Landay AL, Lederman MM, Lieberman J, McCune JM, Moore JP, Nathanson N, Picker L, Richman DD, Rinaldo CR, Stevenson M, Watkins DI, Wolinsky SM, Zack JA. Support for the RV144 HIV Vaccine Trial. *Science* 305 (5681):177-80, 2004 (author reply). Epub 2004/07/14, PubMed PMID: 15250069.
486. Dong T, Stewart-Jones G, Chen N, Easterbrook P, Xu X, Papagno L, Appay V, Weekes M, Conlon C, Spina C, Little S, Screamton G, van der Merwe A, Richman DD, McMichael AJ, Jones EY, Rowland-Jones SL. HIV-Specific Cytotoxic T cells from Long-Term Survivors Select a Unique T Cell Receptor. *Journal of Experimental Medicine* 200(12):1547-57, 2004. Epub 2004/12/15. doi: 10.1084/jem.20032044. PubMed PMID: 15596521; PMCID: PMC2212004.
487. Institute of Medicine Committee for Examining the Probable Consequences of Alternative Patterns of Widespread Antiretroviral Drug Use in Resource-Constrained Settings (Curran J, Debas H, Benatar S, Blower S, Jackson JB, Kombe G, Mugenyi P, Padayachee N, Padian N, Reddy P, Richman D, Walker B). Scaling up Treatment for the Global AIDS Pandemic: Challenges and Opportunities. Curran J, Debas H, Arya M, Kelley P, Knobler S, Pray L (Editors). The National Academies Press, Washington, DC; 325 pp, 2004.
488. Johnson VA, Brun-Vezinet F, Clotet B, Conway B, D'Aquila RT, Demeter LM, Kuritzkes DR, Pillay D, Schapiro JM, Telenti A, Richman DD. Update of the Drug Resistance Mutations in HIV-1: 2004. *Topics in HIV Medicine* 12(4):119-24, 2004. Epub 2004/11/02. PubMed PMID: 15516709.
489. Leigh Brown AJ, Frost SD, Good B, Daar ES, Simon V, Markowitz M, Collier AC, Connick E, Conway B, Margolick JB, Routy JP, Corbeil J, Hellmann NS, Richman DD, Little SJ. Genetic Basis of Hypersusceptibility to Protease Inhibitors and Low Replicative Capacity of Human Immunodeficiency Virus Type 1 Strains in Primary Infection. *Journal of Virology* 78(5):2242-6, 2004. Epub 2004/02/14. PubMed PMID: 14963120; PMCID: PMC369210.
490. Papagno L, Spina CA, Marchant A, Salio M, Rufer N, Little S, Dong T, Chesney G, Waters A, Easterbrook P, Dunbar PR, Shepherd D, Cerundolo V, Emery V, Griffiths P, Conlon C, McMichael AJ, Richman DD, Rowland-Jones SL, Appay V. Immune Activation and CD8+ T-Cell Differentiation Towards Senescence in HIV-1 Infection. *PLoS Biology* 2(2):E20, 2004. Epub 2004/02/18. doi: 10.1371/journal.pbio.0020020. PubMed PMID: 14966528; PMCID: PMC340937.
491. Richman DD, Little SJ, Smith DM, Wrin T, Petropoulos C, Wong JK. HIV Evolution and Escape. *Transactions of the American Clinical and Climatological Association* 115:289-303, 2004. Epub 2006/10/25. PubMed PMID: 17060974; PMCID: PMC2263778.
492. Richman DD, Morton SC, Wrin T, Hellmann N, Berry S, Shapiro MF, Bozzette SA. The Prevalence of Antiretroviral Drug Resistance in the United States. *AIDS* 18(10):1393-401, 2004. Epub 2004/06/17. PubMed PMID: 15199315.

493. Richman DD. Benefits and Limitations of Testing for Resistance to HIV Drugs. *Journal of Antimicrobial Chemotherapy* 53(4):555-7, 2004. Epub 2004/03/12. doi: 10.1093/jac/dkh157. PubMed PMID: 15014064.
494. Smith DM, Kingery JD, Wong JK, Ignacio CC, Richman DD, Little SJ. The Prostate as a Reservoir for HIV-1. *AIDS* 18(11):1600-2, 2004. Epub 2004/07/09. PubMed PMID: 15238781.
495. Smith DM, Wong JK, Hightower GK, Ignacio CC, Koelsch KK, Daar ES, Richman DD, Little SJ. Incidence of HIV Superinfection Following Primary Infection. *JAMA* 292(10):1177-8, 2004. Epub 2004/09/09. doi: 10.1001/jama.292.10.1177. PubMed PMID: 15353529.
496. Woelk CH, Ottone F, Plotkin CR, Du P, Royer CD, Rought SE, Lozach J, Sasik R, Kornbluth RS, Richman DD, Corbeil J. Interferon Gene Expression Following HIV Type 1 Infection of Monocyte-Derived Macrophages. *AIDS Research and Human Retroviruses* 20(11):1210-22, 2004. Epub 2004/12/14. doi: 10.1089/aid.2004.20.1210. PubMed PMID: 15588343.
497. Yeni PG, Hammer SM, Hirsch MS, Saag MS, Schechter M, Carpenter CC, Fischl MA, Gatell JM, Gazzard BG, Jacobsen DM, Katzenstein DA, Montaner JS, Richman DD, Schooley RT, Thompson MA, Vella S, Volberding PA. Treatment for Adult HIV Infection: 2004 Recommendations of the International AIDS Society-USA Panel. *JAMA* 292(2):251-65, 2004. Epub 2004/07/14. doi: 10.1001/jama.292.2.251. PubMed PMID: 15249575.
498. Yu Q, Konig R, Pillai S, Chiles K, Kearney M, Palmer S, Richman D, Coffin JM, Landau NR. Single-Strand Specificity of APOBEC3G Accounts for Minus-Strand Deamination of the HIV Genome. *Nature Structural & Molecular Biology* 11(5):435-42, 2004. Epub 2004/04/21. doi: 10.1038/nsmb758. PubMed PMID: 15098018.
499. Clotet B, Menéndez-Arias L, Schapiro J, Ruiz L, Kuritzkes D, Burger D, Tural C, Brun-Vezinet F, Loveday C, Boucher C, D'Aquila R, Richman D (Editors). Guide to Management of HIV Drug Resistance, Antiretrovirals, Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects (Fourth edition). Fundació de Lluita contra la SIDA. Badalona, Catalonia, Spain; 392 pp, 2004.
500. Boucher C, Larder B, Mellors J, Richman D. The XIVth International HIV Drug Resistance Workshop, Quebec City, Canada, June 2005. *Antiviral Therapy* 11(5):653-65, 2006. Epub 2006/09/13. PubMed PMID: 16964836.
501. Clotet B, Menéndez-Arias L, Schapiro J, Ruiz L, Kuritzkes D, Burger D, Tural C, Brun-Vezinet F, Loveday C, Boucher C, D'Aquila R, Richman D, Torriani F, Shafer R, De Luca A. (editors). Guide to Management of HIV Drug Resistance, Antiretrovirals, Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects (Fifth edition). Fundació de Lluita contra la SIDA. Badalona, Catalonia, Spain: 430 pp, 2005.
502. Crooks ET, Moore PL, Richman D, Robinson J, Crooks JA, Franti M, Schulke N, Binley JM. Characterizing Anti-HIV Monoclonal Antibodies and Immune Sera by Defining the Mechanism of Neutralization. *Human Antibodies* 14(3-4):101-13, 2005. Epub 2006/05/25. PubMed PMID: 16720980; PMCID: PMC2630880.
503. Frost SD, Wrin T, Smith DM, Kosakovsky Pond SL, Liu Y, Paxinos E, Chappey C, Galovich J, Beauchaine J, Petropoulos CJ, Little SJ, Richman DD. Neutralizing Antibody Responses Drive the Evolution of Human Immunodeficiency Virus Type 1 Envelope During Recent HIV Infection. *Proceedings of the National Academy of Sciences of the United States of America* 102(51):18514-9,

2005. Epub 2005/12/13. doi: 10.1073/pnas.0504658102. PubMed PMID: 16339909; PMCID: PMC1310509.
504. Frost SD, Liu Y, Pond SL, Chappay C, Wrin T, Petropoulos CJ, Little SJ, Richman DD. Characterization of Human Immunodeficiency Virus Type 1 (HIV-1) Envelope Variation and Neutralizing Antibody Responses During Transmission of HIV-1 Subtype B. *Journal of Virology* 79(10):6523-7, 2005. Epub 2005/04/29. doi: 10.1128/jvi.79.10.6523-6527.2005. PubMed PMID: 15858036; PMCID: PMC1091710.
505. Haubrich RH, Kemper CA, Hellmann NS, Keiser PH, Witt MD, Tilles JG, Forthal DN, Leedom J, Leibowitz M, McCutchan JA, Richman DD. A Randomized, Prospective Study of Phenotype Susceptibility Testing Versus Standard of Care to Manage Antiretroviral Therapy: CCTG 575. *AIDS* 19(3):295-302, 2005. Epub 2005/02/19. PubMed PMID: 15718840.
506. Johnson VA, Brun-Vezinet F, Clotet B, Conway B, Kuritzkes DR, Pillay D, Schapiro JM, Telenti A, Richman DD. Update of the Drug Resistance Mutations in HIV-1: Fall 2005. *Topics in HIV Medicine* 13(4):125-31, 2005. Epub 2005/11/24. PubMed PMID: 16304457.
507. Lehrman G, Hogue IB, Palmer S, Jennings C, Spina CA, Wiegand A, Landay AL, Coombs RW, Richman DD, Mellors JW, Coffin JM, Bosch RJ, Margolis DM. Depletion of Latent HIV-1 Infection in Vivo: A Proof-of-Concept Study. *Lancet* 366(9485):549-55, 2005. Epub 2005/08/16. doi: 10.1016/s0140-6736(05)67098-5. PubMed PMID: 16099290; PMCID: PMC1894952.
508. Pillai SK, Good B, Pond SK, Wong JK, Strain MC, Richman DD, Smith DM. Semen-Specific Genetic Characteristics of Human Immunodeficiency Virus Type 1 Env. *Journal of Virology* 79(3):1734-42, 2005. Epub 2005/01/15. doi: 10.1128/jvi.79.3.1734-1742.2005. PubMed PMID: 15650198; PMCID: PMC544119.
509. Pillai SK, Kosakovsky Pond SL, Woelk CH, Richman DD, Smith DM. Codon Volatility Does Not Reflect Selective Pressure on the HIV-1 Genome. *Virology* 336(2):137-43, 2005. Epub 2005/05/17. doi: 10.1016/j.virol.2005.03.014. PubMed PMID: 15892955.
510. Smith DM, Richman DD, Little SJ. HIV Superinfection. *Journal of Infectious Diseases* 192(3):438-44, 2005. Epub 2005/07/05. doi: 10.1086/431682. PubMed PMID: 15995957.
511. Smith DM, Wong JK, Hightower GK, Ignacio CC, Koelsch KK, Petropoulos CJ, Richman DD, Little SJ. HIV Drug Resistance Acquired through Superinfection. *AIDS* 19(12):1251-6, 2005. Epub 2005/07/30. PubMed PMID: 16052079.
512. Strain MC, Letendre S, Pillai SK, Russell T, Ignacio CC, Gunthard HF, Good B, Smith DM, Wolinsky SM, Furtado M, Marquie-Beck J, Durelle J, Grant I, Richman DD, Marcotte T, McCutchan JA, Ellis RJ, Wong JK. Genetic Composition of Human Immunodeficiency Virus Type 1 in Cerebrospinal Fluid and Blood without Treatment and During Failing Antiretroviral Therapy. *Journal of Virology* 79(3):1772-88, 2005. Epub 2005/01/15. doi: 10.1128/jvi.79.3.1772-1788.2005. PubMed PMID: 15650202; PMCID: PMC544082.
513. Strain MC, Little SJ, Daar ES, Havlir DV, Gunthard HF, Lam RY, Daly OA, Nguyen J, Ignacio CC, Spina CA, Richman DD, Wong JK. Effect of Treatment, During Primary Infection, on Establishment and Clearance of Cellular Reservoirs of HIV-1. *Journal of Infectious Diseases* 191(9):1410-8, 2005. Epub 2005/04/06. doi: 10.1086/428777. PubMed PMID: 15809898.

514. Yang OO, Daar ES, Jamieson BD, Balamurugan A, Smith DM, Pitt JA, Petropoulos CJ, Richman DD, Little SJ, Brown AJ. Human Immunodeficiency Virus Type 1 Clade B Superinfection: Evidence for Differential Immune Containment of Distinct Clade B Strains. *Journal of Virology* 79(2):860-8, 2005. Epub 2004/12/23. doi: 10.1128/jvi.79.2.860-868.2005. PubMed PMID: 15613314; PMCID: PMC538553.
515. Zolopa AR, Lazzeroni LC, Rinehart A, Vezinet FB, Clavel F, Collier A, Conway B, Gulick RM, Holodniy M, Perno CF, Shafer RW, Richman DD, Wainberg MA, Kuritzkes DR. Accuracy, Precision, and Consistency of Expert HIV Type 1 Genotype Interpretation: An International Comparison (the GUESS Study). *Clinical Infectious Diseases* 41(1):92-9, 2005. Epub 2005/06/07. doi: 10.1086/430706. PubMed PMID: 15937768.
516. Clotet B, Menéndez-Arias L, Schapiro J, Ruiz L, Kuritzkes D, Burger D, Tural C, Brun-Vezinet F, Loveday C, Boucher C, D'Aquila R, Richman D, Torriani F, Shafer R, De Luca A. (redactores). Guía a la Gerencia de la Resistencia de la Droga del VIH, Antiretrovirals, Los Pharmacokinetics y la Hepatitis Viral en el VIH Infectaron a Temas (la quinto edición). Fundació de Lluita Contra el la SIDA, Badalona, Cataluña, España; 430 pp, 2005.
517. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. Guide to Management of HIV Drug Resistance, Antiretrovirals Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects. 6th Edition. 1-440, 2006.
518. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. Guía a la Gerencia de la Resistencia de la Droga del VIH, Pharmacokinetics de Antiretrovirals y Hepatitis Viral en Temas Infectados VIH. 6to Edición. 1-440, 2006.
519. Daar ES, Richman DD. Confronting the Emergence of Drug-Resistant HIV Type 1: Impact of Antiretroviral Therapy on Individual and Population Resistance. *AIDS Research and Human Retroviruses* 21(5):343-57, 2005. Epub 2005/06/03. doi: 10.1089/aid.2005.21.343. PubMed PMID: 15929696.
520. Day JR, Martinez LE, Sasik R, Hitchin DL, Dueck ME, Richman DD, Guatelli JC. A Computer-Based, Image-Analysis Method to Quantify HIV-1 Infection in a Single-Cycle Infectious Center Assay. *Journal of Virological Methods* 137(1):125-33, 2006. Epub 2006/08/01. doi: 10.1016/j.jviromet.2006.06.019. PubMed PMID: 16876264.
521. Hammer SM, Saag MS, Schechter M, Montaner JS, Schooley RT, Jacobsen DM, Thompson MA, Carpenter CC, Fischl MA, Gazzard BG, Gatell JM, Hirsch MS, Katzenstein DA, Richman DD, Vella S, Yeni PG, Volberding PA. Treatment for Adult HIV Infection: 2006 Recommendations of the International AIDS Society--USA Panel. *Topics in HIV Medicine* 14(3):827-43, 2006. Epub 2006/10/05. PubMed PMID: 17016878.
522. Pond SL, Frost SD, Grossman Z, Gravenor MB, Richman DD, Brown AJ. Adaptation to Different Human Populations by HIV-1 Revealed by Codon-Based Analyses. *PLoS Computational Biology* 2(6):e62, 2006. Epub 2006/06/23. doi: 10.1371/journal.pcbi.0020062. PubMed PMID: 16789820; PMCID: PMC1480537.
523. Kumar S, Choi WT, Dong CZ, Madani N, Tian S, Liu D, Wang Y, Pesavento J, Wang J, Fan X, Yuan J, Fritzsche WR, An J, Sodroski JG, Richman DD, Huang Z. Smm-Chemokines: A Class of Unnatural Synthetic Molecules as Chemical Probes of Chemokine Receptor Biology and Leads for Therapeutic

- Development. *Chemistry and Biology* 13(1):69-79, 2006. Epub 2006/01/24. doi: 10.1016/j.chembiol.2005.10.012. PubMed PMID: 16426973.
524. Pillai SK, Pond SL, Liu Y, Good BM, Strain MC, Ellis RJ, Letendre S, Smith DM, Gunthard HF, Grant I, Marcotte TD, McCutchan JA, Richman DD, Wong JK. Genetic Attributes of Cerebrospinal Fluid-Derived HIV-1 Env. *Brain* 129(Pt 7):1872-83, 2006. Epub 2006/06/01. doi: 10.1093/brain/awl136. PubMed PMID: 16735456.
525. Richman DD. Antiviral Drug Resistance. *Antiviral Research* 71(2-3):117-21, 2006. Epub 2006/04/20. doi: 10.1016/j.antiviral.2006.03.004. PubMed PMID: 16621040.
526. Smith DM, Strain MC, Frost SD, Pillai SK, Wong JK, Wrin T, Liu Y, Petropoulos CJ, Daar ES, Little SJ, Richman DD. Lack of Neutralizing Antibody Response to HIV-1 Predisposes to Superinfection. *Virology* 355(1):1-5, 2006. Epub 2006/09/12. doi: 10.1016/j.virol.2006.08.009. PubMed PMID: 16962152.
527. Yuste E, Sanford HB, Carmody J, Bixby J, Little S, Zwick MB, Greenough T, Burton DR, Richman DD, Desrosiers RC, Johnson WE. Simian Immunodeficiency Virus Engrafted with Human Immunodeficiency Virus Type 1 (HIV-1)-Specific Epitopes: Replication, Neutralization, and Survey of HIV-1-Positive Plasma. *Journal of Virology* 80(6):3030-41, 2006. Epub 2006/02/28. doi: 10.1128/jvi.80.6.3030-3041.2006. PubMed PMID: 16501112; PMCID: PMC1395451.
528. Ahuja SK, Aiuti F, Berkout B, Biberfeld P, Burton DR, Colizzi V, Deeks SG, Desrosiers RC, Dierich MP, Doms RW, Emerman M, Gallo RC, Girard M, Greene WC, Hoxie JA, Hunter E, Klein G, Korber B, Kuritzkes DR, Lederman MM, Malim MH, Marx PA, McCune JM, McMichael A, Miller C, Miller V, Montagnier L, Montefiori DC, Moore JP, Nixon DF, Overbaugh J, Pauza CD, Richman DD, Saag MS, Sattentau Q, Schooley RT, Shattock R, Shaw GM, Stevenson M, Trkola A, Wainberg MA, Weiss RA, Wolinsky S, Zack JA. A Plea for Justice for Jailed Medical Workers. *Science* 314(5801):924-5, 2006. Epub 2006/10/26. doi: 10.1126/science.1136578. PubMed PMID: 17062652.
529. Choi W-T, Kumaki Y, Kumar K, An J, Richman DD, Sodroski JG, Huang Z. Basic and translational research of chemokine ligands and receptors and development of novel therapeutics. *Drug Discovery Research: New frontiers in the post-genomic era*. Chapter 12, 300-335, 2007.
530. Cachay ER, Frost SD, Richman DD, Smith DM, Little SJ. Herpes Simplex Virus Type 2 Infection Does Not Influence Viral Dynamics During Early HIV-1 Infection. *Journal of Infectious Diseases* 195(9):1270-7, 2007. Epub 2007/04/03. doi: 10.1086/513568. PubMed PMID: 17396995.
531. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. Guide to Management of HIV Drug Resistance. *Antiretrovirals Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects*. 7th Edition. 1-465, 2007.
532. Coen, DM, Richman, DD. Antiviral Agents. *Fields virology*. Fifth Edition. Walters, Kluwer/Lippincott, Williams & Wilkins, Philadelphia; Volume 1, Book Chapter 14, 447-485, 2007.
533. Dhillon AK, Donners H, Pantophlet R, Johnson WE, Decker JM, Shaw GM, Lee FH, Richman DD, Doms RW, Vanham G, Burton DR. Dissecting the Neutralizing Antibody Specificities of Broadly Neutralizing Sera from Human Immunodeficiency Virus Type 1-Infected Donors. *Journal of Virology* 81(12):6548-62, 2007. Epub 2007/04/06. doi: 10.1128/jvi.02749-06. PubMed PMID: 17409160; PMCID: PMC1900098.

534. Johnson VA, Brun-Vezinet F, Clotet B, Gunthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: 2007. *Topics in HIV Medicine* 15(4):119-25, 2007. Epub 2007/08/28. PubMed PMID: 17720996.
535. Mascolini M, Boucher C, Larder B, Mellors J, Richman D. Key Reports from the XV International HIV Drug Resistance Workshop 2006. *Antiviral Therapy* 12(1):131-45, 2007. Epub 2007/05/17. PubMed PMID: 17503758.
536. Nathanson N, Richman DD. Antiviral Therapy. In *viral pathogenesis and immunity*. Second Edition. Academic Press, Amsterdam; Part IV, Chapter 16, 221-234, 2007.
537. Noviello CM, Pond SL, Lewis MJ, Richman DD, Pillai SK, Yang OO, Little SJ, Smith DM, Guatelli JC. Maintenance of Nef-Mediated Modulation of Major Histocompatibility Complex Class I and CD4 after Sexual Transmission of Human Immunodeficiency Virus Type 1. *Journal of Virology* 81(9):4776-86, 2007. Epub 2007/03/03. doi: 10.1128/jvi.01793-06. PubMed PMID: 17329339; PMCID: PMC1900175.
538. Poon AF, Kosakovsky Pond SL, Bennett P, Richman DD, Leigh Brown AJ, Frost SD. Adaptation to Human Populations Is Revealed by within-Host Polymorphisms in HIV-1 and Hepatitis C Virus. *PLoS Pathogens* 3(3):e45, 2007. Epub 2007/04/03. doi: 10.1371/journal.ppat.0030045. PubMed PMID: 17397261; PMCID: PMC1839164.
539. Poon AFY, Kosakovsky-Pond SL, Richman DD, Brown AJL Frost SDW. Evolutionary Consequences of within-Host Transient Polymorphisms In HIV-1. *J Virol* 81:13598-13607, 2007.
540. Richman DD, Wasserman R, Locarnini SA. Antiviral Drug Resistance: Implications for Treatment of HBV Infection and Similarities with HIV Disease. *Gastroenterology & Hepatology*, 3:10, Supp 31:15-22, 2007.
541. Smith D, Moini N, Pesano R, Cachay E, Aiem H, Lie Y, Richman D, Little S. Clinical Utility of HIV Standard Genotyping among Antiretroviral-Naive Individuals with Unknown Duration of Infection. *Clinical Infectious Diseases* 44(3):456-8, 2007. Epub 2007/01/06. doi: 10.1086/510748. PubMed PMID: 17205459.
542. Smith DM, Wong JK, Shao H, Hightower GK, Mai SH, Moreno JM, Ignacio CC, Frost SD, Richman DD, Little SJ. Long-Term Persistence of Transmitted HIV Drug Resistance in Male Genital Tract Secretions: Implications for Secondary Transmission. *Journal of Infectious Diseases* 196(3):356-60, 2007. Epub 2007/06/29. doi: 10.1086/519164. PubMed PMID: 17597449.
543. Koelsch KK, Liu L, Haubrich R, May S, Havlir D, Gunthard HF, Ignacio CC, Campos-Soto P, Little SJ, Shafer R, Robbins GK, D'Aquila RT, Kawano Y, Young K, Dao P, Spina CA, Richman DD, Wong JK. Dynamics of Total, Linear Nonintegrated, and Integrated HIV-1 DNA in Vivo and in Vitro. *Journal of Infectious Diseases* 197(3):411-9, 2008. Epub 2008/02/06. doi: 10.1086/525283. PubMed PMID: 18248304.
544. Ahuja SK, Kulkarni H, Catano G, Agan BK, Camargo JF, He W, O'Connell RJ, Marconi VC, Delmar J, Eron J, Clark RA, Frost S, Martin J, Ahuja SS, Deeks SG, Little S, Richman D, Hecht FM, Dolan MJ. CCL3L1-CCR5 Genotype Influences Durability of Immune Recovery During Antiretroviral Therapy of HIV-1-Infected Individuals. *Nature Medicine* 14(4):413-20, 2008. Epub 2008/04/01. doi: 10.1038/nm1741. PubMed PMID: 18376407; PMCID: PMC2630879.

545. Kosakovsky Pond SL, Poon AF, Zarate S, Smith DM, Little SJ, Pillai SK, Ellis RJ, Wong JK, Leigh Brown AJ, Richman DD, Frost SD. Estimating Selection Pressures on HIV-1 Using Phylogenetic Likelihood Models. *Statistics in Medicine* 27(23):4779-89, 2008. Epub. doi: 10.1002/sim.3192. PubMed PMID: 18381707; PMCID: PMC2634745.
546. Johnson VA, Brun-Vezinet F, Clotet B, Gunthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: Spring 2008. *Topics in HIV Medicine* 16(1):62-8, 2008. Epub 2008/04/29. PubMed PMID: 18441382.
547. Johnson VA, Brun-Vezinet F, Clotet B, Gunthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1. *Topics in HIV Medicine* 16(5):138-45, 2008. Epub 2008/12/25. PubMed PMID: 19106428.
548. Cachay ER, Frost SD, Poon AF, Looney D, Rostami SM, Pacold ME, Richman DD, Little SJ, Smith DM. Herpes Simplex Virus Type 2 Acquisition During Recent HIV Infection Does Not Influence Plasma HIV Levels. *Journal of Acquired Immune Deficiency Syndromes* 47(5):592-6, 2008. Epub 2008/01/17. doi: 10.1097/QAI.0b013e318163bd87. PubMed PMID: 18197122; PMCID: PMC2630881.
549. Frost SD, Trkola A, Gunthard HF, Richman DD. Antibody Responses in Primary HIV-1 Infection. *Current Opinion in HIV and AIDS* 3(1):45-51, 2008. Epub 2008/01/01. doi: 10.1097/COH.0b013e3282f310ae. PubMed PMID: 19372943.
550. Hirsch MS, Gunthard HF, Schapiro JM, Brun-Vezinet F, Clotet B, Hammer SM, Johnson VA, Kuritzkes DR, Mellors JW, Pillay D, Yeni PG, Jacobsen DM, Richman DD. Antiretroviral Drug Resistance Testing in Adult HIV-1 Infection: 2008 Recommendations of an International AIDS Society-USA Panel. *Clinical Infectious Diseases* 47(2):266-85, 2008. Epub 2008/06/14. doi: 10.1086/589297. PubMed PMID: 18549313.
551. Little SJ, Frost SD, Wong JK, Smith DM, Pond SL, Ignacio CC, Parkin NT, Petropoulos CJ, Richman DD. Persistence of Transmitted Drug Resistance among Subjects with Primary Human Immunodeficiency Virus Infection. *Journal of Virology* 82(11):5510-8, 2008. Epub 2008/03/21. doi: 10.1128/jvi.02579-07. PubMed PMID: 18353964; PMCID: PMC2395184.
552. Liu L, May S, Richman DD, Hecht FM, Markowitz M, Daar ES, Routy JP, Margolick JB, Collier AC, Woelk CH, Little SJ, Smith DM. Comparison of Algorithms That Interpret Genotypic HIV-1 Drug Resistance to Determine the Prevalence of Transmitted Drug Resistance. *AIDS* 22(7):835-9, 2008. Epub 2008/04/23. doi: 10.1097/QAD.0b013e3282f5ff71. PubMed PMID: 18427201; PMCID: PMC2716722.
553. Mascolini M, Richman D, Larder B, Mellors J, Boucher CA. Clinical Implications of Resistance to Antiretrovirals: New Resistance Technologies and Interpretations. *Antiviral Therapy* 13(2):319-34, 2008. Epub 2008/05/29. PubMed PMID: 18505183.
554. Nelson JD, Kinkead H, Brunel FM, Leaman D, Jensen R, Louis JM, Maruyama T, Bewley CA, Bowdish K, Clore GM, Dawson PE, Frederickson S, Mage RG, Richman DD, Burton DR, Zwick MB. Antibody Elicited against the Gp41 N-Heptad Repeat (Nhr) Coiled-Coil Can Neutralize HIV-1 with Modest Potency but Non-Neutralizing Antibodies Also Bind to Nhr Mimetics. *Virology* 377(1):170-83, 2008. Epub 2008/05/24. doi: 10.1016/j.virol.2008.04.005. PubMed PMID: 18499210; PMCID: PMC2493441.

555. Pawlotsky JM, Dusheiko G, Hatzakis A, Lau D, Lau G, Liang TJ, Locarnini S, Martin P, Richman DD, Zoulim F. Virologic Monitoring of Hepatitis B Virus Therapy in Clinical Trials and Practice: Recommendations for a Standardized Approach. *Gastroenterology* 134(2):405-15, 2008. Epub 2008/02/05. doi: 10.1053/j.gastro.2007.11.036. PubMed PMID: 18242209; PMCID: PMC2676233.
556. Hammer SM, Eron JJ, Jr., Reiss P, Schooley RT, Thompson MA, Walmsley S, Cahn P, Fischl MA, Gatell JM, Hirsch MS, Jacobsen DM, Montaner JS, Richman DD, Yeni PG, Volberding PA. Antiretroviral Treatment of Adult HIV Infection: 2008 Recommendations of the International AIDS Society-USA Panel. *JAMA* 300(5):555-70, 2008. Epub 2008/08/05. doi: 10.1001/jama.300.5.555. PubMed PMID: 18677028.
557. Grant RM, Hamer D, Hope T, Johnston R, Lange J, Lederman MM, Lieberman J, Miller CJ, Moore JP, Mosier DE, Richman DD, Schooley RT, Springer MS, Veazey RS, Wainberg MA. Whither or wither Microbicides? *Science* 321(5888):532-4, 2008. Epub 2008/07/26. doi: 10.1126/science.1160355. PubMed PMID: 18653884; PMCID: PMC2835691.
558. Butler DM, Smith DM, Cachay ER, Hightower GK, Nugent CT, Richman DD, Little SJ. Herpes Simplex Virus 2 Serostatus and Viral Loads of HIV-1 in Blood and Semen as Risk Factors for HIV Transmission among Men Who Have Sex with Men. *AIDS* 22(13):1667-71, 2008. Epub 2008/08/02. doi: 10.1097/QAD.0b013e32830bfed8. PubMed PMID: 18670228; PMCID: PMC2653089.
559. Johnson VA, Brun-Vézinet F, Clotet B, Günthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: Fall 2008. *Topics in HIV Medicine* 16:119-126, 2008.
560. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vézinet F, Geretti AM, Boucher CA, Richman DD. Guide to Management of HIV Drug Resistance, Antiretrovirals Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects. 8th Edition, Fundacio de Lluita contra la SIDA, 1-502, 2008
561. Binley JM, Lybarger EA, Crooks ET, Seaman MS, Gray E, Davis KL, Decker JM, Wycuff D, Harris L, Hawkins N, Wood B, Nathe C, Richman D, Tomaras GD, Bibollet-Ruche F, Robinson JE, Morris L, Shaw GM, Montefiori DC, Mascola JR. Profiling the Specificity of Neutralizing Antibodies in a Large Panel of Plasmas from Patients Chronically Infected with Human Immunodeficiency Virus Type 1 Subtypes B and C. *Journal of Virology* 82(23):11651-68, 2008. Epub 2008/09/26. doi: 10.1128/jvi.01762-08. PubMed PMID: 18815292; PMCID: PMC2583680.
562. Mascolini M, Larder BA, Boucher CA, Richman DD, Mellors JW. Broad Advances in Understanding HIV Resistance to Antiretrovirals: Report on the XVII International HIV Drug Resistance Workshop. *Antiviral Therapy* 13(8):1097-113, 2008. Epub 2009/02/07. PubMed PMID: 19195337.
563. Precopio ML, Butterfield TR, Casazza JP, Little SJ, Richman DD, Koup RA, Roederer M. Optimizing Peptide Matrices for Identifying T-Cell Antigens. *Cytometry A* 73(11):1071-8, 2008. Epub 2008/09/11. doi: 10.1002/cyto.a.20646. PubMed PMID: 18781655; PMCID: PMC2586828.
564. Clinical Virology. edited by Richman DD, Whitley RJ, Hayden FG. ASM Press, Washington DC. 3rd Edition, 1,375 pages, 2009.
565. Ances BM, Sisti D, Vaida F, Liang CL, Leontiev O, Perthen JE, Buxton RB, Benson D, Smith DM, Little SJ, Richman DD, Moore DJ, Ellis RJ. Resting Cerebral Blood Flow: A Potential Biomarker of the

- Effects of HIV in the Brain. *Neurology* 73(9):702-8, 2009. Epub 2009/09/02. doi: 10.1212/WNL.0b013e3181b59a97. PubMed PMID: 19720977; PMCID: PMC2734291.
566. Butler DM, Pacold ME, Jordan PS, Richman DD, Smith DM. The Efficiency of Single Genome Amplification and Sequencing Is Improved by Quantitation and Use of a Bioinformatics Tool. *Journal of Virological Methods* 162(1-2):280-3, 2009. Epub 2009/08/25. doi: 10.1016/j.jviromet.2009.08.002. PubMed PMID: 19698751; PMCID: PMC2761514.
567. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. Guide to Management of HIV Drug Resistance, Antiretrovirals Pharmacokinetics and Viral Hepatitis in HIV Infected Subjects. 9th Edition, Fundacio de Lluita contra la SIDA, 408 pages, 2009.
568. Eron JJ, Jr., Park JG, Haubrich R, Aweeka F, Bastow B, Pakes GE, Yu S, Wu H, Richman DD. Predictive Value of Pharmacokinetics-Adjusted Phenotypic Susceptibility on Response to Ritonavir-Enhanced Protease Inhibitors (Pis) in Human Immunodeficiency Virus-Infected Subjects Failing Prior Pi Therapy. *Antimicrobial Agents and Chemotherapy* 53(6):2335-41, 2009. Epub 2009/03/25. doi: 10.1128/aac.01387-08. PubMed PMID: 19307363; PMCID: PMC2687257.
569. Richman DD, Whitley RJ, Hayden FG. Introduction, Chapter 1, In: Clinical Virology. Edited by Richman DD, Whitley RJ, Hayden FG. ASM Press, Washington DC; 3rd Edition, 2009.
570. Guatelli JC, Siliciano RF, Kuritzkes DR, Richman DD. Chapter 33, Human Immunodeficiency Virus. In: Clinical Virology. Edited by Richman DD, Whitley RJ, Hayden FG. ASM Press, Washington DC; 3rd Edition, 2009.
571. Johnson VA, Brun-Vezinet F, Clotet B, Gunthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: December 2009. *Topics in HIV Medicine* 17(5):138-45, 2009. Epub 2010/01/14. PubMed PMID: 20068260.
572. Jordan PS, Poon A, Eron J, Squires K, Ignacio C, Richman DD, Smith DM. A Novel Codon Insert in Protease of Clade B HIV Type 1. *AIDS Research and Human Retroviruses* 25(5):547-50, 2009. Epub 2009/04/29. doi: 10.1089/aid.2008.0310. PubMed PMID: 19397401; PMCID: PMC2749665.
573. Mascolini M, Boucher CA, Mellors JW, Larder BA, Richman DD. Progress in Basic and Clinical Research on HIV Resistance: Report on the Xviii International HIV Drug Resistance Workshop. *Antiviral Therapy* 14(7):1015-37, 2009. Epub 2009/11/18. doi: 10.3851/imp1423. PubMed PMID: 19918107.
574. Montaner JS, Richman DD, Hammer SM. Poor Agreement between 2 Assays for Measuring Low Levels of HIV-1 Viral Load. *Clinical Infectious Diseases* 49(8):1283-4, 2009. Epub 2009/09/29. doi: 10.1086/605688. PubMed PMID: 19780662.
575. Nugent CT, Dockter J, Bernardin F, Hecht R, Smith D, Delwart E, Pilcher C, Richman D, Busch M, Giachetti C. Detection of HIV-1 in Alternative Specimen Types Using the APTIMA HIV-1 RNA Qualitative Assay. *Journal of Virological Methods* 159(1):10-4, 2009. Epub 2009/05/16. doi: 10.1016/j.jviromet.2009.02.015. PubMed PMID: 19442838; PMCID: PMC2930826
576. Nugent CT, Nodelman V, Giachetti C, Richman DD, Looney DJ. Evaluation of a Highly Sensitive Qualitative Human Immunodeficiency Virus Type 1 (HIV-1) RNA Assay for Detection of HIV-1

- Suppression. *Journal of Clinical Microbiology* 47(3):833-6, 2009. Epub 2009/01/01. doi: 10.1128/jcm.01464-08. PubMed PMID: 19116355; PMCID: PMC2650919.
577. Poon AF, Swenson LC, Dong WW, Deng W, Kosakovsky Pond SL, Brumme ZL, Mullins JI, Richman DD, Harrigan PR, Frost SD. Phylogenetic Analysis of Population-Based and Deep Sequencing Data to Identify Coevolving Sites in the Nef Gene of HIV-1. *Molecular Biology and Evolution* 27(4):819-32, 2010. Epub 2009/12/04. doi: 10.1093/molbev/msp289. PubMed PMID: 19955476; PMCID: PMC2877536.
578. Richman DD, Margolis DM, Delaney M, Greene WC, Hazuda D, Pomerantz RJ. The Challenge of Finding a Cure for HIV Infection. *Science* 323(5919):1304-7, 2009. Epub 2009/03/07. doi: 10.1126/science.1165706. PubMed PMID: 19265012.
579. Smith DM, May SJ, Perez-Santiago J, Strain MC, Ignacio CC, Haubrich RH, Richman DD, Benson CA, Little SJ. The Use of Pooled Viral Load Testing to Identify Antiretroviral Treatment Failure. *AIDS* 23(16):2151-8, 2009. Epub 2009/09/05. doi: 10.1097/QAD.0b013e3283313ca9. PubMed PMID: 19730348; PMCID: PMC2915784.
580. Smith DM, May SJ, Tweeten S, Drumright L, Pacold ME, Kosakovsky Pond SL, Pesano RL, Lie YS, Richman DD, Frost SD, Woelk CH, Little SJ. A Public Health Model for the Molecular Surveillance of HIV Transmission in San Diego, California. *AIDS* 23(2):225-32, 2009. Epub 2008/12/23. doi: 10.1097/QAD.0b013e32831d2a81. PubMed PMID: 19098493; PMCID: PMC2644048.
581. Smith DM, Zarate S, Shao H, Pillai SK, Letendre SL, Wong JK, Richman DD, Frost SD, Ellis RJ. Pleocytosis Is Associated with Disruption of HIV Compartmentalization between Blood and Cerebral Spinal Fluid Viral Populations. *Virology* 385(1):204-8, 2009. Epub 2008/12/23. doi: 10.1016/j.virol.2008.11.010. PubMed PMID: 19100592; PMCID: PMC2794037.
582. Yukl S, Pillai S, Li P, Chang K, Pasutti W, Ahlgren C, Havlir D, Strain M, Gunthard H, Richman D, Rice AP, Daar E, Little S, Wong JK. Latently-Infected CD4+ T Cells Are Enriched for HIV-1 Tat Variants with Impaired Transactivation Activity. *Virology* 387(1):98-108, 2009. Epub 2009/03/10. doi: 10.1016/j.virol.2009.01.013. PubMed PMID: 19268337; PMCID: PMC4474533
583. Clotet B, Menéndez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. Guide to Management of HIV Drug Resistance, Antiretrovirals Pharmacokinetics and Viral Hepatitis in HIV Infected Patients. 10th Edition Fundacio de Lluita contra la SIDA, 422 pages, 2012.
584. Butler DM, Delport W, Kosakovsky Pond SL, Lakdawala MK, Cheng PM, Little SJ, Richman DD, Smith DM. The Origins of Sexually Transmitted HIV among Men Who Have Sex with Men. *Science Translational Medicine* 2(18):18re1, 2010. Epub 2010/04/08. doi: 10.1126/scitranslmed.3000447. PubMed PMID: 20371483; PMCID: PMC2945226.
585. Committee on Planning the Assessment/Evaluation of Programs Implemented Under the U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008. Strategic Approach to the Evaluation of Programs Implemented Under the Tom Lantos and Henry J. Hyde U.S. Global Leadership against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008. The National Academies Press, Washington, D.C., 197 pp., 2010.

586. Gianella S, Richman DD. Minority Variants of Drug-Resistant HIV. *Journal of Infectious Diseases* 202(5):657-66, 2010. Epub 2010/07/24. doi: 10.1086/655397. PubMed PMID: 20649427; PMCID: PMC2916955.
587. Goicoechea M, Jain S, Bi L, Sun S, Smith G, Ha B, Richman D, Louie S, Haubrich R. Interlaboratory Measurement Differences in Intracellular Carbovir Triphosphate Concentrations in HIV-Infected Patients: Sources of Variability in Processing, Shipping, and Quantitation. *Journal of Clinical Pharmacology* 50(8):968-74, 2010. Epub 2009/12/03. doi: 10.1177/0091270009352186. PubMed PMID: 19952374.
588. Goicoechea M, Jain S, Bi L, Kemper C, Daar ES, Diamond C, Ha B, Flaherty J, Sun S, Richman D, Louie S, Haubrich R. Abacavir and Tenofovir Disoproxil Fumarate Co-Administration Results in a Nonadditive Antiviral Effect in HIV-1-Infected Patients. *AIDS* 24(5):707-16, 2010. Epub 2010/01/21. doi: 10.1097/QAD.0b013e32833676eb. PubMed PMID: 20087154.
589. International HIV Controllers Study, Pereyra F, Jia X, McLaren PJ, Telenti A, de Bakker PI, Walker BD, Ripke S, Brumme CJ, Pulit SL, Carrington M, Kadie CM, Carlson JM, Heckerman D, Graham RR, Plenge RM, Deeks SG, Gianniny L, Crawford G, Sullivan J, Gonzalez E, Davies L, Camargo A, Moore JM, Beattie N, Gupta S, Crenshaw A, Burtt NP, Guiducci C, Gupta N, Gao X, Qi Y, Yuki Y, Piechocka-Trocha A, Cutrell E, Rosenberg R, Moss KL, Lemay P, O'Leary J, Schaefer T, Verma P, Toth I, Block B, Baker B, Rothchild A, Lian J, Proudfoot J, Alvino DM, Vine S, Addo MM, Allen TM, Altfeld M, Henn MR, Le Gall S, Streeck H, Haas DW, Kuritzkes DR, Robbins GK, Shafer RW, Gulick RM, Shikuma CM, Haubrich R, Riddler S, Sax PE, Daar ES, Ribaudo HJ, Agan B, Agarwal S, Ahern RL, Allen BL, Altidor S, Altschuler EL, Ambardar S, Anastos K, Anderson B, Anderson V, Andrade U, Antoniskis D, Bangsberg D, Barbaro D, Barrie W, Bartczak J, Barton S, Basden P, Basgoz N, Bazner S, Bellos NC, Benson AM, Berger J, Bernard NF, Bernard AM, Birch C, Bodner SJ, Bolan RK, Boudreaux ET, Bradley M, Braun JF, Brndjar JE, Brown SJ, Brown K, Brown ST, Burack J, Bush LM, Cafaro V, Campbell O, Campbell J, Carlson RH, Carmichael JK, Casey KK, Cavacuiti C, Celestin G, Chambers ST, Chez N, Chirc LM, Cimoch PJ, Cohen D, Cohn LE, Conway B, Cooper DA, Cornelison B, Cox DT, Cristofano MV, Cuchural G, Jr., Czartoski JL, Dahman JM, Daly JS, Davis BT, Davis K, Davod SM, DeJesus E, Dietz CA, Dunham E, Dunn ME, Ellerin TB, Eron JJ, Fangman JJ, Farel CE, Ferlazzo H, Fidler S, Fleenor-Ford A, Frankel R, Freedberg KA, French NK, Fuchs JD, Fuller JD, Gaberman J, Gallant JE, Gandhi RT, Garcia E, Garmon D, Gathe JC, Jr., Gaultier CR, Gebre W, Gilman FD, Gilson I, Goepfert PA, Gottlieb MS, Goulston C, Groger RK, Gurley TD, Haber S, Hardwicke R, Hardy WD, Harrigan PR, Hawkins TN, Heath S, Hecht FM, Henry WK, Hladek M, Hoffman RP, Horton JM, Hsu RK, Huhn GD, Hunt P, Hupert MJ, Illeman ML, Jaeger H, Jellinger RM, John M, Johnson JA, Johnson KL, Johnson H, Johnson K, Joly J, Jordan WC, Kauffman CA, Khanlou H, Killian RK, Kim AY, Kim DD, Kinder CA, Kirchner JT, Kogelman L, Kojic EM, Korthuis PT, Kurisu W, Kwon DS, LaMar M, Lampiris H, Lanzafame M, Lederman MM, Lee DM, Lee JM, Lee MJ, Lee ET, Lemoine J, Levy JA, Llibre JM, Liguori MA, Little SJ, Liu AY, Lopez AJ, Loutfy MR, Loy D, Mohammed DY, Man A, Mansour MK, Marconi VC, Markowitz M, Marques R, Martin JN, Martin HL, Jr., Mayer KH, McElrath MJ, McGhee TA, McGovern BH, McGowan K, McIntyre D, McLeod GX, Menezes P, Mesa G, Metroka CE, Meyer-Olson D, Miller AO, Montgomery K, Mounzer KC, Nagami EH, Nagin I, Nahass RG, Nelson MO, Nielsen C, Norene DL, O'Connor DH, Ojikutu BO, Okulicz J, Oladehin OO, Oldfield EC, 3rd, Olander SA, Ostrowski M, Owen WF, Jr., Pae E, Parsonnet J, Pavlatos AM, Perlmutter AM, Pierce MN, Pincus JM, Pisani L, Price LJ, Proia L, Prokesch RC, Pujet HC, Ramgopal M, Rathod A, Rausch M, Ravishankar J, Rhame FS, Richards CS, Richman DD, Rodes B, Rodriguez M, Rose RC, 3rd, Rosenberg ES, Rosenthal D, Ross PE, Rubin DS, Rumbaugh E, Saenz L, Salvaggio MR, Sanchez WC, Sanjana VM, Santiago S, Schmidt W, Schuitemaker H, Sestak PM, Shalit P, Shay W, Shirvani VN, Silebi VI, Sizemore JM, Jr., Skolnik PR, Sokol-Anderson M, Sosman JM, Stabile P, Stapleton JT, Starrett S,

- Stein F, Stellbrink HJ, Sterman FL, Stone VE, Stone DR, Tambussi G, Taplitz RA, Tedaldi EM, Telenti A, Theisen W, Torres R, Tosiello L, Tremblay C, Tribble MA, Trinh PD, Tsao A, Ueda P, Vaccaro A, Valadas E, Vanig TJ, Vecino I, Vega VM, Veikley W, Wade BH, Walworth C, Wanidworanun C, Ward DJ, Warner DA, Weber RD, Webster D, Weis S, Wheeler DA, White DJ, Wilkins E, Winston A, Wlodaver CG, van't Wout A, Wright DP, Yang OO, Yurdin DL, Zabukovic BW, Zachary KC, Zeeman B, Zhao M. The Major Genetic Determinants of HIV-1 Control Affect HLA Class I Peptide Presentation. *Science* 330(6010):1551-7, 2010. Epub 2010/11/06. doi: 10.1126/science.1195271. PubMed PMID: 21051598; PMCID: PMC3235490.
590. Johnson VA, Brun-Vezinet F, Clotet B, Gunthard HF, Kuritzkes DR, Pillay D, Schapiro JM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: December 2010. *Topics in HIV Medicine* 18(5):156-63, 2010. Epub 2011/01/20. PubMed PMID: 21245516.
591. Manosuthi W, Butler DM, Chanratita W, Sukasem C, Richman DD, Smith DM. Patients Infected with HIV Type 1 Subtype CRF01_AE and Failing First-Line Nevirapine- and Efavirenz-Based Regimens Demonstrate Considerable Cross-Resistance to Etravirine. *AIDS Research and Human Retroviruses* 26(6):609-11, 2010. Epub 2010/05/29. doi: 10.1089/aid.2009.0107. PubMed PMID: 20507208; PMCID: PMC2982719.
592. Manosuthi W, Butler DM, Chanratita W, Sukasem C, Richman DD, Smith DM. Patients Infected with HIV Type 1 Subtype CRF01_AE and Failing First-Line Nevirapine- and Efavirenz-Based Regimens Demonstrate Considerable Cross-Resistance to Etravirine. *AIDS Research and Human Retroviruses* 26(6):609-11, 2010. Epub 2010/05/29. doi: 10.1089/aid.2009.0107. PubMed PMID: 20507208; PMCID: PMC2982719.
593. Markowitz M, Vaida F, Hare CB, Boden D, Mohri H, Hecht FM, Kalayjian RC, Conrad A, Mildvan D, Aberg J, Hogan C, Kilby JM, Balfour HH, Jr., Schafer K, Richman D, Little S. The Virologic and Immunologic Effects of Cyclosporine as an Adjunct to Antiretroviral Therapy in Patients Treated During Acute and Early HIV-1 Infection. *Journal of Infectious Diseases* 201(9):1298-302, 2010. Epub 2010/03/20. doi: 10.1086/651664. PubMed PMID: 20235838; PMCID: PMC2851487.
594. Morris SR, Little SJ, Cunningham T, Garfein RS, Richman DD, Smith DM. Evaluation of an HIV Nucleic Acid Testing Program with Automated Internet and Voicemail Systems to Deliver Results. *Annals of Internal Medicine* 152(12):778-85, 2010. Epub 2010/06/16. doi: 10.7326/0003-4819-152-12-201006150-00005. PubMed PMID: 20547906; PMCID: PMC2922925.
595. Pacold M, Smith D, Little S, Cheng PM, Jordan P, Ignacio C, Richman D, Pond SK. Comparison of Methods to Detect HIV Dual Infection. *AIDS Research and Human Retroviruses* 26(12):1291-8, 2010. Epub 2010/10/20. doi: 10.1089/aid.2010.0042. PubMed PMID: 20954840; PMCID: PMC3011997.
596. Thompson MA, Aberg JA, Cahn P, Montaner JS, Rizzardini G, Telenti A, Gatell JM, Gunthard HF, Hammer SM, Hirsch MS, Jacobsen DM, Reiss P, Richman DD, Volberding PA, Yeni P, Schooley RT. Antiretroviral Treatment of Adult HIV Infection: 2010 Recommendations of the International AIDS Society-USA Panel. *JAMA* 304(3):321-33, 2010. Epub 2010/07/20. doi: 10.1001/jama.2010.1004. PubMed PMID: 20639566.
597. Woelk CH, Beliakova-Bethell N, Goicoechea M, Zhao Y, Du P, Rought SE, Lozach J, Perez-Santiago J, Richman DD, Smith DM, Little SJ. Gene Expression before HAART Initiation Predicts HIV-Infected

- Individuals at Risk of Poor CD4+ T-Cell Recovery. AIDS 24(2):217-22, 2010. Epub 2009/12/03. doi: 10.1097/QAD.0b013e328334f1f0. PubMed PMID: 19952713; PMCID: PMC2915828.
598. Gianella S, Delport W, Pacold ME, Young JA, Choi JY, Little SJ, Richman DD, Kosakovsky Pond SL, Smith DM. Detection of Minority Resistance During Early HIV-1 Infection: Natural Variation and Spurious Detection Rather Than Transmission and Evolution of Multiple Viral Variants. Journal of Virology 85(16):8359-67, 2011. Epub 2011/06/03. doi: 10.1128/JVI.02582-10. PubMed PMID: 21632754; PMCID: PMC3147985.
 599. Homann S, Smith D, Little S, Richman D, Guatelli J. Upregulation of BST-2/Tetherin by HIV Infection in Vivo. Journal of Virology 85(20):10659-68, 2011. Epub 2011/08/19. doi: 10.1128/jvi.05524-11. PubMed PMID: 21849457; PMCID: PMC3187519.
 600. Johnson VA, Calvez V, Gunthard HF, Paredes R, Pillay D, Shafer R, Wensing AM, Richman DD. 2011 Update of the Drug Resistance Mutations in HIV-1. Topics in Antiviral Medicine 19(4):156-64, 2011. Epub 2011/12/14. PubMed PMID: 22156218; PMCID: PMC6148877.
 601. Magee WC, Valiaeva N, Beadle JR, Richman DD, Hostetler KY, Evans DH. Inhibition of HIV-1 by Octadecyloxyethyl Esters of (S)-[3-Hydroxy-2-(Phosphonomethoxy)Propyl] Nucleosides and Evaluation of Their Mechanism of Action. Antimicrobial Agents and Chemotherapy 55(11):5063-72, 2011. Epub 2011/09/08. doi: 10.1128/aac.05161-11. PubMed PMID: 21896914; PMCID: PMC3195056.
 602. Mascolini M, Mellors JW, Richman DD, Boucher CA, Larder BA. HIV and Hepatitis Virus Resistance to Antivirals: Review of Data from the XIX International HIV and Hepatitis Virus Drug Resistance Workshop and Curative Strategies. Antiviral Therapy 16(2):263-86, 2011. Epub 2011/03/31. doi: 10.3851/imp1761. PubMed PMID: 21447877.
 603. Meditz AL, MaWhinney S, Allshouse A, Feser W, Markowitz M, Little S, Hecht R, Daar ES, Collier AC, Margolick J, Kilby JM, Routy JP, Conway B, Kaldor J, Levy J, Schooley R, Cooper DA, Altfeld M, Richman D, Connick E. Sex, Race, and Geographic Region Influence Clinical Outcomes Following Primary HIV-1 Infection. Journal of Infectious Diseases 203(4):442-51, 2011. Epub 2011/01/20. doi: 10.1093/infdis/jiq085. PubMed PMID: 21245157; PMCID: PMC3071223.
 604. Richman DD. Introduction: Challenges to Finding a Cure for HIV Infection. Current Opinion in HIV and AIDS 6(1):1-3, 2011. Epub 2011/01/19. doi: 10.1097/COH.0b013e328340ffa6. PubMed PMID: 21242886; PMCID: PMC3077900.
 605. Tilghman MW, Guerena DD, Licea A, Perez-Santiago J, Richman DD, May S, Smith DM. Pooled Nucleic Acid Testing to Detect Antiretroviral Treatment Failure in Mexico. Journal of Acquired Immune Deficiency Syndromes 56(3):e70-4, 2011. Epub 2010/12/03. doi: 10.1097/QAI.0b013e3181ff63d7. PubMed PMID: 21124228; PMCID: PMC3039117. Archin NM, Liberty AL, Kashuba AD, Choudhary SK, Kuruc JD, Crooks AM, Parker DC, Anderson EM, Kearney MF, Strain MC, Richman DD, Hudgens MG, Bosch RJ, Coffin JM, Eron JJ, Hazuda DJ, Margolis DM. Administration of Vorinostat Disrupts HIV-1 Latency in Patients on Antiretroviral Therapy. Nature 487(7408):482-5, 2012. Epub. doi: 10.1038/nature11286. PubMed PMID: 22837004; PMCID: PMC3704185.
 606. Gianella S, Mehta SR, Strain MC, Young JA, Vargas MV, Little SJ, Richman DD, Kosakovsky Pond SL, Smith DM. Impact of Seminal Cytomegalovirus Replication on HIV-1 Dynamics between Blood and

- Semen. *Journal of Medical Virology* 84(11):1703-9, 2012. Epub 2012/09/22. doi: 10.1002/jmv.23398. PubMed PMID: 22997072; PMCID: PMC3472447.
607. Gianella S, Morris SR, Anderson C, Spina CA, Vargas MV, Young JA, Richman DD, Little SJ, Smith DM. Herpes Viruses and HIV-1 Drug Resistance Mutations Influence the Virologic and Immunologic Milieu of the Male Genital Tract. *AIDS* 27(1):39-47, 2013. Epub 2012/06/29. doi: 10.1097/QAD.0b013e3283573305. PubMed PMID: 22739399; PMCID: PMC3769229.
608. Gianella S, Strain MC, Rought SE, Vargas MV, Little SJ, Richman DD, Spina CA, Smith DM. Associations Between Virologic and Immunologic Dynamics in Blood and in the Male Genital Tract. *Journal of Virology* 86(3):1307-15, 2012. Epub 2011/11/25. doi: 10.1128/jvi.06077-11. PubMed PMID: 22114342; PMCID: PMC3264378.
609. Mehta SR, Kosakovsky Pond SL, Young JA, Richman D, Little S, Smith DM. Associations between Phylogenetic Clustering and HLA Profile among HIV-Infected Individuals in San Diego, California. *Journal of Infectious Diseases* 205(10):1529-33, 2012. Epub 2012/03/27. doi: 10.1093/infdis/jis231. PubMed PMID: 22448013; PMCID: PMC3415817.
610. Pacold ME, Pond SL, Wagner GA, Delport W, Bourque DL, Richman DD, Little SJ, Smith DM. Clinical, Virologic, and Immunologic Correlates of HIV-1 Intraclade B Dual Infection among Men Who Have Sex with Men. *AIDS* 26(2):157-65, 2012. Epub 2011/11/03. doi: 10.1097/QAD.0b013e32834dcd26. PubMed PMID: 22045341; PMCID: PMC3807679.
611. Richman DD. Antiretroviral Drug Resistance in Resource-Limited Settings. *Lancet* 380(9849):1210-1, 2012. Epub 2012/07/26. doi: 10.1016/S0140-6736(12)61188-X. PubMed PMID: 22828483.
612. Thompson MA, Aberg JA, Hoy JF, Telenti A, Benson C, Cahn P, Eron JJ, Gunthard HF, Hammer SM, Reiss P, Richman DD, Rizzardini G, Thomas DL, Jacobsen DM, Volberding PA. Antiretroviral Treatment of Adult HIV Infection: 2012 Recommendations of the International Antiviral Society-USA Panel. *JAMA* 308(4):387-402, 2012. Epub 2012/07/24. doi: 10.1001/jama.2012.7961. PubMed PMID: 22820792.
613. Clotet B, Menendez-Arias L, Schapiro JM, Kuritzkes D, Burger D, Rockstroh JK, Soriano V, Telenti A, Brun-Vezinet F, Geretti AM, Boucher CA, Richman DD. The HIV and Hepatitis Drug Resistance and Pharmacokinetics Guide. Barcelona, Spain: Fundacio de Lluita contra la SIDA; 676 p. 2012.
614. Tilghman MW, May S, Perez-Santiago J, Ignacio CC, Little SJ, Richman DD, Smith DM. A Combined Screening Platform for HIV Treatment Failure and Resistance. *PloS One* 7(4):e35401, 2012. Epub 2012/05/09. doi: 10.1371/journal.pone.0035401. PubMed PMID: 22563383; PMCID: PMC3338506.
615. Gianella S, Mehta SR, Young JA, Vargas MV, Little SJ, Richman DD, Kosakovsky Pond SL, Smith DM. Sexual Transmission of Predicted CXCR4-Tropic HIV-1 Likely Originating from the Source Partner's Seminal Cells. *Virology* 434(1):2-4, 2012. Epub 2012/10/09. doi: 10.1016/j.virol.2012.09.010. PubMed PMID: 23040890; PMCID: PMC3485073.
616. Gianella S, Morris SR, Vargas MV, Young JA, Callahan B, Richman DD, Little SJ, Smith DM. Role of Seminal Shedding of Herpesviruses in HIV Type 1 Transmission. *Journal of Infectious Diseases* 207(2):257-61, 2013. Epub 2012/11/14. doi: 10.1093/infdis/jis683. PubMed PMID: 23148284; PMCID: PMC3532824.

617. Soto PC, Karris MY, Spina CA, Richman DD, Varki A. Cell-Intrinsic Mechanism Involving Siglec-5 Associated with Divergent Outcomes of HIV-1 Infection in Human and Chimpanzee CD4 T cells. *Journal of Molecular Medicine (Berlin, Germany)* 91(2):261-70, 2013. Epub 2012/09/05. doi: 10.1007/s00109-012-0951-7. PubMed PMID: 22945238; PMCID: PMC3558668.
618. Stadeli KM, Richman DD. Rates of Emergence of HIV Drug Resistance in Resource-Limited Settings: A Systematic Review. *Antiviral Therapy* 18(1):115-23, 2013. Epub 2012/10/12. doi: 10.3851/imp2437. PubMed PMID: 23052978; PMCID: PMC4295493.
619. Wie SH, Du P, Luong TQ, Rought SE, Beliakova-Bethell N, Lozach J, Corbeil J, Kornbluth RS, Richman DD, Woelk CH. HIV Downregulates Interferon-Stimulated Genes in Primary Macrophages. *Journal of Interferon and Cytokine Research* 33(2):90-5, 2013. Epub 2013/01/02. doi: 10.1089/jir.2012.0052. PubMed PMID: 23276142; PMCID: PMC3573720.
620. Le T, Wright EJ, Smith DM, He W, Catano G, Okulicz JF, Young JA, Clark RA, Richman DD, Little SJ, Ahuja SK. Enhanced CD4+ T-Cell Recovery with Earlier HIV-1 Antiretroviral Therapy. *New England Journal of Medicine* 368(3):218-30, 2013. Epub 2013/01/18. doi: 10.1056/NEJMoa1110187. PubMed PMID: 23323898; PMCID: PMC3657555.
621. Choi JY, Hightower GK, Wong JK, Heaton R, Woods S, Grant I, Marcotte TD, Ellis RJ, Letendre SL, Collier AC, Marra CM, Clifford DB, Gelman BB, McArthur JC, Morgello S, Simpson DM, McCutchan JA, Richman DD, Smith DM. Genetic Features of Cerebrospinal Fluid-Derived Subtype B HIV-1 Tat. *Journal of Neurovirology* 18(2):81-90, 2012. Epub 2012/04/25. doi: 10.1007/s13365-011-0059-9. PubMed PMID: 22528397; PMCID: PMC3572198.
622. Hightower GK, Wong JK, Letendre SL, Umlauf AA, Ellis RJ, Ignacio CC, Heaton RK, Collier AC, Marra CM, Clifford DB, Gelman BB, McArthur JC, Morgello S, Simpson DM, McCutchan JA, Grant I, Little SJ, Richman DD, Kosakovsky Pond SL, Smith DM, CHARTER Study Group. Higher HIV-1 Genetic Diversity Is Associated with AIDS and Neuropsychological Impairment. *Virology* 433(2):498-505, 2012. Epub 2012/09/25. doi: 10.1016/j.virol.2012.08.028. PubMed PMID: 22999095; PMCID: PMC3466337.
623. Gianella S, Anderson CM, Vargas MV, Richman DD, Little SJ, Morris SR, Smith DM. Cytomegalovirus DNA in Semen and Blood Is Associated with Higher Levels of Proviral HIV DNA. *Journal of Infectious Diseases* 207(6):898-902, 2013. Epub 2013/01/01. doi: 10.1093/infdis/jis777. PubMed PMID: 23275608; PMCID: PMC3571441.
624. Strain MC, Richman DD. New Assays for Monitoring Residual HIV Burden in Effectively Treated Individuals. *Current Opinion in HIV and AIDS* 8(2):106-10, 2013. Epub 2013/01/15. doi: 10.1097/COH.0b013e32835d811b. PubMed PMID: 23314907; PMCID: PMC3754420.
625. Beliakova-Bethell N, Zhang JX, Singhania A, Lee V, Terry VH, Richman DD, Spina CA, Woelk CH. Suberoylanilide Hydroxamic Acid Induces Limited Changes in the Transcriptome of Primary CD4(+) T cells. *AIDS* 27(1):29-37, 2013. Epub 2012/12/12. doi: 10.1097/QAD.0b013e32835b3e26. PubMed PMID: 23221426; PMCID: PMC3752851.
626. Strain MC, Lada SM, Luong T, Rought SE, Gianella S, Terry VH, Spina CA, Woelk CH, Richman DD. Highly Precise Measurement of HIV DNA by Droplet Digital PCR. *PloS One* 8(4):e55943, 2013. Epub 2013/04/11. doi: 10.1371/journal.pone.0055943. PubMed PMID: 23573183; PMCID: PMC3616050.

627. Wagner GA, Pacold ME, Vigil E, Caballero G, Morris SR, Kosakovsky Pond SL, Little SJ, Richman DD, Gianella S, Smith DM. Using Ultradep Pyrosequencing to Study HIV-1 Coreceptor Usage in Primary and Dual Infection. *Journal of Infectious Diseases* 208(2):271-4, 2013. Epub 2013/04/20. doi: 10.1093/infdis/jit168. PubMed PMID: 23599311; PMCID: PMC3685231.
628. Johnson VA, Calvez V, Gunthard HF, Paredes R, Pillay D, Shafer RW, Wensing AM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: March 2013. *Topics in Antiviral Medicine* 21(1):6-14, 2013. Epub 2013/04/19. PubMed PMID: 23596273; PMCID: PMC6148891.
629. Eriksson S, Graf EH, Dahl V, Strain MC, Yukl SA, Lysenko ES, Bosch RJ, Lai J, Chioma S, Emad F, Abdel-Mohsen M, Hoh R, Hecht F, Hunt P, Somsouk M, Wong J, Johnston R, Siliciano RF, Richman DD, O'Doherty U, Palmer S, Deeks SG, Siliciano JD. Comparative Analysis of Measures of Viral Reservoirs in HIV-1 Eradication Studies. *PLoS Pathogens* 9(2):e1003174, 2013. Epub 2013/03/06. doi: 10.1371/journal.ppat.1003174. PubMed PMID: 23459007; PMCID: PMC3573107.
630. Rouzioux C, Richman D. How to Best Measure HIV Reservoirs? *Current Opinion in HIV and AIDS* 8(3):170-5, 2013. Epub 2013/04/09. doi: 10.1097/COH.0b013e32835fc619. PubMed PMID: 23564004; PMCID: PMC3763804. Yukl SA, Boritz E, Busch M, Bentsen C, Chun TW, Douek D, Eisele E, Haase A, Ho YC, Hutter G, Justement JS, Keating S, Lee TH, Li P, Murray D, Palmer S, Pilcher C, Pillai S, Price RW, Rothenberger M, Schacker T, Siliciano J, Siliciano R, Sinclair E, Strain M, Wong J, Richman D, Deeks SG. Challenges in Detecting HIV Persistence During Potentially Curative Interventions: A Study of the Berlin Patient. *PLoS Pathogens* 9(5):e1003347, 2013. Epub 2013/05/15. doi: 10.1371/journal.ppat.1003347. PubMed PMID: 23671416; PMCID: PMC3649997.
631. Perez-Santiago J, Gianella S, Massanella M, Spina CA, Karris MY, Var SR, Patel D, Jordan PS, Young JA, Little SJ, Richman DD, Smith DM. Gut Lactobacillales Are Associated with Higher CD4 and Less Microbial Translocation During HIV Infection. *AIDS* 27(12):1921-31, 2013. Epub 2013/11/02. PubMed PMID: 24180001; PMCID: PMC3816380.
632. Katlama C, Deeks SG, Autran B, Martinez-Picado J, van Lunzen J, Rouzioux C, Miller M, Vella S, Schmitz JE, Ahlers J, Richman DD, Sekaly RP. Barriers to a Cure for HIV: New Ways to Target and Eradicate HIV-1 Reservoirs. *Lancet* 381(9883):2109-17, 2013. Epub 2013/04/02. doi: 10.1016/s0140-6736(13)60104-x. PubMed PMID: 23541541; PMCID: PMC3815451.
633. Gianella S, Smith DM, Vargas MV, Little SJ, Richman DD, Daar ES, Dube MP, Zhang F, Ginocchio CC, Haubrich RH, Morris SR, the CCTG 592 Team. Shedding of HIV and Human Herpesviruses in the Semen of Effectively Treated HIV-1-Infected Men Who Have Sex with Men. *Clinical Infectious Diseases* 57(3):441-7, 2013. Epub 2013/04/19. doi: 10.1093/cid/cit252. PubMed PMID: 23595831; PMCID: PMC3703105.
634. Wie SH, Du P, Luong TQ, Rought SE, Beliakova-Bethell N, Lozach J, Corbeil J, Kornbluth RS, Richman DD, Woelk CH. HIV Downregulates Interferon-Stimulated Genes in Primary Macrophages. *Journal of Interferon and Cytokine Research* 33(2):90-5, 2013. Epub 2013/01/02. doi: 10.1089/jir.2012.0052. PubMed PMID: 23276142; PMCID: PMC3573720.
635. Hatano H, Strain MC, Scherzer R, Bacchetti P, Wentworth D, Hoh R, Martin JN, McCune JM, Neaton JD, Tracy RP, Hsue PY, Richman DD, Deeks SG. Increase in 2-Long Terminal Repeat Circles and Decrease in D-dimer after Raltegravir Intensification in Patients with Treated HIV Infection: A Randomized, Placebo-Controlled Trial. *Journal of Infectious Diseases* 208(9):1436-42, 2013. Epub 2013/08/27. doi: 10.1093/infdis/jit453. PubMed PMID: 23975885; PMCID: PMC3789577.

636. Xu Y, Duggineni S, Espitia S, Richman DD, An J, Huang Z. A Synthetic Bivalent Ligand of CXCR4 Inhibits HIV Infection. *Biochemical and Biophysical Research Communications* 435(4):646-50, 2013. Epub 2013/05/22. doi: 10.1016/j.bbrc.2013.05.038. PubMed PMID: 23688427; PMCID: PMC3752463.
637. Johnson VA, Calvez V, Gunthard HF, Paredes R, Pillay D, Shafer RW, Wensing AM, Richman DD. Update of the Drug Resistance Mutations in HIV-1: March 2013. *Topics in Antiviral Medicine* 21(1):6-14, 2013. Epub 2013/04/19. PubMed PMID: 23596273; PMCID: PMC6148891.
638. Persaud D, Gay H, Ziemniak C, Chen YH, Piatak M, Jr., Chun TW, Strain M, Richman D, Luzuriaga K. Absence of Detectable HIV-1 Viremia after Treatment Cessation in an Infant. *New England Journal of Medicine* 369(19):1828-35, 2013. Epub 2013/10/25. doi: 10.1056/NEJMoa1302976. PubMed PMID: 24152233; PMCID: PMC3954754.
639. Massanella M, Singhania A, Beliakova-Bethell N, Pier R, Lada SM, White CH, Perez-Santiago J, Blanco J, Richman DD, Little SJ, Woelk CH. Differential Gene Expression in HIV-Infected Individuals Following ART. *Antiviral Research* 100(2):420-8, 2013. Epub 2013/08/13. doi: 10.1016/j.antiviral.2013.07.017. PubMed PMID: 23933117; PMCID: PMC3899918.
640. Hightower GK, May SJ, Perez-Santiago J, Pacold ME, Wagner GA, Little SJ, Richman DD, Mehta SR, Smith DM, Pond SL. HIV-1 Clade B Pol Evolution Following Primary Infection. *PLoS One* 8(6):e68188, 2013. Epub 2013/07/11. doi: 10.1371/journal.pone.0068188. PubMed PMID: 23840830; PMCID: PMC3695957.
641. Chaillon A, Gianella S, Vazquez H, Ignacio C, Zweig AC, Richman DD, Smith DM. Novel Codon Insert in HIV Type 1 Clade B Reverse Transcriptase Associated with Low-Level Viremia During Antiretroviral Therapy. *AIDS Research and Human Retroviruses* 30(2):165-9, 2014. Epub 2013/09/12. doi: 10.1089/aid.2013.0202. PubMed PMID: 24020934; PMCID: PMC3910474.
642. Chaillon A, Wagner GA, Hepler NL, Little SJ, Kosakovsky Pond SL, Caballero G, Pacold ME, Phung P, Wrin T, Richman DD, Wertheim JO, Smith DM. Dynamics of Viral Evolution and Neutralizing Antibody Response after HIV-1 Superinfection. *Journal of Virology* 87(23):12737-44, 2013. Epub 2013/09/21. doi: 10.1128/jvi.02260-13. PubMed PMID: 24049166; PMCID: PMC3838120.
643. DeBoever C, Reid EG, Smith EN, Wang X, Dumaop W, Harismendy O, Carson D, Richman D, Masliah E, Frazer KA. Whole Transcriptome Sequencing Enables Discovery and Analysis of Viruses in Archived Primary Central Nervous System Lymphomas. *PLoS One* 8(9):e73956, 2013. Epub 2013/09/12. doi: 10.1371/journal.pone.0073956. PubMed PMID: 24023918; PMCID: PMC3762708.
644. Coen D, Richman D. Antiviral Agents. In: Knipe DM, Howley PM. Editors. *Fields Virology*. 6th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; p. 338-74, 2013.
645. Committee on the Outcome and Impact Evaluation of Global HIV/AIDS Programs Implemented Under the Lantos-Hyde Act of 2008. Evaluation of PEPFAR. IOM (Institute of Medicine). Washington, DC: The National Academies Press, 814 pages, 2013.
646. Wagner GA, Pacold ME, Kosakovsky Pond SL, Caballero G, Chaillon A, Rudolph AE, Morris SR, Little SJ, Richman DD, Smith DM. Incidence and Prevalence of Intrasubtype HIV-1 Dual Infection in at-Risk Men in the United States. *Journal of Infectious Diseases* 209(7):1032-8, 2014. Epub 2013/11/26. doi: 10.1093/infdis/jit633. PubMed PMID: 24273040; PMCID: PMC3952674.

647. Gianella S, Morris SR, Tatro E, Vargas MV, Haubrich RH, Daar ES, Dube MP, Richman DD, Little SJ, Smith DM. Virologic Correlates of Anti-CMV IgG Levels in HIV-1-Infected Men. *Journal of Infectious Diseases* 209(3):452-6, 2014. Epub 2013/08/22. doi: 10.1093/infdis/jit434. PubMed PMID: 23964106; PMCID: PMC3883163.
648. Chaillon A, Gianella S, Massanella Luna M, Little SJ, Richman DD, Mehta SR. A Case Cluster Demonstrating the Relationship between HLA Concordance and Virologic and Disease Outcomes in Human Immunodeficiency Virus Infection. *Virology* 449:104-8, 2014. Epub 2014/01/15. doi: 10.1016/j.virol.2013.11.012. PubMed PMID: 24418543; PMCID: PMC3895440.
649. Tatro ET, Purnajo I, Richman DD, Smith DM, Gianella S. Antibody Response to Achromobacter Xylosoxidans During HIV Infection Is Associated with Lower CD4 Levels and Increased Lymphocyte Activation. *Clinical and Vaccine Immunology* 21(1):46-50, 2014. Epub 2013/11/01. doi: 10.1128/cvi.00553-13. PubMed PMID: 24173027; PMCID: PMC3910916.
650. Chaillon A, Gianella S, Wertheim JO, Richman DD, Mehta SR, Smith DM. HIV Migration between Blood and Cerebrospinal Fluid or Semen over Time. *Journal of Infectious Diseases* 209(10):1642-52, 2014. Epub 2013/12/05. doi: 10.1093/infdis/jit678. PubMed PMID: 24302756; PMCID: PMC3997580.
651. Tilghman MW, Perez-Santiago J, Osorio G, Little SJ, Richman DD, Mathews WC, Haubrich RH, Smith DM. Community HIV-1 Drug Resistance Is Associated with Transmitted Drug Resistance. *HIV Medicine* 15(6):339-46, 2014. Epub 2014/01/15. doi: 10.1111/hiv.12122. PubMed PMID: 24417811; PMCID: PMC4055747.
652. Wertheim JO, Leigh Brown AJ, Hepler NL, Mehta SR, Richman DD, Smith DM, Kosakovsky Pond SL. The Global Transmission Network of HIV-1. *Journal of Infectious Diseases* 209(2):304-13, 2014. Epub 2013/10/24. doi: 10.1093/infdis/jit524. PubMed PMID: 24151309; PMCID: PMC3873788.
653. Richman DD. Editorial Commentary: Extending HIV Drug Resistance Testing to Low Levels of Plasma Viremia. *Clinical Infectious Diseases* 58(8):1174-5, 2014. Epub 2014/01/17. doi: 10.1093/cid/ciu025. PubMed PMID: 24429434.
654. Karris MY, Kao YT, Patel D, Dawson M, Woods SP, Vaida F, Spina C, Richman D, Little S, Smith DM. Predictors of Virologic Response in Persons Who Start Antiretroviral Therapy During Recent HIV Infection. *AIDS* 28(6):841-9, 2014. Epub 2014/01/10. doi: 10.1097/qad.0000000000000149. PubMed PMID: 24401640; PMCID: PMC4049563.
655. Luzuriaga K, Tabak B, Garber M, Chen YH, Ziemniak C, McManus MM, Murray D, Strain MC, Richman DD, Chun TW, Cunningham CK, Persaud D. HIV Type 1 (HIV-1) Proviral Reservoir Decay Continuously under Sustained Virologic Control in HIV-1-Infected Children Who Received Early Treatment. *Journal of Infectious Diseases* 210(10):1529-38, 2014. Epub 2014/05/23. doi: 10.1093/infdis/jiu297. PubMed PMID: 24850788; PMCID: PMC4215073.
656. Kim EY, Lorenzo-Redondo R, Little SJ, Chung YS, Phalora PK, Maljkovic Berry I, Archer J, Penugonda S, Fischer W, Richman DD, Bhattacharya T, Malim MH, Wolinsky SM. Human APOBEC3 Induced Mutation of Human Immunodeficiency Virus Type-1 Contributes to Adaptation and Evolution in Natural Infection. *PLoS Pathogens* 10(7):e1004281, 2014. Epub 2014/08/01. doi: 10.1371/journal.ppat.1004281. PubMed PMID: 25080100; PMCID: PMC4117599.

657. Wensing AM, Calvez V, Gunthard HF, Johnson VA, Paredes R, Pillay D, Shafer RW, Richman DD. 2014 Update of the Drug Resistance Mutations in HIV-1. *Topics in Antiviral Medicine* 22(3):642-50, 2014. Epub 2014/08/08. PubMed PMID: 25101529; PMCID: PMC4392881.
658. Hepler NL, Scheffler K, Weaver S, Murrell B, Richman DD, Burton DR, Poignard P, Smith DM, Kosakovsky Pond SL. IDEPI: Rapid Prediction of HIV-1 Antibody Epitopes and Other Phenotypic Features from Sequence Data Using a Flexible Machine Learning Platform. *PLoS Computational Biology* 10(9):e1003842, 2014. Epub 2014/09/26. doi: 10.1371/journal.pcbi.1003842. PubMed PMID: 25254639; PMCID: PMC4177671.
659. Archin NM, Bateson R, Tripathy MK, Crooks AM, Yang KH, Dahl NP, Kearney MF, Anderson EM, Coffin JM, Strain MC, Richman DD, Robertson KR, Kashuba AD, Bosch RJ, Hazuda DJ, Kuruc JD, Eron JJ, Margolis DM. HIV-1 Expression within Resting CD4+ T Cells after Multiple Doses of Vorinostat. *Journal of Infectious Diseases* 210(5):728-35, 2014. Epub 2014/03/13. doi: 10.1093/infdis/jiu155. PubMed PMID: 24620025; PMCID: PMC4148603.
660. Okulicz JF, Le TD, Agan BK, Camargo JF, Landrum ML, Wright E, Dolan MJ, Ganesan A, Ferguson TM, Smith DM, Richman DD, Little SJ, Clark RA, He W, Ahuja SK. Influence of the Timing of Antiretroviral Therapy on the Potential for Normalization of Immune Status in Human Immunodeficiency Virus 1-Infected Individuals. *JAMA Intern Med* 175(1):88-99, 2015. Epub 2014/11/25. doi: 10.1001/jamainternmed.2014.4010. PubMed PMID: 25419650; PMCID: PMC4286496.
661. Gianella S, Massanella M, Richman DD, Little SJ, Spina CA, Vargas MV, Lada SM, Daar ES, Dube MP, Haubrich RH, Morris SR, Smith DM, California Collaborative Treatment Group 592 Team. Cytomegalovirus Replication in Semen Is Associated with Higher Levels of Proviral HIV DNA and CD4+ T Cell Activation During Antiretroviral Treatment. *Journal of Virology* 88(14):7818-27, 2014. Epub 2014/05/03. doi: 10.1128/jvi.00831-14. PubMed PMID: 24789781; PMCID: PMC4097769.
662. Menéndez-Arias L, Richman DD. Editorial Overview: Antivirals and Resistance: Advances and Challenges Ahead. *Current Opinion in Virology* 8:iv-vii, 2014. Epub 2014/08/27. doi: 10.1016/j.coviro.2014.08.002. PubMed PMID: 25155454.
663. Cockerham LR, Siliciano JD, Sinclair E, O'Doherty U, Palmer S, Yukl SA, Strain MC, Chomont N, Hecht FM, Siliciano RF, Richman DD, Deeks SG. CD4+ and CD8+ T Cell Activation Are Associated with HIV DNA in Resting CD4+ T Cells. *PloS One* 9(10):e110731, 2014. Epub 2014/10/24. doi: 10.1371/journal.pone.0110731. PubMed PMID: 25340755; PMCID: PMC4207702.
664. Massanella M, Ouchi D, Marfil S, Llibre JM, Puertas MC, Buzon MJ, Richman DD, Orna E, Stevenson M, Gatell JM, Domingo P, Negredo E, Martinez-Picado J, Clotet B, Blanco J. Different Plasma Markers of Inflammation Are Influenced by Immune Recovery and cART Composition or Intensification in Treated HIV Infected Individuals. *PloS One* 9(12):e114142, 2014. Epub 2014/12/03. doi: 10.1371/journal.pone.0114142. PubMed PMID: 25462535; PMCID: PMC4252101.
665. Wang C, Abdel-Mohsen M, Strain MC, Lada SM, Yukl S, Cockerham LR, Pilcher CD, Hecht FM, Sinclair E, Liegler T, Richman DD, Deeks SG, Pillai SK. Decreased HIV Type 1 Transcription in CCR5-Delta32 Heterozygotes During Suppressive Antiretroviral Therapy. *Journal of Infectious Diseases* 210(11):1838-43, 2014. Epub 2014/06/18. doi: 10.1093/infdis/jiu338. PubMed PMID: 24935955; PMCID: PMC4271057.

666. Richman DD, Joep MA Lange. Antiviral Therapy 19(4):325-6, 2014. Epub 2014/08/15. doi: 10.3851/imp2847. PubMed PMID: 25118622.
667. Persaud D, Patel K, Karalius B, Rainwater-Lovett K, Ziemniak C, Ellis A, Chen YH, Richman D, Siberry GK, Van Dyke RB, Burchett S, Seage GR, 3rd, Luzuriaga K. Influence of Age at Virologic Control on Peripheral Blood Human Immunodeficiency Virus Reservoir Size and Serostatus in Perinatally Infected Adolescents. JAMA Pediatr 168(12):1138-46, 2014. Epub 2014/10/07. doi: 10.1001/jamapediatrics.2014.1560. PubMed PMID: 25286283; PMCID: PMC4324476.
668. Carter CC, Wagner GA, Hightower GK, Caballero G, Phung P, Richman DD, Pond SL, Smith DM. HIV-1 Neutralizing Antibody Response and Viral Genetic Diversity Characterized with Next Generation Sequencing. Virology 474:34-40, 2015. Epub 2014/12/03. doi: 10.1016/j.virol.2014.10.019. PubMed PMID: 25463602; PMCID: PMC4259848.
669. Abdel-Mohsen M, Wang C, Strain MC, Lada SM, Deng X, Cockerham LR, Pilcher CD, Hecht FM, Liegler T, Richman DD, Deeks SG, Pillai SK. Select Host Restriction Factors Are Associated with HIV Persistence During Antiretroviral Therapy. AIDS 29(4):411-20, 2015. Epub 2015/01/21. doi: 10.1097/qad.0000000000000572. PubMed PMID: 25602681; PMCID: PMC4385712.
670. Massanella M, Gianella S, Lada SM, Richman DD, Strain MC. Quantification of Total and 2-LTR (Long Terminal Repeat) HIV DNA, HIV RNA and Herpesvirus DNA in PBMCs. Bio Protoc 5(11), 2015. Epub 2015/06/05. PubMed PMID: 27478862; PMCID: PMC4962884.
671. Massanella M, Gianella S, Schrier R, Dan JM, Perez-Santiago J, Oliveira MF, Richman DD, Little SJ, Benson CA, Daar ES, Dube MP, Haubrich RH, Smith DM, Morris SR, the CCTG 592 collaborative group. Methamphetamine Use in HIV-Infected Individuals Affects T-Cell Function and Viral Outcome During Suppressive Antiretroviral Therapy. Scientific Reports 5:13179, 2015. Epub 2015/08/25. doi: 10.1038/srep13179. PubMed PMID: 26299251; PMCID: PMC4547398.
672. Shafer RW. The Future of HIV-1 Therapeutics. Resistance is Futile? Ed. Torbett B, Goodsell DS, Richman DD. Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America 62(1):136-7, 2016. Epub 12/09. doi: 10.1093/cid/civ806. PubMed PMID: PMC4678109.
673. Rokx C, Richman DD, Muller-Trutwin M, Silvestri G, Lunzen J, Khoo S, Lichtenfeld M, Altfeld M, Perno CF, Hunt PW, Mallon P, Rockstroh JK, Pozniak AL, Clotet B, Boucher CA. Second European Round Table on the Future Management of HIV: 10-11 October 2014, Barcelona, Spain. J Virus Erad 1(3):211-20, 2015. Epub 2015/01/01. PubMed PMID: 27482415; PMCID: PMC4946744.
674. Procopio FA, Fromentin R, Kulpa DA, Brehm JH, Bebin AG, Strain MC, Richman DD, O'Doherty U, Palmer S, Hecht FM, Hoh R, Barnard RJ, Miller MD, Hazuda DJ, Deeks SG, Sekaly RP, Chomont N. A Novel Assay to Measure the Magnitude of the Inducible Viral Reservoir in HIV-Infected Individuals. EBioMedicine 2(8):874-83, 2015. Epub 2015/10/02. doi: 10.1016/j.ebiom.2015.06.019. PubMed PMID: 26425694; PMCID: PMC4563128.
675. Ruggiero A, De Spiegelaere W, Cozzi-Lepri A, Kiselinova M, Pollakis G, Beloukas A, Vandekerckhove L, Strain M, Richman D, Phillips A, Geretti AM on behalf of the ERAS Study Group. During Stably Suppressive Antiretroviral Therapy Integrated HIV-1 DNA Load in Peripheral Blood Is Associated with the Frequency of CD8 Cells Expressing HLA-DR/DP/DQ. EBioMedicine 2(9):1153-9, 2015. Epub 2015/10/27. doi: 10.1016/j.ebiom.2015.07.025. PubMed PMID: 26498496; PMCID: PMC4588402.

676. Gianella S, Anderson CM, Richman DD, Smith DM, Little SJ. No Evidence of Posttreatment Control after Early Initiation of Antiretroviral Therapy. *AIDS* 29(16):2093-7, 2015. Epub 2015/11/07. doi: 10.1097/qad.0000000000000816. PubMed PMID: 26544575; PMCID: PMC4638137.
677. Reardon B, Beliakova-Bethell N, Spina CA, Singhania A, Margolis DM, Richman DR, Woelk CH. Dose-Responsive Gene Expression in Suberoylanilide Hydroxamic Acid-Treated Resting CD4+ T Cells. *AIDS* 29(17):2235-44, 2015. Epub 2015/08/11. doi: 10.1097/qad.0000000000000839. PubMed PMID: 26258524; PMCID: PMC4917679.
678. White CH, Johnston HE, Moesker B, Manousopoulou A, Margolis DM, Richman DD, Spina CA, Garbis SD, Woelk CH, Beliakova-Bethell N. Mixed Effects of Suberoylanilide Hydroxamic Acid (SAHA) on the Host Transcriptome and Proteome and Their Implications for HIV Reactivation from Latency. *Antiviral Research* 123:78-85, 2015. Epub 2015/09/08. doi: 10.1016/j.antiviral.2015.09.002. PubMed PMID: 26343910; PMCID: PMC5606336.
679. Wensing AM, Calvez V, Gunthard HF, Johnson VA, Paredes R, Pillay D, Shafer RW, Richman DD. 2015 Update of the Drug Resistance Mutations in HIV-1. *Topics in Antiviral Medicine* 23(4):132-41, 2015. Epub 2015/12/30. PubMed PMID: 26713503; PMCID: PMC6148920.
680. Richman DD. HIV: Cure By Killing. *Nature*. 2015;528 (7581):198-9. Epub 2015/12/04, PubMed PMID: 26633623.
681. Rhee SY, Jordan MR, Raizes E, Chua A, Parkin N, Kantor R, Van Zyl GU, Mukui I, Hosseinipour MC, Frenkel LM, Ndembib N, Hamers RL, Rinke de Wit TF, Wallis CL, Gupta RK, Fokam J, Zeh C, Schapiro JM, Carmona S, Katzenstein D, Tang M, Aghokeng AF, De Oliveira T, Wensing AM, Gallant JE, Wainberg MA, Richman DD, Fitzgibbon JE, Schito M, Bertagnolio S, Yang C, Shafer RW. HIV-1 Drug Resistance Mutations: Potential Applications for Point-of-Care Genotypic Resistance Testing. *PloS One* 10(12):e0145772, 2015. Epub 2015/12/31. doi: 10.1371/journal.pone.0145772. PubMed PMID: 26717411; PMCID: PMC4696791.
682. Panichsillapakit T, Smith DM, Wertheim JO, Richman DD, Little SJ, Mehta SR. Prevalence of Transmitted HIV Drug Resistance among Recently Infected Persons in San Diego, Ca 1996-2013. *Journal of Acquired Immune Deficiency Syndromes* 71(2):228-36, 2016. Epub 2015/09/29. doi: 10.1097/qai.0000000000000831. PubMed PMID: 26413846; PMCID: PMC4712087.
683. Massanella M, Richman DD. Measuring the Latent Reservoir in Vivo. *Journal of Clinical Investigation* 126(2):464-72, 2016. Epub 2016/02/02. doi: 10.1172/jci80567. PubMed PMID: 26829625; PMCID: PMC4731179.
684. Gianella S, Anderson CM, Var SR, Oliveira MF, Lada SM, Vargas MV, Massanella M, Little SJ, Richman DD, Strain MC, Perez-Santiago J, Smith DM. Replication of Human Herpesviruses Is Associated with Higher HIV DNA Levels During Antiretroviral Therapy Started at Early Phases of HIV Infection. *Journal of Virology* 90(8):3944-52, 2016. Epub 2016/02/05. doi: 10.1128/jvi.02638-15. PubMed PMID: 26842469; PMCID: PMC4810527.
685. Richman DD, Nathanson N. Antiviral Therapy. In *Viral Pathogenesis*, Third Edition, Academic Press, Chapter 20, 271-285, 2016.
686. Richman DD. Editorial Commentary: HIV Is Putting up Less Resistance. *Clinical Infectious Diseases* 62(10):1318-9, 2016. Epub 2016/03/11. doi: 10.1093/cid/ciw130. PubMed PMID: 26962077.

687. Panichsillapakit T, Patel D, Santangelo J, Richman DD, Little SJ, Smith DM. Colorectal Disorders in Acute Human Immunodeficiency Virus Infection: A Case Series. *Open Forum Infect Dis* 3(1):ofw014, 2016. Epub 2016/03/01. doi: 10.1093/ofid/ofw014. PubMed PMID: 26925432; PMCID: PMC4766383.
688. Bruner KM, Murray AJ, Pollack RA, Soliman MG, Laskey SB, Capoferri AA, Lai J, Strain MC, Lada SM, Hoh R, Ho YC, Richman DD, Deeks SG, Siliciano JD, Siliciano RF. Defective Proviruses Rapidly Accumulate During Acute HIV-1 Infection. *Nature Medicine* 22(9):1043-9, 2016. Epub 2016/08/09. doi: 10.1038/nm.4156. PubMed PMID: 27500724; PMCID: PMC5014606.
689. Mehta SR, Murrell B, Anderson CM, Kosakovsky Pond SL, Wertheim JO, Young JA, Freitas L, Richman DD, Mathews WC, Scheffler K, Little SJ, Smith DM. Using HIV Sequence and Epidemiologic Data to Assess the Effect of Self-Referral Testing for Acute HIV Infection on Incident Diagnoses in San Diego, California. *Clinical Infectious Diseases* 63(1):101-7, 2016. Epub 2016/05/14. doi: 10.1093/cid/ciw161. PubMed PMID: 27174704; PMCID: PMC4901863.
690. Deeks SG, Lewin SR, Ross AL, Ananworanich J, Benkirane M, Cannon P, Chomont N, Douek D, Lifson JD, Lo YR, Kuritzkes D, Margolis D, Mellors J, Persaud D, Tucker JD, Barre-Sinoussi F, Alter G, Auerbach J, Autran B, Barouch DH, Behrens G, Cavazzana M, Chen Z, Cohen EA, Corbelli GM, Eholie S, Eyal N, Fidler S, Garcia L, Grossman C, Henderson G, Henrich TJ, Jefferys R, Kiem HP, McCune J, Moodley K, Newman PA, Nijhuis M, Nsubuga MS, Ott M, Palmer S, Richman D, Saez-Cirion A, Sharp M, Siliciano J, Silvestri G, Singh J, Spire B, Taylor J, Tolstrup M, Valente S, van Lunzen J, Walensky R, Wilson I, Zack J, International AIDS Society Towards a Cure Working Group. International AIDS Society Global Scientific Strategy: Towards an HIV Cure 2016. *Nature Medicine* 22(8):839-50, 2016. Epub 2016/07/12. doi: 10.1038/nm.4108. PubMed PMID: 27400264; PMCID: PMC5322797.
691. Wagner GA, Chaillon A, Liu S, Franklin DR, Jr., Caballero G, Kosakovsky Pond SL, Vaida F, Heaton RK, Letendre SL, Grant I, Richman DD, Smith DM. HIV-Associated Neurocognitive Disorder Is Associated with HIV-1 Dual Infection. *AIDS* 30(17):2591-7, 2016. Epub 2016/10/27. doi: 10.1097/qad.0000000000001237. PubMed PMID: 27536983; PMCID: PMC5083206.
692. White CH, Moesker B, Beliakova-Bethell N, Martins LJ, Spina CA, Margolis DM, Richman DD, Planelles V, Bosque A, Woelk CH. Transcriptomic Analysis Implicates the P53 Signaling Pathway in the Establishment of HIV-1 Latency in Central Memory CD4 T Cells in an in Vitro Model. *PLoS Pathogens* 12(11):e1006026, 2016. Epub 2016/11/30. doi: 10.1371/journal.ppat.1006026. PubMed PMID: 27898737; PMCID: PMC5127598.
693. Karris MY, Umlauf A, Vaida F, Richman D, Little S, Smith D. A Randomized Controlled Clinical Trial on the Impact of CCR5 Blockade with Maraviroc in Early Infection on T-Cell Dynamics. *Medicine (Baltimore)* 95(44):e5315, 2016. Epub 2016/11/20. doi: 10.1097/md.0000000000005315. PubMed PMID: 27858912; PMCID: PMC5591160.
694. Laird Smith M, Murrell B, Eren K, Ignacio C, Landais E, Weaver S, Phung P, Ludka C, Hepler L, Caballero G, Pollner T, Guo Y, Richman D, Poignard P, Paxinos EE, Kosakovsky Pond SL, Smith DM. Rapid Sequencing of Complete Env Genes from Primary HIV-1 Samples. *Virus Evol* 2(2):vew018, 2016. Epub 2016/07/08. doi: 10.1093/ve/vew018. PubMed PMID: 29492273; PMCID: PMC5822884.
695. Lee SA, Bacchetti P, Chomont N, Fromentin R, Lewin SR, O'Doherty U, Palmer S, Richman DD, Siliciano JD, Yukl SA, Deeks SG, Burbelo PD. Anti-HIV Antibody Responses and the HIV Reservoir Size During Antiretroviral Therapy. *PloS One* 11(8):e0160192, 2016. Epub 2016/08/03. doi: 10.1371/journal.pone.0160192. PubMed PMID: 27483366; PMCID: PMC4970722.

696. Richman DD, Whitley RJ, Hayden FG. Clinical Virology, Edited by Richman DD, Whitley RJ, Hayden FG. 4th Edition. ASM Press Washington DC; 1-1489, 2017.
697. Richman DD, Whitley RJ, Hayden FG. Chapter 1, Introduction. In: Clinical Virology, Edited by Richman DD, Whitley RJ, Heyden FG. 4th Edition. ASM Press Washington DC; 1-5, 2017.
698. Guatelli JC, Siliciano RF, Kuritzkes DR, Richman DD. Chapter 33, Human Immunodeficiency Virus. In: Clinical Virology. Edited by Richman DD, Whitley RJ Hayden FG. 4th Edition. ASM Press, Washington DC; 795-840, 2017.
699. Wensing AM, Calvez V, Gunthard HF, Johnson VA, Paredes R, Pillay D, Shafer RW, Richman DD. 2017 Update of the Drug Resistance Mutations in HIV-1. *Topics in Antiviral Medicine* 24(4):132-3, 2017. Epub 2017/02/17. PubMed PMID: 28208121; PMCID: PMC5677049.
700. Benson CA, Currier JS, Del Rio C, Gallant JE, Gulick RM, Marrazzo JM, Richman DD, Saag MS, Schooley RT, Volberding PA. A Conversation among the IAS-USA Board of Directors: Hot Topics and Emerging Data in HIV Research and Care. *Topics in Antiviral Medicine* 24(4):142-51, 2017. Epub 2017/02/17. PubMed PMID: 28208122; PMCID: PMC5677050.
701. Richman DD. HIV: Finding Latent Needles in a Haystack. *Nature* 543(7646):499-500, 2017. Epub 2017/03/16. doi: 10.1038/nature21899. PubMed PMID: 28297707.
702. Honeycutt JB, Thayer WO, Baker CE, Ribeiro RM, Lada SM, Cao Y, Cleary RA, Hudgens MG, Richman DD, Garcia JV. HIV Persistence in Tissue Macrophages of Humanized Myeloid-Only Mice During Antiretroviral Therapy. *Nature Medicine* 23(5):638-43, 2017. Epub 2017/04/18. doi: 10.1038/nm.4319. PubMed PMID: 28414330; PMCID: PMC5419854.
703. Choi JY, Pond SLK, Anderson CM, Richman DD, Smith DM. Molecular Features of the V1-V4 Coding Region of Sexually Transmitted Human Immunodeficiency Virus Type 1. *Journal of Infectious Diseases* 215(10):1506-13, 2017. Epub 2017/04/19. doi: 10.1093/infdis/jix184. PubMed PMID: 28419276; PMCID: PMC6281333.
704. Yek C, Massanella M, Peling T, Lednovich K, Nair SV, Worlock A, Vargas M, Gianella S, Ellis RJ, Strain MC, Busch MP, Nugent CT, Richman DD. Evaluation of the Aptima HIV-1 Quant Dx Assay for HIV-1 RNA Quantitation in Different Biological Specimen Types. *Journal of Clinical Microbiology* 55(8):2544-53, 2017. Epub 2017/06/09. doi: 10.1128/jcm.00425-17. PubMed PMID: 28592548; PMCID: PMC5527433.
705. Beliakova-Bethell N, Hezareh M, Wong JK, Strain MC, Lewinski MK, Richman DD, Spina CA. Relative Efficacy of T Cell Stimuli as Inducers of Productive HIV-1 Replication in Latently Infected CD4 Lymphocytes from Patients on Suppressive cART. *Virology* 508:127-33, 2017. Epub 2017/05/21. doi: 10.1016/j.virol.2017.05.008. PubMed PMID: 28527342; PMCID: PMC5654527.
706. Richman DD, Gallo RC. Mark Wainberg. *Current Opinion in HIV and AIDS* 12(5):423-4, 2017. Epub 2017/08/05. doi: 10.1097/COH.0000000000000394. PubMed PMID: 28771448.
707. Chaillon A, Gianella S, Lada SM, Perez-Santiago J, Jordan P, Ignacio C, Karris M, Richman DD, Mehta SR, Little SJ, Wertheim JO, Smith DM. Size, Composition, and Evolution of HIV DNA Populations During Early Antiretroviral Therapy and Intensification with Maraviroc. *Journal of Virology* 92(3), 2018. Epub 2017/11/17. doi: 10.1128/jvi.01589-17. PubMed PMID: 29142136; PMCID: PMC5774877.

708. Henrich TJ, Hatano H, Bacon O, Hogan LE, Rutishauser R, Hill A, Kearney MF, Anderson EM, Buchbinder SP, Cohen SE, Abdel-Mohsen M, Pohlmeier CW, Fromentin R, Hoh R, Liu AY, McCune JM, Spindler J, Metcalf-Pate K, Hobbs KS, Thanh C, Gibson EA, Kuritzkes DR, Siliciano RF, Price RW, Richman DD, Chomont N, Siliciano JD, Mellors JW, Yukl SA, Blankson JN, Liegler T, Deeks SG. HIV-1 Persistence Following Extremely Early Initiation of Antiretroviral Therapy (ART) During Acute HIV-1 Infection: An Observational Study. *PLoS Medicine* 14(11):e1002417, 2017. Epub 2017/11/08. doi: 10.1371/journal.pmed.1002417. PubMed PMID: 29112956; PMCID: PMC5675377.
709. Cummins NW, Rizza S, Litzow MR, Hua S, Lee GQ, Einkauf K, Chun TW, Rhame F, Baker JV, Busch MP, Chomont N, Dean PG, Fromentin R, Haase AT, Hampton D, Keating SM, Lada SM, Lee TH, Natesampillai S, Richman DD, Schacker TW, Wietgrefe S, Yu XG, Yao JD, Zeuli J, Lichterfeld M, Badley AD. Extensive Virologic and Immunologic Characterization in an HIV-Infected Individual Following Allogeneic Stem Cell Transplant and Analytic Cessation of Antiretroviral Therapy: A Case Study. *PLoS Medicine* 14(11):e1002461, 2017. Epub 2017/11/29. doi: 10.1371/journal.pmed.1002461. PubMed PMID: 29182633; PMCID: PMC5705162.
710. Wagner GA, Landais E, Caballero G, Phung P, Kosakovsky Pond SL, Poignard P, Richman DD, Little SJ, Smith DM. Intrasubtype B HIV-1 Superinfection Correlates with Delayed Neutralizing Antibody Response. *Journal of Virology* 91(17), 2017. Epub 2017/06/16. doi: 10.1128/jvi.00475-17. PubMed PMID: 28615205; PMCID: PMC5553187.
711. White CH, Beliakova-Bethell N, Lada SM, Breen MS, Hurst TP, Spina CA, Richman DD, Frater J, Magiorkinis G, Woelk CH. Transcriptional Modulation of Human Endogenous Retroviruses in Primary CD4+ T Cells Following Vorinostat Treatment. *Frontiers in Immunology* 9:603, 2018. Epub 2018/05/01. doi: 10.3389/fimmu.2018.00603. PubMed PMID: 29706951; PMCID: PMC5906534.
712. Sadanand S, Das J, Chung AW, Schoen MK, Lane S, Suscovich TJ, Streeck H, Smith DM, Little SJ, Lauffenburger DA, Richman DD, Alter G. Temporal Variation in HIV-Specific IgG Subclass Antibodies During Acute Infection Differentiates Spontaneous Controllers from Chronic Progressors. *AIDS* 32(4):443-50, 2018. Epub 2017/12/15. doi: 10.1097/qad.0000000000001716. PubMed PMID: 29239894; PMCID: PMC5983383.
713. Hermans LE, Moorhouse M, Carmona S, Grobbee DE, Hofstra LM, Richman DD, Tempelman HA, Venter WDF, Wensing AMJ. Effect of HIV-1 Low-Level Viraemia During Antiretroviral Therapy on Treatment Outcomes in WHO-Guided South African Treatment Programmes: A Multicentre Cohort Study. *Lancet Infectious Diseases* 18(2):188-97, 2018. Epub 2017/11/22. doi: 10.1016/S1473-3099(17)30681-3. PubMed PMID: 29158101.
714. Abdel-Mohsen M, Kuri-Cervantes L, Grau-Exposito J, Spivak AM, Nell RA, Tomescu C, Vadrevu SK, Giron LB, Serra-Peinado C, Genesca M, Castellvi J, Wu G, Del Rio Estrada PM, Gonzalez-Navarro M, Lynn K, King CT, Vemula S, Cox K, Wan Y, Li Q, Mounzer K, Kostman J, Frank I, Paiardini M, Hazuda D, Reyes-Teran G, Richman D, Howell B, Tebas P, Martinez-Picado J, Planelles V, Buzon MJ, Betts MR, Montaner LJ. CD32 Is Expressed on Cells with Transcriptionally Active HIV but Does Not Enrich for HIV DNA in Resting T cells. *Science Translational Medicine* 10(437), 2018. Epub 2018/04/20. doi: 10.1126/scitranslmed.aar6759. PubMed PMID: 29669853; PMCID: PMC6282755.
715. Ruggiero A, Cozzi-Lepri A, Beloukas A, Richman D, Khoo S, Phillips A, Geretti AM; on behalf of the ERAS Study Group. Factors Associated with Persistence of Plasma HIV-1 RNA During Long-Term Continuously Suppressive Firstline Antiretroviral Therapy. *Open Forum Infect Dis* 5(2):ofy032, 2018. Epub 2018/03/07. doi: 10.1093/ofid/ofy032. PubMed PMID: 29507867; PMCID: PMC5825920.

716. Encyclopedia of AIDS. Editors: Hope TJ, Douglas DD, Stevenson M, editors. 1 ed. New York, NY: Springer; 2018. pp. 2192.
717. Papasavvas E, Lada SM, Joseph J, Yin X, Liu Q, Azzoni L, Mounzer K, Kostman JR, Richman D, Montaner LJ. Analytical ART Interruption Does Not Irreversibly Change Pre-Interruption Levels of Cellular HIV. *AIDS*, 2018. Epub 2018/06/13. doi: 10.1097/qad.0000000000001909. PubMed PMID: 29894387; PMCID: PMC6289896.
718. Gunthard HF, Calvez V, Paredes R, Pillay D, Shafer RW, Wensing AM, Jacobsen DM, Richman DD. Human Immunodeficiency Virus Drug Resistance: 2018 Recommendations of the International Antiviral Society-USA Panel. *Clinical Infectious Diseases* 68(2):177-87, 2019. Epub 2018/07/28. doi: 10.1093/cid/ciy463. PubMed PMID: 30052811; PMCID: PMC6321850.
719. Lofano G, Gorman MJ, Yousif AS, Yu WH, Fox JM, Dugast AS, Ackerman ME, Suscovich TJ, Weiner J, Barouch D, Streeck H, Little S, Smith D, Richman D, Lauffenburger D, Walker BD, Diamond MS, Alter G. Antigen-Specific Antibody Fc Glycosylation Enhances Humoral Immunity Via the Recruitment of Complement. *Sci Immunol* 3(26), 2018. Epub 2018/08/19. doi: 10.1126/sciimmunol.aat7796. PubMed PMID: 30120121; PMCID: PMC6298214.
720. Rothenberger M, Wagner JE, Haase A, Richman D, Grzywacz B, Strain M, Lada S, Estes J, Fletcher CV, Podany AT, Anderson J, Schmidt T, Wietgrefe S, Schacker T, Verneris MR. Transplantation of CCR532 Homozygous Umbilical Cord Blood in a Child with Acute Lymphoblastic Leukemia and Perinatally Acquired HIV Infection. *Open Forum Infect Dis* 5(5):ofy090, 2018. Epub 2018/06/06. doi: 10.1093/ofid/ofy090. PubMed PMID: 29868623; PMCID: PMC5965100.
721. Lada SM, Huang K, VanBelzen DJ, Montaner LJ, O'Doherty U, Richman DD. Quantitation of Integrated HIV Provirus by Pulsed-Field Gel Electrophoresis and Droplet Digital PCR. *Journal of Clinical Microbiology* 56(12), 2018. Epub 2018/09/21. doi: 10.1128/jcm.01158-18. PubMed PMID: 30232127; PMCID: PMC6258838.
722. Massanella M, Yek C, Lada SM, Nakazawa M, Shefa N, Huang K, Richman DD. Improved Assays to Measure and Characterize the Inducible HIV Reservoir. *EBioMedicine* 36:113-21, 2018. Epub 2018/10/15. doi: 10.1016/j.ebiom.2018.09.036. PubMed PMID: 30316868; PMCID: PMC6197429.
723. Gunthard HF, Calvez V, Paredes R, Pillay D, Shafer RW, Wensing AM, Jacobsen DM, Richman DD. Reply to Ambrosioni Et Al. *Clinical Infectious Diseases* 68(11):1977-8, 2019. Epub 2018/12/07. doi: 10.1093/cid/ciy1022. PubMed PMID: 30520997.
724. Richman DD, Huang K, Lada SM, Sun X, Jain S, Massanella M, Menke B. Replication Competence of Virions Induced from CD4+ Lymphocytes Latently Infected with HIV. *Retrovirology* 16(1):4, 2019. Epub 2019/02/17. doi: 10.1186/s12977-019-0466-1. PubMed PMID: 30770748; PMCID: PMC6377736.
725. Rosenbloom DIS, Bacchetti P, Stone M, Deng X, Bosch RJ, Richman DD, Siliciano JD, Mellors JW, Deeks SG, Ptak RG, Hoh R, Keating SM, Dimapasoc M, Massanella M, Lai J, Sobolewski MD, Kulpa DA, Busch MP, Reservoir Assay V, Evaluation Network Study G. Assessing Intra-Lab Precision and Inter-Lab Repeatability of Outgrowth Assays of HIV-1 Latent Reservoir Size. *PLoS Computational Biology* 15(4):e1006849, 2019. Epub 2019/04/13. doi: 10.1371/journal.pcbi.1006849. PubMed PMID: 30978183; PMCID: PMC6481870.

726. Beliakova-Bethell N, Mukim A, White CH, Deshmukh S, Abewe H, Richman DD, Spina CA. Histone Deacetylase Inhibitors Induce Complex Host Responses that Contribute to Differential Potencies of these Compounds in HIV Reactivation. *Journal of Biological Chemistry* 294(14):5576-89, 2019. Epub 2019/02/13. doi: 10.1074/jbc.RA118.005185. PubMed PMID: 30745362; PMCID: PMC6462528.
727. Olagunju A, Anweh D, Okafor O, Dickinson L, Richman D, Owen A, Adejuyigbe E. Viral and Antiretroviral Dynamics in HIV Mother-to-Child Transmission Fluids (VADICT) – Protocol and Data Analysis Plan for a Cohort Study. *Wellcome Open Research* 4(34):34, 2019. Epub. doi: 10.12688/wellcomeopenres.15072.1.
728. Prakash K, Richman D. A Case Report of Disseminated Histoplasmosis and Concurrent Cryptococcal Meningitis in a Patient Treated with Ruxolitinib. *BMC Infectious Diseases* 19(1):287, 2019. Epub 2019/03/29. doi: 10.1186/s12879-019-3922-6. PubMed PMID: 30917797.
729. Lavergne S, Gaufin T, Richman DD. Myroides Injenensis Bacteremia and Severe Cellulitis. *Open Forum Infectious Diseases*. 2019. In press.
730. Wensing AM, Calvez V, Ceddherini-Silberstien F, Charpentier C, Gunthard HF, Paredes R, Shafer RW, Richman DD. 2019 Update of the Drug Resistance Mutations in HIV-1. 2019 Resistance Mutations Update; Topics Antiviral Medicine 27, Issue 3. July/August 2019. In press.

ABSTRACTS

1. Chanock RM, Murphy BR, Richman DD, Spring SB. Attenuation of influenza A virus by ts mutation. Third International Congress of Virology, Madrid, September 1975.
2. Murphy BR, Richman DD, Spring SB, Chanock RM. Use of temperature sensitive mutants of influenza A virus as live virus vaccine strains. *Am J Epidemiol* 102:465, 1975.
3. Dolin R, Richman DD, Murphy BR, Fauci AS. Cell mediated immune responses following influenza in man. *Clin Res* 26: 342A, 1976.
4. Richman DD, Cleveland PH, Oxman MN. A rapid and sensitive technique for the detection of viral antigens. 19th Interscience Conference on Antimicrobial Agents and Chemotherapy, October 1979.
5. Cleveland PH, Richman DD, Wickham MG, Binder PS, Worthen DM, Oxman MN. A rapid RIA procedure for detecting herpes virus antigens. *Invest Ophthalmol Vis Sci*, Supp 232: 1979.
6. Cleveland PH, Richman DD, Oxman MN, Worthen DM. A rapid technique for typing herpes viruses. *Invest Ophthalmol Vis Sci*, Supp. 156, 1980.
7. Redfield DC, Richman DD, Oxman MN, Kronenberg L. Psoralen inactivation of herpes simplex and influenza viruses and of virus-infected cells. 20th Interscience Conference on Antimicrobial Agents and Chemotherapy, 1980.
8. Cleveland PH, Richman DD, Redfield DC, Oxman MN, Disharoon DR, Binder PS. Detection of herpes virus antigens in infected eyes. *Invest Ophthalmol Vis Sci* (supplement) 20: 136, 1981.

9. Richman DD, Cleveland P, Oxman M, Van Wyke K, Webster R. Rapid characterization of influenza viruses using monoclonal antibodies. Fifth International Congress of Virology, Strasbourg, France, August, 1981.
10. Cleveland PH, Richman DD, Redfield DC, Oxman MN, Disharoon DR, Binder PS. A rapid enzyme immunoassay for herpes simplex virus antigens performed on swabs from infected eyes. 21st Interscience Conference on Antimicrobial Agents and Chemotherapy, 1981.
11. Hostetler KY, Richman DD. Mechanisms of drug-induced lipidosis in cultured kidney cells. Clin Res 30: 487A, 1982.
12. Cleveland PH, Richman DD, Redfield DC, Oxman MN, Disharoon DR, Binder PS. Detection of herpes simplex virus antigens on swabs from infected rabbit eyes. Invest Ophthalmol Vis Sci (supplement) 22: 215, 1982.
13. Mertz GJ et al. Double-blind placebo-controlled trial of oral acyclovir for first-episode genital herpes. 22nd Interscience Conference on Antimicrobial Agents and Chemotherapy, 1982.
14. Reichman RC et al. Treatment of recurrent herpes simplex genitalis with orally administered acyclovir. 22nd Interscience Conference on Antimicrobial Agents and Chemotherapy, 1982.
15. Woolf NK, Harris JP, Ryan AF, Richman DD. Congenital cytomegalovirus infections in the guinea pig: effect of maternal vaccination on postnatal CMV labyrinthitis. Association for Research in Otolaryngology, St. Petersburg, Florida, 1983.
16. Woolf NK, Harris JP, Butler DM and Richman DD. Experimental cytomegalovirus infection of the guinea pig inner ear; systemic presentation prevents hearing loss. Association for Research in Otolaryngology, St. Petersburg, Florida, 1983.
17. Harris JP, Woolf NK, Butler D, Richman DD, Ryan A. Experimental cytomegalovirus inner ear infection. Effects on cochlear morphology and function, Association for Research in Otolaryngology, 1983.
18. Disharoon DR, Richman DD, Binder PS, Cleveland PH. Correlation of lacrimal fluid class specific anti-herpes virus activity with clinical disease. Invest Ophthalmol Vis Sci (supplement) 24: 194, 1983.
19. Cleveland PH, Disharoon DR, Richman DD. A sensitive direct immunoassay for HSV antigens using monoclonal antibody and the avidin-biotin system. Invest Ophthalmol Vis Sci (supplement) 24: 192, 1983.
20. Del Real F, Richman DD, Binder PS, Cleveland PH. Class specific immunoglobulin levels in the lacrimal fluid of patients with herpes simplex keratitis. Invest Ophthalmol Vis Sci (supplement) 24: 78, 1983.
21. Dueck R, Prutow RJ, Richman DD. Increased intrapulmonary shunt with anesthesia following acute viral respiratory infection in sheep. Anesthesiology 59: A511, 1983.
22. Reichman RC, Badger GJ, Mertz GJ, Corey L, Richman DD, Oxman M, Connor J, Bryson Y, Tyrrell D, Portnoy J, Dolin R. Patient-initiated therapy of recurrent herpes simplex genitalis with orally administered acyclovir. Clin Res 31: 373A, 1983.

23. Redfield DC, Richman DD, Cleveland PH, Albanil S, Oxman MN, Wahl GM. Detection and typing of herpes simplex virus by DNA hybridization. 23rd Interscience Conference on Antimicrobial Agents and Chemotherapy, American Society for Microbiology, 1983.
24. Harris JP, Woolf NK, Butler DM, Ryan AF, and Richman DD. Experimental cytomegalovirus infection of the guinea pig inner ear: immunology and histopathology. Association for Research in Otolaryngology, 1984.
25. Cleveland PH, Disharoon DR, Redfield DC, Richman DD. A new method for the rapid detection of herpes simplex virus antigens on swabs. *Invest Ophthalmol Vis Sci* (supplement), 1984.
26. Harris JP, Woolf NK, Ryan AF, Richman DD. Experimental cytomegalovirus labyrinthitis. Association for Research in Otolaryngology, 1984.
27. Spector SA, Lavine JA, McCutchan JA, Richman DD, Hirata KK, Neuman TR. Detection of human cytomegalovirus DNA in leukocytes of homosexual men with the acquired immunodeficiency syndrome (AIDS). Ninth International Herpesvirus Workshop, August 24-29, Seattle, Washington, 1984.
28. Savoia MC, Nesbitt MN, Kirkland TN, Richman DD, Oxman MN. Resistance of inbred mice to herpes simplex virus (HSV) infection is linked to the brown locus on chromosome 4. 24th Interscience Conference on Antimicrobial Agents and Chemotherapy, American Society for Microbiology. 1984.
29. Woolf NK, Harris JP, Ryan AF, Richman DD. Cogenital cytomegaloviral infections in the guinea pig: effect of maternal vaccination on postnatal experimental CMV labyrinthitis, Association for Research in Otolaryngology, February, Clearwater Beach, Florida, 1985.
30. Spector SA, McCutchan JA, Lavine JE, Love J, Richman DD. Detection of human cytomegalovirus (HCMV) DNA in leukocyte subpopulations of homosexual men with AIDS and ARC. International Conference on Acquired Immunodeficiency Syndrome (AIDS), April 14-17, Atlanta, Georgia, 1985.
31. Volpicelli M, Disharoon DR, Richman DD and Cleveland PH. Differentiation of adenovirus and herpes simplex virus antigens using a bead immunoenzyme staining technique. *Invest Ophthalmol Vis Sci Supp.* 26: 70, 1985.
32. Cleveland PH, Pierce S, Burquez R, Disharoon DR, Richman DD, Brown SI, Binder PS and Robertson S. A 10 minute assay for the detection of herpes simplex with antigens on swabs. *Invest Ophthalmol Vis Sci Supp.* 26: 73, 1985.
33. Cleveland PH, Richman DD, Victor J, Robertson SM and Oxman MN. A ten minute assay for the detection of virus and chlamydial antigens on swabs. International Meeting on Advances in Virology, May, Catania, Sicily, 1985.
34. Cleveland PH, Pierce S, Oxman MN, Disharoon D and Richman DD. A 10 minute assay for the detection of herpes simplex virus antigens on swabs. 25th Interscience Conference on Antimicrobial Agents and Chemotherapy, American Society for Microbiology, 1985.
35. Gompels UA, Richman DD, Minson AC, Buckmaster EA. Characterization of glycoprotein H of HSV-1. Tenth International Herpesvirus Workshop, August 12-15, Ann Arbor, Michigan, 1985.

36. Buckmaster EA, Richman DD, Minson AC. Characterization of a 55K glycoprotein of HSV-1. Tenth International Herpesvirus Workshop, August 12-15, Ann Arbor, Michigan, 1985.
37. Woolf NK, Harris JP, Keithley EM, Magit AE, Richman DD. Cytomegalovirus infections in the guinea pig: Intrathecal hearing loss. Association for Research in Otolaryngology, Clearwater Beach, Florida, 1986.
38. Cleveland PH, Terry L, Richman DD, Howe WE, Choate V, De Sousa B, Robertson SM. A 25-minute assay for the detection of herpes simplex, varicella zoster and adenovirus antigens directly from eye swabs. *Invest Ophthalmol Vis Sci* (supplement), 1986.
39. Cleveland PH, Terry L, Richman DD, Robertson SM. Comparison of lesion, lid, and tear specimens for recovery of viral antigen and infectious virus in patients with either herpes simplex virus (HSV), varicella zoster virus (VZV), or adenovirus (ADV) ocular infections. International Conference on Herpetic Eye Diseases, 1986.
40. Shrawder EJ, Richman DD, McCutchan JA, Spector S, Widder KJ. Elevated erythrocyte adenosine deaminase activities in AIDS and in AIDS associated conditions. 2nd International Conference on AIDS, Paris, France, June 1986.
41. Wiley CA, Schrier RD, Richman DD, Lampert PW, Oldstone MBA, Nelson JA. LAV/HTLV-III infects inflammatory cells within the brain of AIDS patients. 2nd International Conference on AIDS, Paris, France, June 1986.
42. Richman DD, McCutchan JA, Spector SA. Detection of LAV/HTLV-III RNA in peripheral blood mononuclear cells by nucleic acid hybridization. 2nd International Conference on AIDS, Paris, France, June 1986.
43. Waterman S, Richman DD, Cleveland PH. A new immunoassay for the identification of dengue virus. 35th Annual Meeting of the American Society for Tropical Medicine and Hygiene, Denver, CO, December 1986.
44. Grant I, Atkinson JH, Hesselink JR, Jernigan T, Kennedy CJ, McCutchan JA, Richman DD, Spector SA. Neuropsychology of AIDS-related disorders. International Neuropsychology Society Conference, February 18-21, Washington, DC, 1987.
45. Grant I, Atkinson JH, Kennedy C, McCutchan JA, Richman DD, Spector SA. NP findings in HIV infection: relation to seropositivity and treatment with AZT. International Neuropsychology Society Conference, July 1-4, Barcelona, Spain, 1987.
46. Jarvik JG, Hesselink JR, Kennedy C, Teschke R, Wiley C, Spector S, Richman DD, McCutchan JA. Acquired immunodeficiency syndrome: magnetic resonance patterns of brain involvement with pathologic correlation. Society of Magnetic Resonance in Medicine Conference, August 17-21, New York, NY, 1987.
47. Bozette S, Fleck R, Stayboldt C, Kennedy C, McCutchan JA, Spector S, Richman DD. Hematologic toxicity of azidothymidine (AZT). *J Cell Biochem*, Supp. 11D:64, 1987.
48. Haertle T, Carrera CJ, McDougal JS, Richman DD, Carson DA. Metabolism and anti-HIV activity of 2-

- halo-2',3'-dideoxyadenosines. *J Cell Biochem, Supp.* 11D: 65, 1987.
49. Smith RS, Richman D, Viel S. Simultaneous detection of HBsAg and antibody to human immunodeficiency (HIV) virus in human plasma. *J Cell Biochem, Supp.* 11D: 25, 1987.
50. Woolf NK, Ochi JW, Silva EJ, Harris JP, Richman DD. DHPG percents cochlear pathophysiology during experimental guinea pig cytomegalovirus labyrinthitis. Association for Research in Otolaryngology, Clearwater Beach, Florida, 1987.
51. Woolf NK, Ochi JW, Silva EJ, Sharp PA, Harris JP, Richman DD. Prophylactic ganciclovir treatment prevents cochlear pathophysiology during experimental guinea pig cytomegalovirus labyrinthitis. American Society of Virology, June 1, Chapel Hill, NC, 1987.
52. Haertle T, Carrera CJ, McDougal JS, Richman DD, Carson DA. Synthesis, metabolism and anti-HIV activity of 2-halo-2',3'-dideoxyadenosine derivatives. *Clin Res* 35: 655A, 1987.
53. McCutchan A, Klauber M, Klauber S, Speckho P, Jacobson D, Spector S, Richman DD. Development of a simple clinical method to screen for AIDS virus in blood donors in underdeveloped countries. *Clin Res* 35: 355A, 1987.
54. AZT Collaborative Working Group. The efficacy of azidothymidine in the treatment of patients with AIDS and AIDS-related complex: a double-blind placebo-controlled trial. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
55. AZT Collaborative Working Group. The toxicity of 3'-azido-3'-deoxythymidine (azidothymidine) in the treatment of patients with AIDS and AIDS-related complex: a double-blind, placebo-controlled trial. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
56. Gingeras TR, Richman DD, Davis GR, Kwoh DY. Detection of HIV-specific sequences using *in vitro* nucleic acid amplification and oligonucleotide-based chromatography. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
57. Spector SA, Martin M, Richman DD, Speckho P, McCutchan JA. Polypeptide specific antibody response to human cytomegalovirus (HCMV) in patients with acquired immunodeficiency syndrome. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
58. Atkinson JH, Grant I, Kennedy CJ, Richman DD, Spector SA, McCutchan JA. Psychiatric illness in HIV-infected men and controls. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
59. McCutchan JA, Klauber M, Kennedy C, Klauber S, Speckho P, Jacobson D, et al. Development of a simple clinical method to screen for AIDS virus in blood donors in underdeveloped countries. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
60. Kennedy C, Teschke RS, Hesselink J, Berger J, Fischl M, Richman DD, et al. Clinical evaluation of the central nervous system in HIV infected patients on azidothymidine (AZT). 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.

61. Grant I, Atkinson JH, Kennedy CJ, Richman DD, Spector SA, McCutchan JA. Progressive neuropsychological deficit in HIV infection. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
62. McCutchan JA, Jacobson D, Kennedy C, Spector S, Klauber M, Richman DD, et al. Risk factors for infection by HIV and development of AIDS in a cohort of gay men. 3rd International Conference on Acquired Immunodeficiency Syndrome (AIDS), June 1-5, Washington, DC, 1987.
63. Cleveland PH, Richman DD. Comparison of virus culture and a 25 minute immunostaining assay on eye specimens from an epidemic of adenovirus keratoconjunctivitis. The Third European Congress of Clinical Microbiology, 1987.
64. The AZT Collaborative Study Group (D. Richman, presenter) A placebo controlled study of Retrovir in patients with AIDS and advanced ARC. 15th International Congress of Chemotherapy, Istanbul, July 19-24, 1987.
65. Richman DD, Cleveland PH. Antigen detection by enzyme immunoassay using a vacuum filtration system. VII International Congress of Virology, Edmonton, Alberta, August 9-14, 1987.
66. Dankner WM, McCutchan JA, Richman DD, Spector SA. Detection of human cytomegalovirus (HCMV) in peripheral blood leukocytes (PBL) by *in situ* cytohybridization. 27th Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, American Society for Microbiology, 1987.
67. Spector SA, Kennedy C, McCutchan JA, Straube RC, Connor JD, Paradise M, Richman DD. Antiviral effect of zidovudine (AZT) and ribavirin in clinical trials. 27th Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, American Society for Microbiology, 1987.
68. Richman DD, Cleveland PH. Antigen detection by enzyme immunoassay using a vacuum filtration system. Fifth International Symposium on Rapid Methods and Automation in Microbiology and Immunology, Florence, November 4-6, 1987.
69. Woolf NK, Griffith BP, Koehrn FJ, Harris JP, Richman DD. Experimental congenital cytomegalovirus infections in the guinea pig: Hearing loss and distribution of virus in the auditory system. XIth Midwinter Research Meeting of the Association for Research in Otolaryngology, February, Clearwater, Florida, 1988.
70. Woolf NK, Harris JP, Keithley EM, Magit AE, Richman DD. Cytomegalovirus infections in the guinea pig: Intrathecal CMV inoculations. XIth Midwinter Research Meeting of the Association for Research in Otolaryngology, February, Clearwater, Florida, 1988.
71. Viel S, Parks DE, Smith R, Richman DD. Simultaneous detection of HBsAg and antibody to human immunodeficiency (HIV) virus in human plasma. Federation Proceedings (FASEB) 2:1159A, 1988.
72. Pauza D, Richman DD. Mechanisms of HIV persistence: virus replication is regulated stringently in monoblastoid cells. IV International Conference on AIDS, June 12-16, Stockholm, Sweden, 1988.
73. Bozzette S, Larson R, Chiu J, Tilless J, Leedom J, McCutchan JA, Richman DD, California Collaborative Treatment Group (UCSD, USC, UCI). Low incidence of early relapse in cryptococcal meningitis after exclusion of persistent systemic and genitourinary infection. IV International Conference on AIDS,

June 12-16, Stockholm, Sweden, 1988.

74. Hochster H, Dieterich D, Laverty M, Reichman R, Plank C, Pettinelli C, Spector S, Richman DD. Toxicity of coadministered AZT and ganciclovir (DHPG) for CMV infection (AIDS Treatment Evaluation Units #004). IV International Conference on AIDS, June 12-16, Stockholm, Sweden, 1988.
75. Mizutani WT, Woods VL, McCutchan JA, Spector S, Richman DD, Zvaifler NJ. Anticardiolipin antibodies (ACA) in human immunodeficiency virus (HIV) infected gay males may be associated with a deteriorating clinical course. IV International Conference on AIDS, June 12-16, Stockholm, Sweden, 1988.
76. Grant I, Hesselink J, Jernigan T, Heaton RK, Atkinson JH, Weinrich J, Richman DD, Spector SA, McCutchan JA, Ostrow D. Neuropsychology and magnetic resonance imaging in HIV infection. IV International Conference on AIDS, June 12-16, Stockholm, Sweden, 1988.
77. McCutchan JA, Jacobson D, Speckho P, Kennedy C, Bozzette S, Abramson I, Bartok A, Spector SA, Richman DD. Natural history and correlates of lymphadenopathy during progression of HIV infection. IV International Conference on AIDS, June 12-16, Stockholm, Sweden, 1988.
78. Grant I, Atkinson JM, Hesselink JR, Weinrich J, Richman DD, Spector SA, McCutchan JA, Heaton RK. Neuropsychiatry of human immunodeficiency virus (HIV) infection. The 4th Scientific Meeting of the Pacific Rim College of Psychiatrists, Shatin, N.T., Hong Kong, 1988.
79. Carson DA, Haertle T, Carrera CJ, Willis EH, Wasson B, Richman DD. 2'-halo-2',3'-dideoxyadenosines: Metabolically stable dideoxynucleosides with activity against the human immunodeficiency virus (HIV). VI International Symposium on Human Purine and Pyrimidine Metabolism, Hakone, Japan, July 17-July 21, 1988.
80. Schmitt FA, Bigley JW, McKinnis R, Logue PE, Evans RW, Drucker JL, The AZT Collaborative Working Group. Short-term longitudinal change in AIDS and ARC patients: Neuropsychological effects of AZT. Conference on Neuropsychiatric Disease and AIDS, Royal College of Physicians in London, October, 1988.
81. Hochster H, Liebes L, Connor J, Reichman R, Richman DD. Pharmacokinetics of combined AZT and DHPG (Ganciclovir). Results of a multicenter phase I study (ACTG 004). 28th Interscience Conference on Antimicrobial Agents and Chemotherapy, Los Angeles, CA., October 24, 1988
82. Kornbluth RS, Oh PS, Richman DD. HIV production by cultured macrophages can be regulated by interferon (IFN), cytokines, and bacterial lipopolysaccharide (LPS). Society for Leukocyte Biology, Washington DC, October 27-30, 1988.
83. Guatelli J, Blumeyer K, Riggs N, Richman DD, Gingras T. A quantitative assay for HIV-1 RNA based on the polymerase chain reaction. Amer Assoc Clin Chem. Practical Aspects of Molecular Probes. Third San Diego Conference, 1988.
84. Richman DD. The *in vitro* assessment of antiviral drugs for HIV. UCLA Symposia on Molecular and Cellular Biology, Tamarron, CO, J Cell Biochem, Suppl 13B:245, 1989.
85. Spina CA, Guatelli J, Richman DD. Control of HIV replication in CD4 lymphocytes: "Latency" and

- induction of active viral replication. UCLA Symposia on Molecular and Cellular Biology, Tamarron, CO, J Cell Biochem, Suppl 13B:261, 1989.
86. Larder BA, Darby G, Richman DD. Application of a quantitative plaque assay in a CD4+ HeLa cell line to determine AZT-sensitivity of HIV isolates from patients with AIDS or ARC. UCLA Symposia on Molecular and Cellular Biology, Tamarron, CO, J Cell Biochem, Suppl 13B:303, 1989.
 87. Kornbluth RS, Oh PS, Munis JR, Cleveland PH, Richman DD. HIV replication in macrophages is prevented by interferons (IFN) and bacterial lipopolysaccharide (LPS). UCLA Symposia on Molecular and Cellular Biology, Tamarron, CO, J Cell Biochem, Suppl 13B:317, 1989.
 88. Munis JR, Kornbluth RS, Richman DD. Production of tumor necrosis factor by HIV infected monocytes/macrophages in primary cell culture. Third International Symposium on Tumor Necrosis Factor, Napa, January 1989.
 89. Kornbluth RS, Munis JR, Oh PS, Richman DD. Interactions between human immunodeficiency virus (HIV) replication and cytokine gene expression in primary human macrophages *in vitro*. Third International Symposium on Tumor Necrosis Factor, Napa, January 1989.
 90. Kornbluth RS, Oh PS, Munis JR, Cleveland PH, Richman DD. Interferons and bacterial lipopolysaccharide (LPS) protect macrophages from productive HIV infections *in vitro*. FASEB J 3A:1324, 1989.
 91. Schrier RD, Gnann JW, Landes R, Lockshin C, Richman DD, McCutchan JA, Kennedy C, Oldstone MBA. T cell recognition of HIV peptides. V International Conference on AIDS, Montreal, June 1989.
 92. Hostetler KY, Richman DD. Inhibition of HIV replication by novel phospholipid derivatives of AZT and other antiretroviral nucleosides *in vitro*. V International Conference on AIDS, Montreal, June 1989.
 93. Wu AW, Rubin HR, Mathews WC, Brysk LM, Hardy WD, Grant I, Richman DD, et al. A brief health status instrument for use in AIDS clinical trials. V International Conference on AIDS, Montreal, June 1989.
 94. Arcia JM, Bozzette SA, Bartok A, McCutchan JA, Richman DD, Spector S, UC San Diego and the California Collaborative Treatment Group. Bronchoalveolar lavage (BAL) CMV culture positivity (CMV+) is associated with better outcome of *Pneumocystis carinii* pneumonia (PCP) in men with AIDS. V International Conference on AIDS, Montreal, June 1989.
 95. McCutchan JA, Ballard C, Freeman B, Bartok A, Richman DD and The California Collaborative Treatment Group. Cyanocobalamin (Vitamin B₁₂) supplementation does not prevent the hematologic toxicity of azidothymidine (AZT). V International Conference on AIDS, Montreal, June 1989.
 96. Larsen R, Bozzette S, McCutchan JA, Chiu J, Leal M, Richman DD and The California Collaborative Treatment Group. Persistent *Cryptococcus neoformans* prostatic infection after successful treatment of meningitis. Vth International Conference on AIDS, Montreal, June 1989.
 97. Richman DD, Darby G, Larder BA. Resistance to HIV drugs. Vth International Conference on AIDS, Montreal, June 1989.
 98. Spina CA, McCutchan JA, Richman DD. Phenotypic characterization of the expanded CD8Leu-7⁺ cell

- population in patients with HIV infection. Vth International Conference on AIDS, Montreal, June 1989.
99. Larder BA, Kemp SD, Darby G, Richman. Variants of HIV resistant to zidovudine (AZT). Vth International Conference on AIDS, Montreal, June 1989.
 100. Guatelli J, Richman DD, Gingeras T. A strategy for the detection of specifically spliced mRNAs encoding HIV-1 regulatory genes. Vth International Conference on AIDS, Montreal, June 1989.
 101. Munis JR, Kornbluth RS, Richman DD. Dideoxynucleosides prevent formation of HIV-1 provirus during single cycle infection of macrophages. Vth International Conference on AIDS, Montreal, June 1989.
 102. Day J, Grant I, Atkinson H, Brysk L, McCutchan JA, Heaton RK, Richman DD, et al. Neuropsychological follow-up of subjects on AZT licensing trials: San Diego Cohort. Vth International Conference on AIDS, Montreal, June 1989.
 103. Kornbluth RS, Oh PS, Munis JR, Cleveland PH, Richman DD. Interferons (IFN) and bacterial lipopolysaccharide (LPS) prevent HIV infection in macrophages by blocking provirus formation. Vth International Conference on AIDS, Montreal, June 1989.
 104. Weinrich J, Grant I, Atkinson J, Richman DD, Spector SA, McCutchan JA. Childhood gender nonconformity predicts HIV-1 seropositivity in homosexual men. V International Conference on AIDS, Montreal, June 1989.
 105. Gingeras T, Guatelli J, Richman DD, Davis G, et. al. Correlation study involving the detection of HIV-1 in samples from AIDS patients using co-culture p24 ELISA, and *tas*- and PCR-mediated hybridization assays. V International Conference on AIDS, Montreal, June 1989.
 106. Collier A, Coombs R, Bozette S, Spector S, Pettinelli C, Richman DD, Causey D, Leedom J, Davies G, Gianola F, Corey L. Virologic and clinical response to combination zidovudine (AZT) and acyclovir (ACV) in AIDS-related complex (ARC). 29th Interscience Conference on Antimicrobial Agents and Chemotherapy, Houston, 1989.
 107. Meylan PR, Kornbluth RS, Richman DD. Virulence of transparent and opaque colonial variants of Micobacterium avium-intracellulare (MAI) isolated from AIDS patients. 29th Interscience Conference on Antimicrobial Agents and Chemotherapy, Houston, 1989.
 108. Kornbluth RS, Oh PS, Richman DD. Effects of interferons on established HIV infection in cultured macrophages. 26th National Meeting of the Society for Leukocyte Biology, October 12-15, Marco Island, Florida, 1989.
 109. Huryn DM, Sluboski BC, Tam SY, Todar LJ, Weigele M, Sim IS, Frank KB, Richman DD, Mitsuya H, Broder S. Synthesis and anti-HIV activity of a novel series of "isomeric" dideoxynucleosides. Second International Conference on Drug Research in Immunologic and Infectious Diseases: AIDS, N.Y. Academy of Sciences, Arlington, VA., Nov. 6-9, 1989.
 110. Zarling JM, Shiu-Lok H, Moran P, Sias J, Spina CA. Richman DD, Uckun F. Cell-mediated immunity to recombinant vaccinia-AIDS virus vaccines and inhibition of HIV-1 production by pokeweed antiviral protein-monoclonal antibody conjugates. Quatrieme Colloque Des "Cent Gardes", Pasteur Vaccins,

Marnes-La-Coquette, France, October 26-28, 1989.

111. Richman DD. HIV drug resistance. Quatrieme Colloque Des "Cent Gardes", Pasteur Vaccins, Marnes-La-Coquette, France, October 26-28, 1989.
112. Richman DD. AZT Resistance. 2nd International Conference on Drug Research in Immunologic and Infectious Diseases. Acquired Immune Deficiency Syndrome (AIDS), The New York Academy of Sciences, National Institutes of Health, New York, N.Y., November 6-9, 1989.
113. Frank KB, Connell EV, Holman MJ, Huryn DM, Sluboski BC, Tam SY, Todaro LJ, Weigele M, Sim IS, Hoffman-La Roche, Inc., Richman DD, Mitsuya H, Broder S. Anabolism and mechanism of action of RO24-5098, an antiviral isomer of 2',3'-dideoxyadenosine. 2nd International Conference on Drug Research in Immunologic and Infectious Diseases. Acquired Immune Deficiency Syndrome (AIDS), The New York Academy of Sciences, National Institutes of Health, New York, N.Y., November 6-9, 1989.
114. Meylan PR, Richman DD, Kornbluth RS. *in vitro* HIV infection does not compromise human macrophage anti-M. avium (MAI) activity. HIV, Lentiviruses and the monocyte-macrophage, San Francisco, November 1989.
115. Kornbluth RS, Munis JR, Oh PS, Richman DD. Protection of macrophages from superinfection by vesicular stomatitis virus (VSV) following infection with a macrophage-tropic strain of HIV which does not alter the production of several cytokines. Workshop on Human Immunodeficiency Viruses, Lentiviruses, and the Monocyte-Macrophage, San Francisco, November 9, 1989.
116. Meylan PR, Munis JR, Kornbluth RS, Richman DD. In vitro HIV infection of human macrophages does not affect the multiplication of mycobacteria in dually infected cells. Frontiers in Mycobacteriology: Immunobiology of Mycobacterial Infections, National Jewish Center for Immunology and Respiratory Medicine, Vail, CO, October 27, 1990.
117. Meylan PR, Richman DD, Kornbluth RS. Reduced intracellular growth of mycobacteria in human macrophages cultivated in physiological oxygen pressure. Presented at Frontiers in Mycobacteriology: Immunobiology of Mycobacterial Infections, National Jewish Center for Immunology and Respiratory Medicine, Vail, CO, October 27, 1990.
118. Van den Bosch H, va Wijk B, Stuhmiller L, Richman DD. Enhanced inhibition of HIV replication by dideoxythymidine diphosphate diglyceride in HT4-6C cells, *in vitro*. Clinical Research 38:1990.
119. Mosier De, Gulizia RJ, Baird SM, Richman DD, Wilson DB, Fox RI, Kipps TJ. B cell lymphomas in scid mice engrafted with human peripheral blood leukocytes. 31st Annual Meeting of the American Society of Hematology, New Jersey, 1990.
120. Zarling JM, Shiu-Lok H, Moran P, Sias J, Spina CA. Richman DD, Uckun F. Cell-mediated immunity to recombinant vaccinia-AIDS virus vaccines and inhibition of HIV-1 production by pokeweed antiviral protein-monoclonal antibody conjugates. J Cellular Biochem, suppl 14D, 455, 1990.
121. Richman DD. HIV drug resistance. J Cellular Biochem, supp 14D, 30, 1990.
122. Guatelli JC, Gingeras TR, Richman DD. Ordered sequence of splice acceptor utilization during HIV-1 infection of cultured cells. J Cellular Biochem, supp 14D, 119, 1990.

123. Munis JR, Kornbluth RS, Guatelli JC, Richman DD. Kinetics of expression of structural and regulatory genes of HIV-1 during single-cycle replication in macrophages. *J Cellular Biochem*, supp 14D, 135, 1990.
124. Kornbluth RS, Richman DD. HIV-infected macrophages resist superinfection by vesicular stomatitis virus (VSV) but do not produce interferon: effect of 2'-aminopurine. *J Cellular Biochem*, supp 14D, 225. 1990.
125. Meylan PR, Kornbluth RS, Spina CA, Richman DD. Differentiation of THP-1 cells induced by PMA renders them permissive for a macrophage-tropic strain of HIV-1. *J Cellular Biochem*, Suppl. 14D, 235. 1990.
126. Spina CA, Guatelli JC, Richman DD. HIV replication in primary CD4 lymphocyte cultures: induction of regulatory and structural gene expression by cell activation and DNA synthesis. *J Cellular Biochem*, Suppl. 14D, 246. 1990.
127. Hostetler KY, van den Bosch H, van Wijk B, Stuhmmiller LM, Richman DD. Phospholipid derivatives of dideoxythymidine (ddT) exhibit greatly increased potency against replication of HIV in CD4-HeLa cells. *J Cellular Biochem*, Suppl. 14D, 423. 1990.
128. Li JL, Felgner PL, Richman DD, Hostetler DD. Comparative therapeutic effects of AZT and liposomal AZT monophosphate in murine retrovirus-induced immunodeficiency disease. *J Cellular Biochem*, Suppl. 14D, 525. 1990.
129. Hsu M-C, Volsky D, Richman DD, Tam S, Schutt A, Holly M, Antelman D, Slice L, Chingra U. Search for inhibitors of HIV *tat*. Advances in Molecular Biology and Targeted Treatments for AIDS, III Annual Meeting of the NIH National Cooperative Drug Discovery Groups for the Treatment of AIDS, Washington DC. 1990.
130. Richman DD. The acquisition of zidovudine (AZT) resistance and associated mutations in human immunodeficiency virus. Advances in Molecular Biology and Targeted Treatments for AIDS, III Annual Meeting of the NIH National Cooperative Drug Discovery Groups for the Treatment of AIDS, Washington DC. 1990.
131. Zarling J, Moran P, Haffar O, Sias J, Ledbetter J, Richman DD. Inhibition of HIV-1 replication in CD4+ T cells by pokeweed antiviral protein conjugated to monoclonal antibodies reactive with CD4+ T cells. Advances in Molecular Biology and Targeted Treatments for AIDS, III Annual Meeting of the NIH National Cooperative Drug Discovery Groups for the Treatment of AIDS, Washington DC. 1990.
132. Wu AW, Rubin HR, Mathews WC, Brysk LM, Hardy WD, Bozette SA, Atkinson JH, Grant I, Richman DD. Functional status and well-being in a placebo-controlled trial of zidovudine in early ARC. VI International Conference on AIDS, vol. 1, San Francisco. June 1990.
133. Skowron G, Merigan TC, 047 Study Group of the AIDS Clinical Trials Group. Phase II trial of alternating and intermittent regimens of zidovudine (ZDV) and 2',3'-dideoxycytidine (ddC) in ARC and AIDS. VI International Conference on AIDS, vol. 1, San Francisco. June 1990.
134. Felgner PL, Richman DD, Hostetler KY. Marine retrovirus-induced immunodeficiency disease: comparative effects of AZT and liposomal AZT monophosphate. VI International Conference on

- AIDS, vol. 1, San Francisco. June 1990.
135. Shirasaka T, Yarchoan R, Aoki S, Ford H, DeVico A, Sarngadharan MG, Richman DD, Broder S, Mitsuya H. *In vitro* study of drug-sensitivity of HIV strains isolated from patients with AIDS or ARC before and after therapy with AZT and/or 2,3'-dideoxycytidine (ddC). VI International Conference on AIDS, vol. 1, San Francisco. June 1990.
 136. Kumar R, Richman DD, Hostetler KY. Antiretroviral effects of glycerophospholipid stereoisomers of AZT on HIV replication in HT4-6C cells. VI International Conference on AIDS, vol. 1, San Francisco. June 1990.
 137. Li J-L, Felgner PL, Richman DD, Hostetler KY. Murine retrovirus-induced immunodeficiency disease: comparative effects of AZT and liposomal AZT monophosphate. VI International Conference on AIDS, San Francisco, CA. June 1990.
 138. Kornbluth RS, Richman DD. Macrophages productively infected with HIV resist superinfection by vesicular stomatitis virus (VSV). VI International Conference on AIDS, vol. 2, San Francisco. June 1990.
 139. Spina CA, Terry L, Rosen J, McCutchan JA, Richman DD. Identification of T cell antigenic epitopes of HIV by proliferative responses to synthetic peptides of the *env* glycoproteins. VI International Conference on AIDS, San Francisco, CA, June, 1990.
 140. Bozzette S, Skowron G, Arrezzo J, Spector SA, Pettinelli C, Richman DD, ddC Study Group of the ACTG. ACTG 050: Alternating (ALT) and intermittent (INT) ddC and AZT in the treatment of persons with advanced HIV infection and hematologic intolerance to AZT. VI International Conference on AIDS, vol. 3, San Francisco, June, 1990.
 141. Bozzette SA, Larsen R, Chiu J, Rothman P, Jacobsen J, Richman DD, The California Collaborative Treatment Group. Successful secondary prophylaxis of cryptococcal meningitis (CM) with fluconazole (FLU): a placebo-controlled trial. Sixth International Conf. on AIDS, San Francisco, CA, June, 1990.
 142. Meng T, Boota A, Fischl MA, Spector S, McCaan M, Richman DD. ACTG 106: Phase I/II dose finding study of concurrently administered dideoxycytidine (ddC) and Zidovudine (ZDV, AZT). VI International Conference on AIDS, vol. 3, San Francisco, June, 1990.
 143. Fischl M, Parker CB, Pettinelli C, Wulfsohn M, Rasheed S, The AIDS Clinical Trials Group. The efficacy and safety of a lower dose of zidovudine in the treatment of patients with AIDS-associated PCP. VI International Conference on AIDS, San Francisco, CA, June, 1990.
 144. Meylan PR, Richman DD, Kornbluth RS. Effects of live mycobacteria and muramyl peptides on the replication of HIV in human macrophages. VIIIth International Congress of Virology, Berlin, August 26, 1990.
 145. Greenberg S, Sampson J, Buckley R, Richman D, Milwee S, the ZDV HIV Asymptomatic Study Group. Zidovudine (ZDV) therapy in asymptotically HIV infected individuals: Multicenter study of safety and efficacy. 30th Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, October, 1990.
 146. Bozzette SA, Larsen R, Chiu J, Rothman P, Jacobsen P, Richman D, The California Collaborative

- Treatment Group. Successful secondary prophylaxis of cryptococcal meningitis (CM) with fluconazole (FLU): A placebo controlled trial. 30th Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, October, 1990.
147. Schmitt F, Baer P, Cox M, Greenberg S, Richman DD, Buckley R, King J, Milwee S, The ZDV HIV Asymptomatic Study Group. Zidovudine (AZT) treatment of asymptomatic HIV infection: initial neuropsychological (NP) outcomes. 30th Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, October, 1990.
 148. Richman DD. Prospects for therapy: promising new antiretroviral compounds. Cinquieme Colloque Des "Cent Gardes", Pasteur Vaccins, Marnes-La-Coquette, France, October 29-31, 1990.
 149. Carson DA, Terai C, Richman DD. Therapeutic strategies for elimination of HIV from monocytes. Universitywide AIDS Research Program and Task Force on AIDS Annual Meeting of Principal Investigators, San Diego, CA, March 1990.
 150. López-Galíndez C, Rojas JM, Nájera R, Richman DD, Perucho M. Characterization of genetic variation and AZT resistance mutations of HIV by the RNase A mismatch method. VIIth International Congress of Virology, Berlin, August 26-31, 1990.
 151. Kornbluth RS, Meylan PR, Munis JR, Guatelli JC, Richman DD. Mechanisms of HIV resistance in interferon-treated macrophages. *J Leuk Biol*, Suppl 1, Abstract #252, 1990.
 152. Richman DD. AZT Resistance. HIV Disease: Pathogenesis and Therapy Symposium, Grenelefe, Florida, March 13-17, 1991. *JAIDS* 4:315:1991.
 153. Spina CA, Guatelli JC, Richman DD. Transcription of HIV-1 regulatory genes in non-productively infected, primary CD4 lymphocytes: preferential expression of *nef*. HIV Disease: Pathogenesis and Therapy Symposium, Grenelefe, Florida, March 13-17, 1991. *JAIDS* 4:328-329:1991.
 154. Kornbluth RS, Richman DD. Macrophages productively infected with HIV resist superinfection by vesicular stomatitis virus (VSV). HIV Disease: Pathogenesis and Therapy Symposium, Grenelefe, Florida, March 13-17, 1991. *JAIDS* 4:334:1991.
 155. Meylan PR, Munis JR, Richman DD, Kornbluth RS. Interaction between HIV and mycobacteria in macrophages cultured *in vitro*. HIV Disease: Pathogenesis and Therapy Symposium, Grenelefe, Florida, March 13-17, 1991. *JAIDS* 4:336:1991.
 156. Gingeras TR, Prodanovich P, Latimer T, Richman DD, Guatelli JC, Barringer K. The use of self-sustained sequence replication (3SR) amplification and bead-based sandwich hybridization (BBSH) to detect AZT-resistant mutants of HIV-1. HIV Disease: Pathogenesis and Therapy Symposium, Grenelefe, Florida, March 13-17, 1991. *JAIDS* 4:349:1991.
 157. Shirasaka T, Yarchoan R, Aoki S, Ford H, DeVico A, Sarngadharan MG, Richman DD, Broder S, Mitsuya H. *in vitro* study of drug-sensitivity of HIV strains isolated from patients with AIDS or ARC before and after therapy with AZT and/or 2'3'-dideoxycytidine (ddC). Annual Meeting Sponsored by the Laboratory of Tumor Cell Biology: Frontiers in Human Retrovirology and Related Topics, Bethesda, Maryland, August 11-17, 1990. *AIDS Res Hum Retrovir* 7:130-131:1991.
 158. Hsu M-C, Schutt A, Holly M, Slice L, Dhingra U, Antelman D, Richman DD. HIV TAT inhibitor. The

Fourth International Conference On Antiviral Research, New Orleans, Louisiana, April 21-26, 1991.

159. Chaisson RE, Keruly J, Richman DD, Creagh-Kirk T, Moore RD, the ZDV Epidemiology Group. Incidence and natural history of *Mycobacterium avium*-complex infection in advanced HIV disease treated with zidovudine. American Thoracic Society, American Lung Association, 1991.
160. López-Galíndez C, Rojas JM, Nájera I, Nájera R, Richman DD, Perucho M. Characterization of genetic variation and AZT resistance mutations of HIV by the RNase A mismatch method. Annual Meeting: The Laboratory of Tumor Cell Biology, Bethesda, Maryland, September 1-8, 1991.
161. Wu AW, Rubin HR, Bozzette SA, Mathews WC, Snyder R, Wright B, McCutchan JA, Spector SA, Richman DD. A longitudinal study of quality of life in asymptomatic HIV infection. VII International Conference on AIDS, Florence, Italy, June 16-21, 1991.
162. Meylan PR, Guatelli JC, Munis JR, Kornbluth RS, Richman DD. Interferons inhibit the replication of HIV-1 in macrophages by reducing both viral DNA and regulatory gene mRNAs. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
163. Moore RD, Kessler H, Richman DD. Non-Hodgkin lymphoma in patients with advanced HIV-infection treated with zidovudine. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
164. Gingeras TR, Prodanovich P, Latimer T, Richman DD, Guatelli JC, Barringer K. The use of self-sustained sequence replication (3SR) amplification and bead-based sandwich hybridization (BBSH) to detect AZT-resistant mutants of HIV-1. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
165. Easterbrook PJ, Keruly JC, Moore RD, the ZDV Epidemiology Study Group. Racial/ethnic differences in outcome with zidovudine therapy. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
166. Hostetler KY, Gardner MF, Richman DD. Phosphatidyl ddC, a phospholipid prodrug of dideoxycytidine: antiviral properties and improved pharmacokinetics in mice. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
167. Chaisson RE, Keruly J, Richman DD, Moore RD, the ZDV Epidemiology Study Group. Prophylaxis for *pneumocystis* and survival in advanced HIV infection treated with zidovudine. VII International conference on AIDS, Florence, Italy, June 16-21, 1991.
168. Hooton TM, DeJarnette L, Tartaglione T, Paar D, Jones T, Santangelo J, Smiles KA, Straus S, Richman DD, Corey L. Serial phase II dose-escalation studies of the oral pyrimidine nucleoside analog FIAC and its metabolite FIAU in human immunodeficiency virus-infected patients. (Abstract 1218) 31st Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, Illinois, Sept 29 - Oct 2, 1991.
169. Hsu M-C, Schutt AD, Holly M, Slice LW, Sherman MI, Richman DD, Potash MJ, Volsky DJ. Inhibition of HIV replication in acute and chronic infection *in vitro* by a tat antagonist. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. J Cell Biochem Suppl 16E:13, 1992.
170. Merluzzi VJ, Grob PM, Wu JC, Cohen KA, Ingraham R, Shih C-K, Hargrave KD, Adams J, Farina P,

- Griffin J, Sullivan JL, Richman DD, Rosenthal AS. Nevirapine, a non nucleoside inhibitor of HIV-1 reverse transcriptase. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. *J Cell Biochem Suppl* 16E:14, 1992.
171. Kornbluth RS and Richman DD. Recovery of infectious HIV following the passage of apoptotic cellular debris through phagocytic macrophages. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. *J Cell Biochem Suppl* 16E:23, 1992.
172. Meylan PRA, Guatelli JC, Munis JR, Kornbluth RS, Richman DD. Multiple mechanisms for the interferon inhibition of HIV replication in macrophages. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. *J Cell Biochem Suppl* 16E:25, 1992.
173. Spina CA, Kwok TJ, Richman DD. Reverse transcription and establishment of a replication-competent form of HIV-1 DNA in quiescent primary CD4 lymphocytes. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. *J Cell Biochem Suppl* 16E:42, 1992.
174. Guatelli JC and Richman DD. Development of hammerhead ribozymes as inhibitors of HIV-1 replication. Keystone Symposia on Prevention and Treatment of AIDS, Keystone, Colorado March 27 - April 4, 1992. *J Cell Biochem Suppl* 16E:79, 1992.
175. Gingeras TR, Prodanovich P, Richman DD. Use of 3SR RNA specific amplification and bead-based sandwich hybridization in the detection of drug resistant HIV-1 mutants. Second Workshop on Viral Resistance, Herndon, Virginia, May 13-15, 1992.
176. Richman DD. Drug susceptibility testing of HIV-1 *in vitro*: an overview of phenotypic assays. Second Workshop on Viral Resistance, Herndon, Virginia, May 13-15, 1992.
177. Griffin J, Shih C-K, Rose J, Hansen G, Bacolla A, Lowy I, Goff S, Prodanovich P, Richman D. HIV-1 response to nevirapine and its analogues. Second Workshop on Viral Resistance, Herndon, Virginia, May 13-15, 1992.
178. Woolf NK, Koehrn FJ, Richman DD. Fibronectin and Na,K-ATPase expression in the cochlea during experimental guinea pig cytomegalovirus labyrinthitis. Association for Research in Otolaryngology 1992.
179. Richman DD and the 164/168 Study Team. The emergence of nevirapine resistance in clinical trials. HIV Drug Resistance Workshop, Noordwijk, The Netherlands, July 17-18, 1992.
180. Richman DD and the 164/168 Study Team. Loss of Nevirapine activity associated with the emergence of resistance in clinical trials. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
181. Cheeseman SH and the ACTG 164/168 Study Team. Nevirapine (NVP) alone and in combination with zidovudine. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
182. Beltangady M, Cross A, Brown M, Kahn J, Lagakos S, Richman D, Dolin R, Pettinelli C, Smaldone L, and AIDS Clinical Trials Group 116B/117 Study Team. Examination of the correlation between early

- surrogate markers and clinical endpoints in the ACTG Trial 116B/117. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
183. Smaldone L, Beltangady M, Lagakos S, Richman D, Dolin R, Pettinelli C, Schindzielorz A, Cross A, Kahn J and the AIDS Clinical Trials Group 116B/117 Study Team. The relative safety of didanosine and zidovudine in the ACTG 116B/117-A randomized, double-blind trial. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
184. Gallant JE, Moore RD, Richman DD, Keruly J, Chaisson RE, the Zidovudine Epidemiology Study Group. Natural history of CMV disease in patients with advanced HIV disease treated with zidovudine. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
185. Kahn J, Lagakos S, Richman D, Dolin R, Pettinelli C, McLaren C, Cross A, Beltangady M, Smaldone L and AIDS Clinical Trials Group 116B/117 Study Team. ACTG protocol 116B/117; clinical outcome of a randomized double blind controlled study of ddI and ZDV. VIII International Conference on AIDS/III STD World Congress, Amsterdam, The Netherlands, July 19-24, 1992.
186. Richman DD. Current advances in anti-retroviral therapy. 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, October 11-14, 1992.
187. Knupp C, Beltangady M, Kahn J, Lagakos S, Richman D, Petinelli C, Smaldone L. Compliance assessment in ddi/ZDV phase III trials using randomly obtained plasma concentration values. 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, October 11-14, 1992.
188. Borgese J, Cislo A, Earley J, Holly M, Holman M, Hsu M-C, Huryn J, Keith D, Luk K-C, Moore D, Richou A, Schutt A, Sluboski B, Tam S, Richman D, Volsky D. Benzodiazepine HIV-TAT inhibitors: synthesis, SAR, and antiviral activity. 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, October 11-14, 1992.
189. Paar DP, Hooton TM, Smiles KA, Di Bisceglie A, Havlir DV, Richman DD, Gretch DR, Corey L, Straus SE. The effect of FIAU on chronic hepatitis B virus (HBV) infection in HIV-infected subjects (ACTG 122b). 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, October 11-14, 1992.
190. Kornbluth RS, Richman DD. Infectious HIV can be recovered from phagocytic macrophages exposed to the apoptotic cellular debris of infected cells. FASEB J 6:A1978, 1992.
191. Kornbluth RS, Bigby T, Spragg RG, Richman DD. Genotypic analysis of HIV reverse transcriptase susceptibilities to antiviral agents. Amer Rev Respir Dis 145:A656, 1992.
192. Richman DD. HIV Resistance to antiviral drugs. International Congress on Drug Therapy in HIV Infection, Glasgow, Scotland, November 9-12, 1992. AIDS Supplement 6:S3.
193. Smaldone L, Beltangady M, Lagakos S, Richman DD, Dolin R, Pettinelli C, Schindzielorz A, Cross A, Kahn J and AIDS Clinical Trials Group 116B/117 Study Team. The relative safety of didanosine and zidovudine in the ACTG 116B/117 - a randomized, double-blind trial. International Congress on Drug Therapy in HIV Infection, Glasgow, Scotland, November 9-12, 1992. AIDS Supplement 6:S6.

194. Richman DD. HIV Drug Resistance. II Congreso Nacional Sobre El Sida, Bilbao, Spain, March 2-5, 1993.
195. Kornbluth RS, Rhodes J, Richman DD: Recovery of infectious HIV following the passage of apoptotic cellular debris through phagocytic macrophages. CHEST 103:102-103, 1993.
196. Corbeil J, Badel P, Rapaport E, Wong-Staal F, Richman DD, Looney D. Effects of retinoid compounds on the proliferation of Kaposi Sarcoma cell cultures. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:13, 1993.
197. Meylan PRA, Kornbluth RS, Richman DD. Sulfated polyanions enhance HIV-1 replication in macrophages. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:19, 1993.
198. Chowers MY, Spina CA, Kwoh TJ, Fitch NJS, Richman DD, Guatelli JC. The nef orf of HIV NL4-3 has a positive effect on viral replication rate in cell lines. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:43, 1993.
199. Guatelli J, Riggs N, Richman D. Mutagenesis of the HIV-1 *rev* splice acceptor region: unexpected generation of dominant defective viral genomes. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:47, 1993.
200. Matsuzaki H, Richman DD, Kornbluth RS. Amplification and sequencing of the 5' and 3' tar elements in viral RNA from HIV_{BaL} infected macrophages. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:51, 1993.
201. Spina CA, Kwoh TJ, Chowers MY, Richman DD. The importance of nef in the induction of HIV-1 replication from primary, quiescent CD4 lymphocytes. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:57, 1993.
202. Kornbluth RS, Richman DD. Debris from apoptotic, HIV-1-infected T cells infects macrophages in a manner that is distinct from a macrophage-tropic virus. Keystone Symposia on Molecular and Cellular Biology, Albuquerque, NM, March 29-April 4, 1993. Journal of Cellular Biochemistry, Supplement 17E:67, 1993.
203. Richman DD. New trends in HIV infection. Dermatology 2000 Conference, Vienna, Austria, May 18-21, 1993.
204. Richman DD and the ACTG 164/168 Study Team. Nevirapine resistance during clinical trials. HIV Drug-Resistance Workshop, Noordwijk, The Netherlands, June 3-5, 1993.
205. Kuritzkes DR, Johnson VA, Crumpacker CS, Japour AJ and the ACTG 116B/117 Virology Resistance Team. Baseline prevalence and clinical significance of zidovudine (ZDV) resistance mutations in HIV-1 isolates from patients participating in ACTG protocol 116B/117. HIV Drug-Resistance Workshop, Noordwijk, The Netherlands, June 3-5, 1993.

206. D'Aquila R, Johnson VA, Kuritzkes D, Japour A, Crumpacker C, Richman DD and the ACTG Protocol 116B/117 Team. HIV-1 drug resistance and syncytium-inducing phenotype: associations with disease progression among ACTG 116B/117 subjects. HIV Drug-Resistance Workshop, Noordwijk, The Netherlands, June 3-5, 1993.
207. Hostetler KY, Basava C, Selk L, Gardner N, Parker S, Richman DD. HIV protease inhibitor lipid prodrug exhibits greatly prolonged plasma residence time in vivo. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany June 6-11, 1993.
208. Havlir D and the ACTG 164 & 168 Study Teams. Antiviral activity of nevirapine at 400 mg in p24 antigen positive adults. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
209. Haubrich RH and the ACTG 213 Team. A randomized study of safety, tolerance, pharmacokinetics, and activity of oral RO 24-7429 (tat antagonist) in patients with HIV infection. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
210. Broor S, Kausari A, Zhang B, Seth P, Richman DD. Stimulation of HIV replication in mononuclear phagocytes by leukemia inhibitory factor. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
211. Gallant JE, Moore RD, Richman DD. Risk factors for Kaposi's sarcoma in patients with advanced HIV disease treated with zidovudine. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
212. Havlir D and the ACTG 208 Study Team. An open-label pilot study to evaluate the development of resistance to nevirapine (BI-RG-587) in HIV-infected patients with CD4 cell count $\square 500/\text{MM}^3$. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
213. D'Aquila R, Johnson V, Kuritzkes D, Japour A, Crumpacker C, Richman DD and ACTG 116B/117 Team. HIV-1 drug resistance and syncytium-inducing phenotype: Associations with disease progression among ACTG 116B/117 subjects. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
214. Cheeseman SH, Murphy RI, Saag MS, Havlir D and the ACTG 164/168 Study Team. Safety of high dose nevirapine (NVP) after 200 mg/d lead-in. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
215. Lai S, Fischl MA, Richman DD, Lin A, Nauss-Karol C, Lieberman J. Using CD4+ to construct a surrogate marker in the evaluation of treatments for HIV-1 infection. IXth International Conference on AIDS/IVth STD World Congress, Berlin, Germany, June 6-11, 1993.
216. Richman DD. Interactions of drug resistance mutations of isolates of HIV from patients treated with Nevirapine. Annual Meeting of Laboratory of Tumor Cell Biology, Bethesda, Maryland, August 22-28, 1993. AIDS Res Human Retroviruses 10(Suppl 1):S23, 1994.
217. Tierney M, Pottage J, Kessler H, Fischl M, Richman D, Merigan T, Powderly W, Pettinelli C, Sherman J, Hirsch M. The tolerability and pharmacokinetics of *N*-butyl-deoxynojirimycin in patients with advanced HIV disease (ACTG 100). 33rd Interscience Conference on Antimicrobial Agents and

Chemotherapy (ICAAC), New Orleans, LA, October 17-20, 1993.

218. Kuritzkes DR, Welles S, Johnson VA, D'Aquila R, Richman DD, Crumpacker CS, Reichelderfer P, De Gruttola V, Japour AJ. Baseline prevalence and clinical significance of zidovudine resistance mutations in HIV-1 isolates from patients participating in ACTG protocol 116B/117. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
219. Eastman PS, Richman DD, Urdea M, Kolberg J. Evaluation of the amino acid 215 genotype of HIV-1 reverse transcriptase and viral load in the plasma of patients during nevirapine monotherapy or nevirapine/ZDV combination therapy. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
220. Havlir D, Murphy R, Saag M, Kaul I, Johnson V, Richman DD, the ACTG 164 and 168 Study Teams. Nevirapine: further dose escalation of monotherapy (600 mg/daily) and combination therapy with zidovudine. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
221. Corbeil J, Howell ML, Richman DD. Analysis of HIV-induced apoptosis: viral infection is required. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
222. D'Aquila R, Johnson VA, Welles S, Japour AJ, Kuritzkes DR, De Gruttola V, Reichelderfer PS, Coombs R, Crumpacker CS, Kahn JO, Richman DD. Zidovudine resistance at entry to ACTG protocol 116B/117 predicted HIV-1 disease progression. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
223. Kornbluth RS and Richman DD. HIV-1 DNA survives apoptosis in infected T cells and is taken up by phagocytosing macrophages with the production of new infectious virus. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993
224. Richman DD. Resistance to antiretrovirals. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
225. Lamson M for the ACTG 164 Study Team. Pharmacokinetics of nevirapine following single and multiple doses of 12.5, 50, 200 and 400 mg/d to HIV-infected patients. The First National Conference on Human Retroviruses and Related Infections, Washington, DC, December 12-16, 1993.
226. Woolf NK, Jaquish D, Go V, Koehrn FJ, Jackson-Friedman C, Richman DD, Isom HC. Detection of guinea pig cytomegalovirus nucleic acid during primary acute and chronic persistent infection by polymerase chain reaction. Proceedings IVth International Cytomegalovirus Conference, Paris, France, 1993.
227. Kornbluth RS, Richman DD. Modulation of the pathway by which macrophages take up HIV-1 DNA from apoptotic infected T cells and regenerate infectious virions. Keystone Symposia on Molecular and Cellular Biology, Hilton Head, South Carolina, January 23-30, 1994. Journal of Cellular Biochemistry, Supplement 18B:120, 1994.
228. Chowers MY, Spina CA, Kwoh TJ, Richman DD, Guatelli JC. Effect of HIV-1 *nef* during single cycle

- replication. Keystone Symposia on Molecular and Cellular Biology, Hilton Head, South Carolina, January 23-30, 1994. Journal of Cellular Biochemistry, Supplement 18B:129, 1994.
229. Kusarit AB, Broor S, Zhang B, Seth P, Richman DD, Carson DA, Wachsman W, Lotz M. Stimulation of HIV replication in mono-nuclear phagocytes by leukemia inhibitory factor. Keystone Symposia on Molecular and Cellular Biology, Hilton Head, South Carolina, January 23-30, 1994. Journal of Cellular Biochemistry, Supplement 18B:135, 1994.
230. Little SJ, Riggs NL, Richman DD, Guatelli JC. Dominant negative effect of *rev* proviral mutants of HIV-1. Keystone Symposia on Molecular and Cellular Biology, Hilton Head, South Carolina, January 23-30, 1994. Journal of Cellular Biochemistry, Supplement 18B:136, 1994.
231. Richman DD. HIV phenotypes affecting therapeutic interventions. The 1994 UCLA/UCI AIDS Symposium, Palm Springs, CA, March 3-6, 1994.
232. Richman DD. The therapeutic significance of HIV drug resistance. The VIth International Antiviral Symposium, Nice, France, June 7-10, 1994.
233. Potts KE, Smidt ML, Stallings WC, Jr, Clare M, Pillay D, Richman DD, Bryant ML. In vitro selection and characterization of human immunodeficiency virus type 1 (HIV-1) variants with decreased sensitivity to hydroxyethylurea isostere containing protease inhibitors. 3rd International HIV Drug Resistance Workshop, Kauai, Hawaii, August 2-5, 1994.
234. Najera I, Richman DD, Olivares I, Rojas JM, Najera R, Lopez-Galindez C. Natural occurrence of resistance mutations in the *pol* gene of HIV-1 isolates. 3rd International HIV Drug Resistance Workshop, Kauai, Hawaii, Aug 2-5, 1994.
235. Wong JK, Ignacio CC, Fitch NJS, Torriani F, Havlir D, Richman DD. Discordance of RT sequences conferring ZDV resistance in proviral DNA from brain and spleen. 3rd International HIV Drug Resistance Workshop, Kauai, Hawaii, August 2-5, 1994.
236. Hooper C, Welles S, D'Aquila R, Japour A, Johnson V, Kurtizkes D, Jackson B, DeGruttola V, Crumpacker C, Richman DD, Kahn J, Kwok S, Todd J, Reichelderfer P, Coombs R. HIV-1 RNA level in plasma and association with disease progression, zidovudine sensitivity phenotype and genotype, syncytium-inducing phenotype, CD4+ cell count and clinical diagnosis of AIDS. 3rd International HIV Drug Resistance Workshop, Kauai, Hawaii, August 2-5, 1994.
237. Pillay D, Smidt ML, Potts KE, Bryant ML, Richman DD. In vitro selection of protease inhibitor resistant human immunodeficiency virus type 1 (HIV-1) strains. 34th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando, FL, October 4-7, 1994.
238. Richman DD. HIV drug resistance. 2nd International Congress on Drug Therapy in HIV Infection, Glasgow, Scotland, November 18-22, 1994. AIDS Supplement 4 8:S3.
239. Chowers M, Spina C, Richman DD, Guatelli J. Enhancement of viral infectivity by HIV-1 Nef. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
240. Corbeil J, Rapaport E, Richman DD, Badel P, Looney D.J. Inhibition and killing of Kaposi's Sarcoma cells by retinoids. 2nd National Conference on Human Retroviruses and Related Infections,

Washington, DC, January 29-February 2, 1995.

241. Fischl MA, Richman DD, Flexner C, Meehan P, Para MF, Haubrich R, Cook J, Wood K, Karim A, The ACTG 282 Team. Phase I study of two formulations and dose schedules of SC-52151, a protease inhibitor. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
242. Welles SL, Jackson JB, Yen-Lieberman B, Demeter L, Japour AJ, Johnson VA, Kuritzkes DR, D'Aquila RA, Reichelderfer P, Richman DD, Reichman R, McLaren C, Todd J, Kwok S, Fischl M, Dolin R, Crumpacker CS. Prognostic capacity of plasma HIV-1 RNA copy number in ACTG 116A. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
243. Havlir D, Eastman S, Richman DD. HIV-1 kinetics: rates of production and clearance of viral populations in asymptomatic patients treated with nevirapine. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
244. Murphy R, Havlir D, Saag MS, Cheeseman SH, Dransfield K, The ACTG 168 Study Team. Safety, immunologic and virologic activity of nevirapine in combination with zidovudine therapy in HIV-infected patients. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
245. Pieniazek D, Janini M, Luo C-C, De La Torre N, Peralta JM, Tanuri A, Schechter M, Pieniazek M, Kalish M, Schochetman G, Rayfield M. Confirmation of homotypic dual infections with HIV-1 and phylogenetic analysis of the contributing subtypes. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
246. Haubrich RH, Hirsch M, Flexner C, Lederman M, Ginsberg R, Richman DD, The ACTG 213 Team. Effect of antiretroviral discontinuation (AD) and reintroduction on markers of HIV infection. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
247. Gallant JE, Moore FD, Richman DD, Keruly J, Chaisson RE. Lack of association between acyclovir use and survival in patients with advanced HIV disease treated with zidovudine. 2nd National Conference on Human Retroviruses and Related Infections, Washington, DC, January 29-February 2, 1995.
248. Flexner C, Richman DD, Bryant M, Karim A, Yeramian P, Meehan P, Haubrich R, Para MF, Fischl MA, the AIDS Clinical Trials Group (ACTG) 282 Study Team. Effect of protein binding on the pharmacodynamics of an HIV protease inhibitor. The Eighth International Conference on Antiviral Research, Santa Fe, NM, April 23-28, 1995.
249. Guatelli J, Chowers M, Pandori M, Spina C, Richman D. Mechanism of enhancement of viral infectivity by HIV-1 nef. Keystone Symposia on Molecular and Cellular Biology, Keystone, CO, April 2-23, 1995. Journal of Cellular Biochemistry, Supplement 21B:190, 1995.
250. Kornbluth RS, Richman DD. Immunosuppressive effects of apoptotic debris from HIV-infected T cells on T cell proliferation. Keystone Symposia on Molecular and Cellular Biology, Keystone, CO, April 2-23, 1995. Journal of Cellular Biochemistry, Supplement 21B:208, 1995.
251. Spina CA, Richman DD. Induction of HIV-1 replication can be dissociated from induction of cell

- proliferation in a primary CD4 cell model. Keystone Symposia on Molecular and Cellular Biology, Keystone, CO, April 2-23, 1995. Journal of Cellular Biochemistry, Supplement 21B:212, 1995.
252. Havlir DV, Johnson VA, Hall DB, Robinson PA, Overbay CB, Richman DD. Factors determining sustained antiviral response to nevirapine. 4th International Workshop on HIV Drug Resistance, Sardinia, Italy. J AIDS 10 (Suppl. 3):S10-S11, 1995.
253. Cavert W, Coombs RW, Grimes J, Kuritzkes D, Johnson V, Kappes J, Stein D, Beatty C, Erice A, Winters M, Katzenstein D, Johnson E, Rojo E, Mirabile M, Elbeik T, Tsatsis B, Corey L, ACTG Protocol 194 Clinica and Virology Laboratories. Therapeutic significance of switching to didanosine (ddI) or adding ddI in subjects with ZDV-resistant HIV-1. 4th International Workshop on HIV Drug Resistance, Sardinia, Italy. J AIDS 10 (Suppl. 3):S20, 1995.
254. Crumpacker C, Welles S, Yen-Lieberman B, Demeter L, Japour A, Smeaton L, Johnson V, Kuritzkes D, D'Aquila R, Reichelderfer P, Richman DD, Reichman R, McLaren C, Todd J, Kwok S, Coombs R, Jackson B. Correlation of plasma HIV-1 RNA level and development of resistance mutations to AZT and ddI with disease progression in patients with advanced HIV-1 disease and little or no AZT therapy. 4th International Workshop on HIV Drug Resistance, Sardinia, Italy. J AIDS 10 (Suppl. 3):S21, 1995.
255. Kozal MJ, Shah N, Yang R, Shen N, Fucini R, Merigan TC, Richman DD, Chee MS, Gingeras TR. Natural polymorphism of HIV-1 clade B protease gene and the implication for therapy. 4th International Workshop on HIV Drug Resistance, Sardinia, Italy. J AIDS (Suppl. 3):S38, 1995.
256. Demeter L, Stannerud K, Mayers D, Fitzgibbon J, Sylvester S, Arens M, Fisher E, Shafer R, Zhao Y, Huang D, Reichelderfer P, Johnson V, Richman D, Rasheed S, Kuritzkes D, Japour A. Interlaboratory concordance of DNA sequence analysis of the HIV-1 reverse transcriptase (RT). 35th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 17-20, 1995.
257. Richman DD. Genotypic and phenotypic characterization of HIV-1 as a tool to study pathogenesis. 35th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 17-20, 1995.
258. Hostetler KY, Kini GD, Richman DD. 1-O-Octadecylglycero-3-phosphoformate exhibits enhanced activity and synergy with AZT against HIV, *in vitro*. 35th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 17-20, 1995.
259. Richman DD. Antiviral chemotherapy: new drugs and new perspectives. Retroviruses of Human AIDS and Related Animal Diseases "Dixième Colloque Des Cent Gardes", Marnes-La-Coquette Near Paris, France, October 23-25, 1995.
260. Woolf NK, Jaquish DV, Koehrn FJ, Jackson-Friedman C, Richman DD. Labyrinthitis and sensorineural hearing loss induced by murine cytomegalovirus (MCMV) in an immunodeficient SCID mouse model. ARO 18:149, 1995.
261. Woolf NK, Jaquish DV, Koehrn FJ, Jackson-Friedman C, Richman DD. Cytomegalovirus induced neurologic disease in SCID mice: labyrinthitis and encephalitis. Proceedings Vth International Cytomegalovirus Conference, Stockholm, Sweden, 1995.

262. Richman DD. Implications of drug resistance on viral dynamics and pathogenesis. Keystone Symposia on Molecular and Cellular Biology, Taos, NM, January 17-23, 1996.
263. Pandori MW, Fitch NJS, Spina CA, Richman DD, Guatelli JC. Mechanism of nef-mediated enhancement of infectivity of HIV-1. Keystone Symposia on Molecular and Cellular Biology, Taos, NM, January 17-23, 1996.
264. Zhang H, Dornadula G, Wu Y, Havlir D, Richman DD, Pomerantz RJ. Kinetic analysis of intravirion reverse transcriptase in the blood plasma of HIV-1 infected-individuals: direct assessment of resistance to reverse transcriptase inhibitors *in vivo*. 3rd Conference on Retroviruses and Opportunistic Infections, Washington, DC, January 28-February 1, 1996.
265. Spina C, Richman DD. Preferential replication of HIV-1 in the CD45RO "memory" subset of primary CD4 cells. 3rd Conference on Retroviruses and Opportunistic Infections, Washington, DC, January 28-February 1, 1996.
266. Gulick R, Mellors J, Havlir D, Eron J, Gonzalez C, McMahon D, Richman D, Valentine F, Jonas L, Meibohm A, Chiou R, Deutsch P, Emini E, Chodakewitz J. 3rd Conference on Retroviruses and Opportunistic Infections, Washington, DC, January 28-February 1, 1996.
267. Richman DD. Resistance to antiretroviral drugs. 3rd Conference on Retroviruses and Opportunistic Infections, Washington, DC, January 28-February 1, 1996.
268. Hostetler KY, Kini GD, Beadle JR, Aldern KA, Richman DD. Antiviral activity of alkylglycerol foscarnet analogs in HIV-1 infected HT4-6C cells: structure-activity studies. Ninth International Conference on Antiviral Research, Urabandai, Fukushima, Japan, May 19-24, 1996.
269. Wong JK, Ignacio CC, Torriani F, Havlir D, Fitch NJS, Richman DD. *In vivo* compartmentalization of HIV: evidence from the examination of *pol* sequences from autopsy tissues. 5th International Workshop on HIV Drug Resistance, Whistler, Canada, July 3-6, Antiviral Therapy 1(Suppl 1):45, 1996.
270. Moutouh L, Richman Dd, Corbeil J. HIV-induced apoptosis requires the CD4 cytoplasmic tail and is accelerated by the presence of p56LCK. 15th Annual American Society for Virology Meeting, London, Ontario, Canda, July 13-17, 1996.
271. Gulick RM, Mellors J, Havlir D, Eron J, Gonzalez C, McMahon D, Richman D, Valentine F, Rooney J, Jonas L, Meibohm A, Emini E, Chodakewitz J. Potent and sustained antiretroviral activity of indinavir (IDV), zidovudine (ZDV) and lamivudine (3TC). XI International Conference on AIDS, Vancouver, Canada, July 1996.
272. Richman DD. Antiviral drug resistance in HIV. Instituto Juan March de Estudios e Investigaciones Centre for International Meetings on Biology: Workshop on RNA Viral Quasispecies. Mardrid, Spain, October 1996.
273. Kornbluth RS, Richman DD. CD40L induces macrophages to produce MIP-1a, which protects CD4+ T cells from infection by NSI strains of HIV-1. Third International Workshop on HIV and Cells of Macrophage Lineage, Varennna, Lake of Como, Italy, October 16-19, 1996.
274. Richman DD. New developments in antiretroviral therapy. Third International Workshop on HIV and

Cells of Macrophage Lineage, Varenna, Lake of Como, Italy, October 16-19, 1996.

275. Richman DD. HIV drug resistance - an overview. 3rd International Congress on Drug Therapy in HIV Infection. Birmingham, UK, November 1996, AIDS 10(Suppl 2), pp S7.
276. Gervais A, West D, Wong-Staal F, Richman D, Corbeil J. LTR-GFP: a new reporter system to monitor HIV infection and anti-HIV drug efficacy. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
277. Kornbluth RS, Kee K, Richman DD. CD40 ligand (CD40L) stimulates human macrophages to produce large amounts of HIV-suppressive □-chemokines. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
278. Little S, Havlir D, Richman D, McLean A, Spina C. Dynamics of T lymphocytes in primary HIV infection. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
279. Havlir DV, Haubrich R, Hwang J, Dunne M, Torriani F, Currier J, Forthal D, Bozzete SA, Richman DD, McCutchan JA. Sequential HIV RNA levels in patients with disseminated *M. avium* complex (MAC): a case control study. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
280. Furman P, Barry DW, Borroto-Esoda K, Moxham C, Richman D, Sommadossi J-P, Endoh R, Niwa T, Yamamoto M, Szczech G. Preclinical development of MKC-442, a potent and selective non-nucleoside inhibitor of HIV reverse transcriptase. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
281. Lopez-Galindez C, Sanchez-Palomino S, Olivares I, Yuste E, Richman DD. Random strong alterations in HIV 1 viral quasispecies due to antiviral treatment. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
282. Günthard H, Wong J, Ignacio C, Havlir D, Richman DD. Comparative performance of high density oligonucleotide sequencing and dideoxynucleotide sequencing of HIV pol from clinical samples. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
283. Richman DD. Resisting resistance: strategic approaches to preventing and coping with resistance to antiretroviral drugs. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
284. Wong JK, Günthard HF, Havlir DV, Haase AT, Zhang ZQ, Kwok S, Ignacio CC, Keating NA, Chodakewitz J, Emini E, Meibohm A, Jonas L, Richman DD. Reduction of HIV in blood and lymph nodes after potent antiretroviral therapy. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
285. Schooley RT, the 141 W94 International Study Group. Preliminary data from a phase I/II study on the safety and antiviral efficacy of the combination of 141 W94 plus 1592U89 in HIV-infected patients with 150 to 400 CD4+ cells/mm³. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC, January 22-26, 1997.
286. Richman DD. Antiviral drug resistance in HIV. 7th International Antiviral Symposium. Sydney, Australia, February 17-19, 1997.
287. Rosowsky A, Fu H, Pai N, Mellors JW, Richman DD, Hostetler KY. Synthesis and inv vitro antiviral activity of long-chain 5'-(O-Alkoxy carbonylphosphinyl)-3'-azido-3'-deoxythymidines against drug-

- sensitive and AZT- or PFA-resistant human immunodeficiency virus type-1 (HIV-1). 10th International Conference on Antiviral Research. Atlanta, GA, April 6-11, 1997 (Antiviral Research 34:A43, 1997).
- 288. Looney DJ, Witke W, Feigal E, Corbeil J, Richman D, Little S. Relationship of HHV-8 peripheral blood mononuclear cell burden to immunodeficiency, opportunistic infections, response to therapy, and stage of Kaposi's Sarcoma. National AIDS Malignancy Conference. Bethesda, MD, April 28-30, 1997 (JAIDS & Human Retrovirology 14:A36, 1997).
 - 289. Bessudo A, Rassenti L, Richman D, Havlir D, Feigal E, Kipps TJ. Skewed and unstable B-cell repertoire in serial blood samples of HIV infected patients. Potential role in the induction of AIDS-associated lymphoma. National AIDS Malignancy Conference. Bethesda, MD, April 28-30, 1997 (JAIDS & Human Retrovirology 14:A51, 1997).
 - 290. Richman DD. The role of resistance and dynamics of HIV in antiviral therapy. J Clin Microbiol Infect 3(Suppl 2):S92, 1997.
 - 291. Wong JK, Gunthard HF, Havlir DV, Zhang Z, Haase AT, Ignacio CC, Kwok S, Emini E, Richman DD. Effect of potent antiretroviral therapy on HIV RNA and DNA levels in blood and lymph nodes after one year of therapy. 2nd Joint Conference of Strategic Program for Innovative Research on AIDS Treatment (SPIRAT) and the National Cooperative Drug Discovery Groups for Treatment of HIV Infection (NCCDG-HIV). Vienna, June 22-26, 1997.
 - 292. Patick AK, Kuritzkes D, Johnson VA, Shugarts D, Bakhtiari M, Potts KE, Farnsworth A, Anderson R, Koel JL, Hazelwood JD, Nail CD, Duran M, Markowitz M, Ho D, Richman D. Genotypic and phenotypic analyses of HIV-1 variants isolated from patients treated with nelfinavir and other HIV-1 protease inhibitors. International Workshop on HIV Drug Resistance, Treatment Strategies and Eradication. St. Petersburg, FL, June 25-28, 1997.
 - 293. Johnson VA, Kuritzkes DR, Richman DD, Hirsch MS, Fischl MA, DeGruttola V, D'Aquila RT. HIV-1 drug resistance and virological failure during combination therapy with nevirapine, zidovudine and didanosine. International Workshop on HIV Drug Resistance, Treatment Strategies and Eradication. St. Petersburg, FL, June 25-28, 1997.
 - 294. Günthard H, Wong J, Ignacio C, Havlir D, Richman D. Emergence of drug resistance in different tissue compartments in 10 patients using population-based sequencing after 1 year of potent antiretroviral therapy. International Workshop on HIV Drug Resistance, Treatment Strategies and Eradication. St. Petersburg, FL, June 25-28, 1997.
 - 295. Kini GD, Beadle JR, Aldern KA, Mellors JW, Richman DD, Hostetler KY. Lipid prodrug of a foscarnet-AZT conjugate: synthesis and antiviral activity against PFA- and AZT-resistant strains of HIV. Proc 213th American Chemical Society, 1997.
 - 296. Gulick R, Mellors J, Havlir D, Eron J, Gonzalez C, McMachon D, Richman D, Valentine F, Jonas L, Meibohm A, Isaacs R, Condra J, Emini E, Chodakewitz J. Indinavir (IDV), Zidovudine (ZDV) and Lamivudine (3TC): concurrent or sequential therapy in ZDV-experienced patients. 37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronto, Ontario, Canada, Sept 28-Oct 1, 1997.
 - 297. Mildvan D, Fischl M, Creagh T, Grossberg S, Nobak R, Witt P, Machado S, Mahmud M, Marshak A, Richman DD. The role of immune activation markers in antiretroviral-naïve patients with advanced HIV disease. 37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronto, Ontario, Canada, Sept 28-Oct 1, 1997.
 - 298. Bacheler LT, George H, Abremski K, Richman D, Mellors JW, Emini E, Schleif WA, Condra JH.

Mutations associated with viral load rebound in patients treated with the HIV-1 non nucleoside reverse transcriptase inhibitor DMP 266 in combination with the HIV-1 protease inhibitor Crixivan®. 37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronto, Ontario, Canada, Sept 28-Oct 1, 1997.

299. Havlir DV, Friedland G, Pollard R, Tierney C, Smeaton L, Fox L, Richman DD, the ACTG 290/298 Teams. Combination zidovudine and stavudine therapy versus other nucleosides: report of two randomized trials. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
300. Sommadossi JP, Zhou XJ, Moore J, Havlir DV, Friedland G, Tierney C, Smeaton L, Fox L, Richman D, Pollard R, the ACTG 290 Team. Impairment of stavudine phosphorylation in patients receiving a combination of zidovudine and d4T. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
301. Eron J, Haubrich R, Richman D, Lang W, Tisdale M, Myers R, Pagano G, Rogers M. Preliminary assessment of 141W94 in combination with other protease inhibitors. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
302. Vazquez-Rosales JG, Yamamoto S, Switzer WM, Havlir DV, Richman DD, Folks TM, Heneine W. Rapid phenotypic determination of nevirapine-resistant HIV-1 by direct analysis of reverse transcriptase (RT) activity in plasma samples. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
303. Little S, Havlir D, Richman D, Spina C, McLean A. Viral population dynamics during acute HIV infection. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
304. Looney DJ, Witke W, Corbeil J, Richman D, Little S. Utility of HHV-8 DNA QC PCR: relationship of PBMC burden to stage of kaposi's sarcoma and response to therapy. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
305. Moutouh L, Richman DD, Corbeil J. Molecular and cellular analysis of HIV-induced apoptosis in lymphoid T cell line expressing wild-type and mutated CD4 receptors. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
306. Kornbluth RS, Kee K, Richman DD. Molecular aspects of CD40 ligand (CD40L) stimulation of macrophages to produce HIV-suppressive □-chemokines. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
307. Günthard H, Wong J, Leigh Brown A, D'Aquila R, Ignacio C, Johnson V, Kuritzkes D, Richman D. Higher selection pressure from antiretroviral drugs in vivo results in increased evolutionary distance. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
308. Hezareh M, Wong JK, Ignacio CC, Richman DD, Spina CA. Differential T cell induction of productive HIV replication in samples from patients on prolonged suppressive therapy. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
309. Wong JK, Hezareh M, Gunthard HF, Havlir DV, Ignacio CC, Furtado M, Wolinsky SM, Spina CA, Richman DD. Persistence of replication competent HIV in patients with undetectable plasma virus. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
310. Estaquier J, Brunner T, Amiesen J-C, Sheeter D, Moutouh L, Green DR, Richman DD, Corbeil J. Induction of T cell apoptosis by syncytium-inducing and non syncytium-inducing isolates of HIV-1. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.

311. Little S, Havlir D, Richman D, McLean A, Spina C. Dynamics of T lymphocytes in acute HIV infection before and after treatment. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
312. Leigh Brown A, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD. Baseline sequence clusters predict response to combination therapy in ACTG 241. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
313. Havlir DV, Hirsch M, Collier A, Marschner I, Bassett R, Tebas P, Ioannidis J, Richman DD. Randomized trial of indinavir (IDV) vs. zidovudine (ZDV)/lamivudine (3TC) vs IDV/ZDV/3TC maintenance therapy after induction IDV/ZDV/3TC therapy. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
314. Zhang Z-Q, Schuler T, Cavert W, Notermans DW, Havlir D, Wong JK, Little S, Henry K, Danner SA, Richman DD, Haase AT. Response of follicular dendritic cells to antiretroviral combination therapy of HIV-1 infection in lymphoid tissues. 5th Conference on Retroviruses and Opportunistic Infections, Chicago, IL, Feb 1-5, 1998.
315. Richman DD. Virologic Impact of combination antiretroviral therapy. Keystone Symposia on Molecular and Cellular Biology, Park City, Utah, March 13-19, 1998.
316. Kini GD, Beadle JR, Aldern KA, Richman DD, Korba BE, Hostetler KY. Anti-hepatitis B virus activity of 3-hexadecyloxypropane-1-phospho-penciclovir and 3-hexadecyloxypropane-1-phospho-dideoxyguanosine in 2.2.15 cells. 11th International Conference on Antiviral Research, San Diego, CA, April 5-10, 1998 (Antiviral Research 37:A65, 1998).
317. Little S, McLean A, Richman D, Havlir D. Viral dynamics in acute HIV infection. 5th Annual HIV Dynamics & Evolution Conference, Santa Fe, New Mexico, April 18-20, 1998.
318. Günthard HF, Wong JK, Leigh Brown A, D'Aquila R, Johnson V, Kuritzkes K, Richman DD. Nucleoside RT-inhibitor and NNRTI combination therapy drives evolution of HIV-1 *pol* resulting in increased evolutionary distances. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
319. Leigh Brown AJ, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD. Baseline sequence clusters predict response to combination therapy in ACTG 241. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
320. Heneine W, Garcia Lerma JG, Vazquez-Rosales JG, Qari S, Juodawlkis A, Havlir D, Schinazi RF, Richman DD, Folks TM. A novel non-culture-based approach for the rapid analysis of phenotypic resistance to reverse transcriptase inhibitors of HIV-1 from plasma. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
321. Havlir DV, Petropoulos CJ, Hellmann NS, Whitcomb JM, Richman DD, the ACTG 343 Team. Evolution of drug resistance associated with loss of viral suppression in patients treated with indinavir, lamivudine and zidovudine. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
322. Martinez-Picado J, De Pasquale MP, Hanna G, Rosenberg E, Sutton L, Savara AV, Wong JK, Richman DD, Siliciano RF, Walker BD, D'Aquila RT. Molecular characterization of the latent reservoir of HIV-1 during maximally suppressive combination therapy. 2nd International Workshop on HIV Drug

Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).

323. Youle M, Stuyver L, Ball J, Moyle G, Beards G, Cane PA, Richman DD, Pillay D. Genotypic differences between plasma and seminal fluid HIV RNA in reverse transcriptase inhibitor experienced patients. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
324. Günthard HF, Ignacio CC, Kee K, Havlir DV, Spina CA, Hezareh M, Richman DD, Wong JK. HIV recovery from PBMC of patients with undetectable plasma viraemia is not due to residual viral replication. 2nd International Workshop on HIV Drug Resistance & Treatment Strategies, Lake Maggiore, Italy, June 24-27, 1998 (Antiviral Therapy 3[Suppl 1], 1998).
325. Corbeil J, Gingeras TR, Mamtoro G, Huang D, Richman DD. Quantitative molecular analysis of mRNA expression of HIV-infected T cell using high density oligonucleotide arrays. 12th World AIDS Conference, Geneva, June 28-July 3, 1998.
326. Barile AJ, Mascola JR, Tasker SA, Shaffer RA, Richman DD, Brodine SK. Prevalence of HIV-1 resistance mutations in a US military cohort of antiretroviral-naïve recent seroconvertors. 12th World AIDS Conference, Geneva, June 28-July 3, 1998.
327. Günthard HF, Wong JK, Spina C, Ignacio C, Kwok S, Christopherson C, Havlir D, Richman D. Induction of HIV-1 replication by influenza vaccination (IV) in patients on potent antiretroviral therapy. 12th World AIDS Conference, Geneva, June 28-July 3, 1998.
328. Heneine W, Garcia-Lerma JG, Vasquez-Rosales H, Havlir D, Schinazi RF, Richman DD, Folks TM. Rapid phenotypic detection of HIV-1 resistance to lamivudine (3TC) and nevirapine (NVP) by direct analysis of plasma reverse transcriptase activity. 12th World AIDS Conference, Geneva, June 28-July 3, 1998.
329. Richman DD. Therapy - new aspects. Symposium on Prion and Lentiviral diseases, Reykjavik, Iceland, August 20-22, 1998.
330. Guo LSS, Kiwan R, Najafi A, Hauser JD, Engbers CD, Pegg E, Amantea MA, Richman DD. Neutralization of HIV-1 by long-circulating pegylated CD4- liposomes. 38th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Diego, CA, September 24-27, 1998.
331. Leigh Brown AJ, Günthard HF, Precious HM, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD. Baseline sequence variation predicts response to combination antiretroviral therapy in ACTG 241. 38th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Diego, CA, September 24-27, 1998.
332. Richman DD. Antiviral therapy 1998-1999. 4th International Congress on Drug Therapy in HIV Infection, Glasgow, UK. AIDS 12[Suppl 4]:S1, 1998.
333. Eron J, Haubrich R, Richman D, Lang W, Tisdale M, Myers R, Pagano G, Rogers M. Safety and efficacy of amprenavir in combination with other protease inhibitors. 4th International Congress on Drug Therapy in HIV Infection, Glasgow, UK. AIDS 12[Suppl 4]:S38, 1998.
334. Richman DD. Minimizing the impact of drug resistance over the long term: issues related to sequencing of antiretroviral drugs. 34th Annual Meeting of the Infectious Diseases Society of America (IDSA), Denver, Colorado, November 12-15, 1998.
335. Richman DD. Viral evolution and resistance in patients with undetectable plasma virus. International

Conference on the Discovery and Clinical Development of Antiretroviral Therapies. St. Thomas, West Indies, US Virgin Islands, December 13-17, 1998.

336. Hostetler KY, Kini GD, Hostetler SE, Beadle JR, Albalil S, Hammond JH, Mellors J, Richman DD. Structure-activity of *sn*-2 substituted analogs of 1-O-octadecyl-*sn*-glycero-3-foscarnet and synergy with zidovudine in HIV-1 infected cells, *in vitro*. International Conference on the Discovery and Clinical Development of Antiretroviral Therapies. St. Thomas, West Indies, US Virgin Islands, December 13-17, 1998.
337. Wong J, Günthard H, Fiscus S, Zhang Z, Schlief W, Havlir D, Eron J, Mellors J, Gulick R, Valentine F, Jonas L, Ignacio C, Dao P, Isaacs R, Emini E, Haase A, Richman D. Residual HIV RNA and DNA in lymph node and HIV RNA in genital secretions and in CSF after two years of suppression of viremia in the Merck 035 cohort. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
338. Precious H, Leigh Brown AJ, Günthard HF, Wong JK, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD. A multiple regression model predicting response to combination therapy from baseline sequence data identifies amino acid sites not previously associated with resistance. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
339. Martinez-Picado J, DePasquale MP, Wong J, Finzi D, Savara A, Sutton L, Richman D, Siliciano R, D'Aquila R. Genetic stability of the latent HIV reservoir in memory CD4 T cells during suppressive therapy. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
340. Feinberg J, Petropoulos CJ, Hellman N, Richman DD. Heterosexual transmission of NNRTI-resistant HIV-1. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
341. Sheeter DA, Leoni LM, Genini D, Carson DA, Richman DD, Corbeil J. HIV induces a p38 mitogen-activated protein kinase-independent ATF-2 phosphorylation which correlate with G2/M phase cell cycle arrest. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
342. Günthard H, Wong J, Spina C, Ignacio C, Kwok S, Christopherson C, Wang J, Haubrich R, Havlir D, Richman D. Impact of influenza vaccination on HIV plasma RNA and patterns of immune response in patients with HAART. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
343. Gulick R, Mellors J, Havlir D, Eron J, Valentine F, McMahon D, Gonzalez C, Jonas L, Meibohm A, Chodakewitz J, Isaacs R, Richman D. Treatment with indinavir, zidovudine and lamivudine: Three-year follow-up. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
344. Corbeil J, Sheeter D, Huang D, Richman DD, Gingras T. Modulation of gene expression as monitored by high-density oligonucleotide arrays for the inoculation of HIV-1 upon T cells. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
345. Kornbluth RS, Kee K, Richman DD. Cytokine effects on CD40 ligand stimulation of macrophages to produce HIV-suppressive □-chemokines. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
346. Little S, Havlir D, McLean A, Richman D, Spina C. Dynamic changes in an activated DC8 cell subset

- in response to fluctuations in viral load during acute primary HIV infection and subsequent therapy. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
- 347. Zhang Z-Q, Schuler T, Wietgrefe S, Reimann KA, Reinhart TA, Cavert W, Miller CJ, Veazey RS, Notermans D, Little S, Danner SA, Richman DD, Havlir D, Wong J, Letvin NL, Wolinsky S, Haase AT. Sexual transmission and propagation of SIV and HIV-1 in activated and quiescent T cells. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
 - 348. Little S, Daar E, Keiser P, D'Aquila R, Connick E, Hellman N, Petropoulos C, Koup R, Rosenberg E, Walker B, Richman D. The spectrum and frequency of reduced antiretroviral drug susceptibility with primary HIV infection in the United States. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
 - 349. Havlir D, Hellman N, Petropoulos C, Whitcomb J, Collier A, Hirsch M, Tebas P, Richman D. Viral rebound in the presence of indinavir without protease inhibitor resistance. 6th Conference on Retroviruses and Opportunistic Infections. Chicago, Illinois, January 31- February 4, 1999.
 - 350. Richman DD. Suboptimal potency of current antiretroviral therapy. The 1999 Palm Springs Symposium on HIV/AIDS. Palm Springs, CA, March 4-7, 1999.
 - 351. Richman DD. Need for improved potency of antiretroviral chemotherapy. 1999 International Meeting of the Institute of Human Virology, Baltimore, MD. Journal of Human Virology 2:193, 1999.
 - 352. Haubrich R, Kemper C, Witt M, Keiser P, Dube M, Forthal D, Currier J, Seefried E, Hwang J, McCutchan JA, Hellmann N, Heilek G, Lie Y, Richman D. Reproducibility of an HIV phenotype resistance assay in clinical practice. 39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 26-29, 1999.
 - 353. Haubrich R, Kemper C, Witt M, Keiser P, Dube M, Forthal D, Currier J, Hwang J, Richman D, Hellmann N, Heilek G, Lie Y, McCutchan JA. 39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 26-29, 1999.
 - 354. O'Brien TR, Ioannidis JP, McDermott D, Carrington M, Murphy PM, Richman DD, Havlir DV. Chemokine receptor polymorphisms and response to potent antiretroviral therapy. Antiviral Therapy 4(1) 91, 1999.
 - 355. Gunthard H, Wong J, Havlir D, Richman DD. Evolution of HIV-1 V3 envelope sequences from residual lymph node RNA from patients on potent antiretroviral therapy with undetectable plasma viraemia for up to 2 years. Antiviral Therapy 4(1) 118, 1999.
 - 356. Haubrich R, Kemper C, Witt M, Keiser P, Dube M, Forthal D, Currier J, Seefried E, Rigby A, Richman DD, Hellmann N, Heilek G, Lie Y, McCutchan JA and the CCTG. Differences in Protease inhibitor (PI) phenotypic susceptibility after failure of the first PI containing regimen. Antiviral Therapy 4(1) 55, 1999.
 - 357. Little S, Darr, E, Keiser P, D'Aquila RD, Connick E, Hellmann N, Petropoulos C, Johnson P, Whitcomb J, Pitt J, Koup R, Friel T, Rosenberg E, Walker B, Richman DD. The spectrum and frequency of reduced antiretroviral drug susceptibility with primary HIV infection in the United States. Antitviral Therapy 4 (1) 86, 1999.
 - 358. Precious HM, Gunthard HF, Wong JK, D'Aquila RT, Johnson VA, Kuritzkes DR, Richman DD, Leigh Brown AJ. Long-term response to antiretroviral therapy is associated with baseline variation at a

- novel site in HIV-1 reverse transcriptase. *Antiviral Therapy* 4 (1) 61, 1999.
359. Martinez-Picado J, DePasquale MP, Kartsonis NA, Hanna G, Wong J, Finzi D, Rosenberg E, Gunthard H, Sutton L, Savara A, Petropoulos C, Hellmann N, Walker BD, Richman DD, Siliciano R, D'Aquila RT. Application and Outcome of Two Strategies to Increase HIV Medication Adherence: Life-Steps and Medication Monitoring. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
360. Frost SDW, Gunthard HF, Wong JK, Havlir D, Richman DD, Leigh Brown AJ. Evidence for positive selection driving the evolution of the HIV-1 envelope gene under potent antiviral therapy. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
361. Corbeil J, Sheeter J, Rought S, Genini D, Leoni L, Du P, Ferguson M, masys D, Welsh J, Fink JL, Drenkow J, Richman DD, Gingeras T. Temporal analysis of CD4⁺ T-Cell genome expression during HIV-1 infection. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
362. Sheeter D, Genini D, Corbeil J, Richman D, Leoni L. HIV-1 directly kills infected cells through disruption of mitochondria and activates caspase 9-induced apoptosis. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
363. Wong JK, Leigh Brown AJ, Quigg M, Albanil S, Daar E, D'Aquila R, Kaiser P, Connick E, Petropoulos C, Whitcomb J, Hellmann N, Richman DD, Little S. Primary infection with HIV-1 with reduced durg susceptibility does not appear to result from point source transmitting. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
364. Martinez-Picado J, DePasquale MP, Kartsonis NA, Hanna G, Wong J, Finzi D, Rosenberg E, Gunthard H, Sutton L, Savara A, Petropoulos C, Hellmann N, Walker BD, Richman DD, Siliciano R, D'Aquila RT. Selection of antiretroviral resistance in the latent reservoir of human immunodeficiency virus type 1 during successful therapy. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
365. Wong JK, Gunthard JF, Ellis RE, Letendre S, Kee K, Dao P, Denison B, Paxinos E, Hellmann N, Hsia K, Spector S, Grant I, Richman DD, McCutchan JA. Transient discordant virologic responses in CSF and plasma and the trafficking of multidrug-resistant HIV. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
366. Zhou XJ, Havlir DV, Richman DD, Acosta EP, Hirsch M, Collier AC, Tebas P, Sommadossi JP, the ACTG 343 Team. Plasma population pharmacokinetics (PK) and CSF penetration of indinavir (IDV) in combination with ZDV and 3TC in HIV-infected patients. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA,, Jan 30 - Feb 2, 2000.
367. Ioannidis JPA, Havlir DV, Tebas P, Hirsch MS, Collier AC, Richman DD. Dynamics of HIV-1 viral load rebound among patients with previous suppression of viral replication. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
368. Li Q, Zupancic M, Zhang Z-Q, Wong JK, Polis M, Feinberg M, Richman D, Little S, Havlir D, Haase AT. The level of RANTES expression and HIV-1 replication in the lymphoid tissues of HIV-1 infected acute and chronic patients. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.

369. Huang W, DeGruttola V, Fischl M, hammer S, Richman DD, Havlir D, Mellors J. Patterns of plasma HIV RNA responses in antiretroviral treatment success and failure. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
370. Acosta EP, Havlir DV, Richman DD, Zhou XJ, Hirsch M, Collier AC, Tebas P, Sommadossi J-P. Pharmacodynamics (PD) of indinavir (IDV) in protease-naive HIV-infected patients receiving ZDV and 3TC. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
371. Havlir D, Gilbert P, Bennett K, Collier A, Hirsch M, Tebas P, Adams E, Goodwin D, Schnittman S, Holohan MK, Richman D, the ACTG 5025 Study Team. Randomized trials of continued indinavir (IDV)/ZDV/3TC vs. switch to IDV/ddI/d4T or IDV/ddI/d4T + hydroxyurea in patients with viral suppression. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
372. Daar ES, Little SJ, Pitt JA, Santangelo J, Ho P, Harawa N, Kerndt P, Giorgi JV, Bai J, Gaut P, Richman DD, Mandel, Nichols S. Screening and diagnosis of primary immunodeficiency virus infection. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
373. Precious HM, Little SJ, Wong JK, Whitcomb J, Hellmann N, Petropoulos CJ, Richman DD, Leigh Brown AJ. The genotypic basis of moderately reduced susceptibility to antiretroviral drugs in primary HIV infection. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
374. Schrier R, havlir D, Torriani F, Durand D, Richman D, the HNRC. T-Cell responses to HIV antigens after antiretroviral treatment. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
375. Spina C, Hansasuta P, Wong J, Ogg G, Little S, Havlir D, Richman DD, Rowland-Jones S. Predominance of Nef-specific CD8 cell responses in acute HIV infection and persistence of HIV-specific CD8 memory cells during viral suppression. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
376. Rought SE, Richman DD, Corbeil J. The generation and application of a doxycycline-repressible, HIV-1 Nef expression system. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
377. Hostetler KY, Beadle JR, Hostetler SE, Kini GD, Aldern KA, Richman DD, Hammond JL, Zonarich DL, Bazmi HZ, Mellors JW. Alkyglycerol foscarnet analogs are active in vitro at submicromolar concentrations against a panel of drug-resistant strains of HIV-1. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
378. Richman DD, Kessler H, Eron J, Thompson M, Raffi F, Jacobson J, Harris J, McCreedy B, Bigley J, Rousseau F. Anti-HIV activity and tolerability of DAPD, a novel dioxolane guanosine RT inhibitor: initial results of a phase I/II 14-day monotherapy clinical trial. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
379. Haubrich R, Keiser P, Kemper C, Witt M, Dubé M, Forthal D, Leibowitz M, Hwang J, Rigby A, McCutchan JA, Hellmann N, Richman DD, the CCTG. Characterization of altered phenotypic

- antiretroviral (ARV) susceptibility to drugs in a failing regimen. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
380. Qari SH, Garcia Lerma JG, Vazquez-Rosales G, Schinazi RF, Havlir D, Richman DD, Reisler R, Vandamme AM, Schmit JC, Kavlick MF, Mitsuya H, Winters M, Merigan T, Heneine W. A rapid and inexpensive approach for phenotypic analysis of drug resistance to reverse transcriptase (RT) inhibitors by direct analysis of RT activity in plasma. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
381. Hanna G, Johnson V, Kuritzkes D, Richman D, Martinez-Picado J, D'Aquila R, the ACTG 241 Team. Sequencing by hybridization vs. cycle sequencing for genotyping HIV-1 reverse transcriptase. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
382. Leigh Brown AJ, Precious HM, Whitcomb J, Daar E, D'Aquila RT, Keiser P, Connick E, Hellmann N, Petropoulos C, Wong JK, Richman DD, Little SJ. Novel amino acid change influencing susceptibility to nevirapine detected in primary HIV infection. 7th Conference on Retroviruses and Opportunistic Infection. San Francisco, CA, Jan 30 - Feb 2, 2000.
383. Paxinos EE, Sartoris MM, Dawson K, Hellmann NS, Petropoulos CJ, Richman DD, Whitcomb JM. Natural variation in susceptibility to non-nucleoside reverse transcriptase inhibitors (NNRTI) predates drug availability. 40th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronto, Ontario, Canada, Sept 17-20, 2000.
384. Haubrich R, Whitcomb J, Keiser P, Kemper C, Witt M, Johnson D, Forthal D, Leibowitz M, Hwang J, Rigby A, Hellmann N, Richman D, McCutchan JA. Non-nucleoside reverse transcriptase inhibitor (NNRTI) hypersusceptibility (HS) is common and improves short-term virologic response. 40th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronto, Ontario, Canada, Sept 17-20, 2000.
385. Appay V, Nixon DF, Donahoe S, Gillespie G, Dong T, King A, Ogg G, Spiegel H, Conlon C, Spina C, Havlir D, Richman D, Waters A, Easterbrook P, McMichael A, Rowland-Jones S. HIV-specific CD8+ T cells produce antiviral cytokines but are impaired in cytolytic function. 2000 International Meeting of the Institute of Human Virology. Baltimore MD, September 10-15, 2000 (J Hum Virology 3:250, 2000).
386. Richman DD. Overview on the latest on genotype/phenotype and replicate fitness: the science. Fifth International Congress on Drug Therapy in HIV Infection, Glasgow, UK, October 22-26, 2000 (AIDS 14[Suppl 4]:S4, 2000).
387. Leigh Brown AJ, Frost SDW, Whitcomb JM, McLean AR, Hellmann NS, Leen CS, Brettle RP, Havlir DV, Mathews WC, Richman DD, Little SJ. Transmission and fitness of drug resistant strains of HIV. Fifth International Congress on Drug Therapy in HIV Infection, Glasgow, UK, October 22-26, 2000 (AIDS 14[Suppl 4]:S13, 2000).
388. Havlir D, Levitan D, Bassett R, Gilbert P, Richman D, Wong J. Prevalence and predictive value of intermittent viraemia in patients with viral suppression. 4th International Workshop on HIV Drug Resistance & Treatment Strategies, Sitges, Spain, June 12-16, 2000. (Antiviral Therapy 5[Suppl 3]:89, 2000).
389. Richman D. Therapeutic agents and viral targets: what is on the horizon? HIV DART 2000, Isla

Verde, Puerto Rico, December 17-21, 2000.

390. Brooun A, Richman D, Kornbluth R. A sensitive integration assay using HIV-1 preintegration complexes (PICs), concatameric target DNA, and PCR quantification of integration junctions. 8th Conference on Retroviruses and Opportunistic Infections. Chicago, IL, February 4 -8, 2001.
391. Wong JK, Strain M, Spina CA, Lam RY, Daly OA, Nguyen J, Ignacio CC, Santangelo JA, Pitt J, Richman DD, Daar E, Little SJ. Decay of cellular reservoirs of HIV-1 during primary infection treated before or after seroconversion. 8th Conference on Retroviruses and Opportunistic Infections. Chicago, IL, February 4 -8, 2001.
392. Douek DC, Betts MR, Hill BJ, Little SJ, Lempicki R, Metcalf JA, Casazza J, Yoder C, Adelsberger JW, Stevens RA, Baseler MW, Keiser P, Richman DD, Davey RT, Koup RA. Thymus function in HIV disease. Keystone Symposia on HIV Pathogenesis. Keystone, Colorado, March 28-April 3, 2001.
393. Richman DD. Viral evolution during treatment. Keystone Symposia on HIV Pathogenesis. Keystone, Colorado, March 28-April 3, 2001.
394. Appay V, Callan M, papagno L, Sutton J, Gillespie G, King A, Ogg G, Waters A, Easterbrook P, Spina CA, Havlir DV, Richman DD, McMichael AJ, Rowland-Jones S. Difference in CD8+ T cell maturation according to viral specificity. Keystone Symposia on HIV Pathogenesis. Keystone, Colorado, March 28-April 3, 2001.
395. Spina C, Kawano Y, Wong J, Richman D. Fate of HIV infection in naive phenotype CD4 cells during *in vitro*, proliferation-induced transition to a memory cell phenotype. Keystone Symposia on HIV Pathogenesis. Keystone, Colorado, March 28-April 3, 2001.
396. Killian S, Hultin L, Hausner MA, Sturgill R, Lua M, Little S, Richman D, Jamieson B, Giorgi J, Spina C. T-Cell repertoire alterations during early HIV-1 infection. Keystone Symposia on HIV Pathogenesis. Keystone, Colorado, March 28-April 3, 2001.
397. Strain MC, Ignacio CC, Levine H, Havlir D, Richman DD, Wong JK. Quantitative assessment of the dependence of viral replication kinetics on cell density. 8th Annual Discussion Meeting on HIV Dynamics and Evolution. Paris, France, April 26-29, 2001.
398. Little SJ, Holte S, Routy JP, Daar ES, Markowitz M, Collier AC, Koup RA, Conway B, Connick E, Saag MS, Mwatha A, Corey L, Keiser PH, Kilby M, Dawson K, Whitcomb JM, Hellmann NS, Richman DD. Antiretroviral resistance and response to initial therapy among recently HIV-infected subjects in North America. 5th International Workshop on HIV Drug Resistance & Treatment Strategies, Scottsdale, AZ, June 4-8, 2001. (Antiviral Therapy 6[Suppl 1]:21, 2001).
399. Haubrich R, Keiser P, Kemper C, Witt M, Leedom J, Forthal D, Leibowitz M, Hwang J Seefried E, McCutchan JA, Hellmann N, Richman D, the CCTG Study Team. CCTG 575: a randomized, prospective study of phenotype testing versus standard of care for patients failing antiretroviral therapy. 5th International Workshop on HIV Drug Resistance & Treatment Strategies, Scottsdale, AZ, June 4-8, 2001. (Antiviral Therapy 6[Suppl 1]:63, 2001).
400. Leigh Brown AJ, Whitcomb J, Hellmann N, Richman DD, Mathews WC, Daar E, Little SJ. Transmission fitness of drug-resistant virus and the prevalence of resistance in the treated population. 5th International Workshop on HIV Drug Resistance & Treatment Strategies, Scottsdale,

AZ, June 4-8, 2001. (Antiviral Therapy 6[Suppl 1]:112, 2001).

401. Richman D. Primary HIV infection: transmission of resistance and induction of CD8 T cell responses. XIth Symposium on HIV Infection. Toulon, France, June 14-16, 2001.
402. Richman D. Antiretrovirals: What's next? The 1st IAS Conference on HIV Pathogenesis and Treatment. Buenos Aires, Argentina, July 8-11, 2001.
403. Gulick R, Mellors J, Havlir D, Eron J, Gonzalez C, Meibohm A, McMahon D, Robertson M, Richman D. Indinavir (IDV), zidovudine (ZDV), and lamivudine (3TC): 5-year follow-up. The 1st IAS Conference on HIV Pathogenesis and Treatment. Buenos Aires, Argentina, July 8-11, 2001.
404. Schooley R, Haubrich R, Sension M, Taege A, Becker S, Richman D, Wire MB, Yau L, You L, Pappa K, Pierce A. Efficacy, safety and amprenavir (APV) pharmacokinetic (PK) responses of twice-daily APV and ritonavir (RTV) regimens in HIV-1 infected treatment-experienced adults for 48 weeks (ESS40006). 41st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Chicago, IL, December 16-19, 2001.
405. Richman DD, Bozzette S, Morton S, Chien S, Wrin T, Dawson K, Hellmann N. The prevalence of antiretroviral drug resistance in the US. 41st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Chicago, IL, December 16-19, 2001.
406. Richman DD, Wrin T, Little S, Petropoulos C. Rapid evolution of the neutralizing antibody response following primary HIV infection. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
407. Pillai S, Guatelli J, Spina C, Letendre S, Ellis RJ, Wong JK, Richman DD. Effects of compartmentalization on HIV-1 Nef evolution. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
408. Wong JK, Letendre S, Macaranas T, Ignacio C, Daly OA, Guenthard HF, Strain MC, Frost SDW, Pillai S, Good B, Furtado M, Wolinsky S, Grant I, Richman DD, McCutchan JA. Distribution of HIV env and pol variants in CSF and plasma of patients with and without antiretroviral therapy. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
409. Arthur LO, Rossio JL, Piatak M, Jr, Flynn BM, Desrosiers RC, Hoxie J, Raz E, Richman DD, VanNest G, Henderson L, Lifson JD. Immunogenicity and protective efficacy of ISS ODN adjuvanted inactivated SIV containing functional envelope glycoprotein against IV SIVmac239 challenge. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
410. Little SJ, Daar Es, Holte S, Frost SDW, Routy JP, Markowitz M, Collier AC, Margolick J, Koup R, Conway B, Connick E, Kilby M, Wrin T, Petropoulos CJ, Hellmann NS, Richman DD. Persistence of transmitted drug resistance among subjects with primary HIV infection not receiving antiretroviral therapy. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
411. Daar ES, Frost SDW, Wong JK, Hellmann NS, Wrin T, Petropoulos CJ, Richman DD, Pitt JA, Little SJ, Leigh Brown AJ. Mixed Infection Multidrug Resistant (MDR) and Wild Type HIV Strains in Primary HIV Infection (PHI): Early Viral Rebound Suggests Loss of Immune Control. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.

412. Strain MC, Little SJ, Daar ES, Gunthard H, Spina C, Lam RY, Daly OA, Ignacio C, Macaranas T, Kwok S, Christopherson C, Santangelo J, Pitt J, Richman DD, Wong JK. Initiation of Treatment before Seroconversion Increases the Rate of Clearance of the Latent Reservoir. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
413. Brooun A, Chinnasamy D, Snarsky V, Spina C, Richman DD, Candotti F, Kornbluth R. Regulation of the HIV-1 pre-integration complex (PIC) in primary human lymphocytes. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
414. Smith D, Little SJ, Daar ES, Koup R, Hellmann NS, Dawson K, Wong JK, Richman DD, Leigh Brown AJ. Genetic variation in p6gag in primary HIV infection. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
415. Leigh Brown AJ, Frost SDW, Mathews WC, Hellmann NS, Daar ES, Richman DD, Little SJ. Will transmission of drug resistant HIV be driven by individuals infected with drug resistant strains? 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
416. Strain MC, Havlir D, Gunthard H, Ignacio C, Macaranas T, Daly OA, Fischer M, Opravil M, Leigh Brown AJ, Levine H, Kwok S, Christopherson C, Smith D, Spina C, Richman DD, Wong JK. Intrinsic decay rate of lymphocyte reservoirs of HIV-1. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
417. Frost SDW, Condra JH, Leigh Brown AJ. Positive selection of HIV-1 protease (PR) prior to the advent of protease inhibitor-based therapy. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
418. Richman DD. Viral dynamics and reservoirs in patients on HAART. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb 24-28, 2002.
419. Richman D, Wrin T, Little S, Petropoulos C. Rapid evolution of neutralizing antibody response following primary HIV infection. Keystone Symposia on HIV Pathogenesis, Keystone, Colorado, April 5-11, 2002.
420. Papagno L, Appay V, Spina C, Hanssuta P, King A, Jone L, Ogg G, Little S, McMichael A, Richman D, Rowland-Jones S. Dynamics of T cell responses in HIV infection. Keystone Symposia on HIV Pathogenesis, Keystone, Colorado, April 5-11, 2002.
421. Pillai S, Good B, Richman D, Corbeil J. Determination of HIV-1 coreceptor usage via machine learning. Keystone Symposia on HIV Pathogenesis, Keystone, Colorado, April 5-11, 2002.
422. Leigh Brown AJ, Good B, Frost SD, Collier AC, Connick E, Conway B, Daar E, Kilby M, Routy JP, Margolick JB, Markowitz M, Dawson K, Hellmann N, Richman DD, Little SJ. Analysing the genotypic basis of hypersusceptibility to amprenavir in HIV from antiretroviral-naive patients. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl 1]:S42, 2002).
423. Koelsch KK, Little S, Ignacio CC, Richman DD, Wong JK. Diverse outcome of genotypic resistance analysis over time in two patients with transmitted reverse transcriptase inhibitor and protease inhibitor resistance mutations at primary infection. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl

- 1]:571, 2002).
424. Smith DM, Ignacio CC, Strain MC, Havlir DV, Lam R, Macaranas T, Richman DD, Wong JK. Disproportionate retention of wild-type HIV-1 in cellular reservoirs of HIV reflects the inherent stability of archival sequences. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl 1]:S83, 2002).
425. Haubrich R, Wrin T, Hellmann N, McCutchan JA, Keiser P, Kemper C, Witt M, Leedom J, Forthal D, Richman D, the CCTG. Replication capacity as a predictor of immunological and virological benefit despite virological failure of an antiretroviral regimen. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl 1]:S133, 2002).
426. Leigh Brown AJ, Frost SD, Daar E, Perrin L, Richman DD, Little SJ. An individual-based epidemiological model for the transmission of drug resistant HIV. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl 1]:S187, 2002).
427. Little SJ, Holte S, Routy JP, Connick E, Daar ES, Conway B, Wang L, Markowitz M, Collier AC, Dawson K, Hellmann NS, Richman DD. Longitudinal analysis of transmitted drug resistance among recently HIV-infected subjects in North America. XI International HIV Drug Resistance Workshop: Basic Principles and Clinical Implications. Seville, Spain, July 2-5, 2002 (Antiviral Therapy 7[Suppl 1]:S188, 2002).
428. Richman DD, Wrin T, Little S, Petropoulos C. Rapid evolution of the neutralizing antibody response following primary HIV infection. XIV International AIDS Conference. Barcelona, Spain, July 7-12, 2002.
429. Haurich R, Hellmann N, Keiser P, Kemper C, Witt M, Forthal D, Leedom J, Leibowitz M, Richman D, McCutchan JA, CCT Group. The clinical relevance of non-nucleoside reverse transcriptase inhibitor (NNRTI) hypersusceptibility: a prospective cohort analysis. XIV International AIDS Conference. Barcelona, Spain, July 7-12, 2002.
430. Richman D, Wrin T, Little S, Petropoulos C. Rapid evolution of the neutralizing antibody response to human immunodeficiency virus type 1 infection and viral escape. XIIITH Cent Gardes Symposium on HIV and AIDS Vaccines. Annecy, France, October 27-29, 2002.
431. Leigh Brown A, Frost S, Daar E, Hellmann N, Mathews C, Richman D, Little S. Modeling the response to potent antiretroviral therapy in San Diego: rates of suppression and transmission of drug resistant HIV. Sixth International Congress on Drug Therapy in HIV Infection. Glasgow, UK, Nov 17-21, 2002.
432. Wong JK, Letendre S, Macaranas T, Ignacio C, Strain M, Frost SDW, Pillai S, Good B, Furtado M, Wolinsky SM, Grant I, McCutchan JA, Ellis R. Effect of antiretroviral treatment on composition of viral populations in CSF. National Institutes of Mental Health Conference: Viral and Host Genetic Factors Regulating HIV/CNS Disease. Washington, DC, Nov 20-22, 2002.
433. Richman DD. Drug resistance: progression and transmission. HIV DART: Frontiers in Drug Development for Antiretroviral Therapies. Naples, Florida, Dec 15-19, 2002.
434. Schooley R, Sension M, Taege A, Haubrich R, Becker S, Richman D, Thompson M, Yau L,

- Hessenthaler S, Hernandez J, Pappa K. Efficacy and safety of amprenavir (APV) and ritonavir (RTV) regimens in HIV-1 infected treatment -experienced adults: 48-week data. HIV DART: Frontiers in Drug Development for Antiretroviral Therapies. Naples, Florida, Dec 15-19, 2002.
435. Schooley R, Haubrich R, Thompson M, Margolis D, Schneider S, Richman D, Pappa K, Yau L, Hessenthaler S, Hernandez J. Effect of amprenavir hyper-susceptibility on the response to apv/ritonavir-based therapy in ART-experienced adults selected by baseline susceptibility (ESS40006): 24-week Data. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
436. Little SJ, Frost SDW, Routy JP, Collier AC, Margolick JB, Daar ES, Koup RA, Conway B, Wang L, Wrin T, Petropoulos CJ, Hellmann NS, Richman DD, Holte S. High replication capacity is associated with high baseline viral load in untreated subjects with primary HIV infection. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
437. Strain MC, Levine H, Sheeter D, Ignacio CC, Havlir DV, Richman DD, Wong J K. Physical determinants of HIV infectivity in vitro: Brownian motion underlies target cell limitation. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
438. Smith DM, Kingery JD, Ignacio CC, Wong JK, Richman DD, Little SJ. The prostate as a reservoir for HIV-1. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
439. Koelsch KK, Kawano Y, Wong JK, Richman DD, Spina CA. An in vitro model for the study of latent/persistent HIV-1 infection in primary CD4 cells: quantitation of integrated viral DNA using real-time PCR. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
440. Frost SDW, Holte S, Wang L, Daar ES, Richman DD, Little SJ. Defining the 'viral setpoint' in HIV-1 infection. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
441. Leigh Brown AJ, Frost SDW, Good B, Daar ES, Simon V, Markowitz M, Collier AC, Connick E, Conway B, Margolick JB, Routy JP, Corbeil J, Hellmann N, Richman DD, Little SJ. Genotypic basis of variation in protease susceptibility in primary HIV infection analyzed with machine learning. The 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA, Feb 10-14, 2003.
442. Richman D, Wrin T, Little S, Petropoulos C. The evolution and neutralization escape of HIV. Keystone Symposia. Banff, Alberta, Canada, Mar 28-Apr 4, 2003.
443. Lifson JD, Rossio JL, Piatak Jr M, Schneider D, Hoffman AN, Coalter V, Poore B, Kiser R, Bess Jr J, Chertova E, Sly DL, Briglio L, Bischofberger N, Szczech G, Ghrayeb J, Schmitz , Reimann K, VanNest G, Raz E, Richman D, McClure H, Sodora D, Hirsch VM, Gauduin M-C, Johnson RP, Desrosiers RC, Watkins D, Arthur L. Control of pathogenic SIV infection: different routes to the same goal. Keystone Symposia. Banff, Alberta, Canada, Mar 28-Apr 4, 2003.
444. Appay V, Papagno L, Spina C, Little S, Marchant A, Dunbar R, McMichael A, Richman D, Rowland-Jones S. Activation and differentiation of HIV non-specific CD8+ T cells during HIV-1 infection. Keystone Symposia. Banff, Alberta, Canada, Mar 28-Apr 4, 2003.

445. Frost SDW, Wrin T, Little SJ, Petropoulos CJ, Richman DD. Quantifying escape from neutralizing antibody responses. HIV Dynamics & Evolution 10th International Workshop. Lake Arrowhead, CA April 13-16, 2003.
446. Frost SDW, Holte S, Wang L, Daar ES, Richman DD, Little SJ. Defining the 'viral setpoint' in HIV-1 infection. HIV Dynamics & Evolution 10th International Worksh02op. Lake Arrowhead, CA April 13-16, 2003.
447. Wong JK, Letendre S, Strain MC, Pillai S, Russell TM, Ignacio CC, Gunthard HF, Richman DD, Grant I, McCutchan JA, Ellis R. Effects of failing antiretroviral therapy on the composition of HIV-1 in CSF and blood. XII International HIV Drug Resistant Workshop. Los Cabos, Mexico, June 10-14, 2003.
448. Frost SDW, Kosakovsky Pond SL, Grossman Z, Daar E, Condra J, Richman DD, Little SJ, Leigh Brown AJ. Effects of amino acid and synonymous polymorphisms in HIV-1 protease on viral fitness. XII International HIV Drug Resistant Workshop. Los Cabos, Mexico, June 10-14, 2003.
449. Smith DM, Koelsch KK, Wong JK, Hightower GK, Ignacio CI, Richman DD, Little SJ. Male genital tract compartmentalization and transmission of 215L revertant. XII International HIV Drug Resistant Workshop. Los Cabos, Mexico, June 10-14, 2003.
450. Little SJ, Dawson K, Hellmann NS, Richman DD, Frost SDW. Persistence of transmitted drug-resistant virus among subjects with primary HIV infection deferring antiretroviral therapy. XII International HIV Drug Resistant Workshop. Los Cabos, Mexico, June 10-14, 2003.
451. Miller L, McCutchan JA, Keiser P, Kemper C, Witt M, Leedom J, Forthal D, Hellmann N, Richman D, Seefried E, Rigby A, Haubrich R, the California Collaborative Treatment Group (CCTG). Accumulation of antiretroviral resistance in treatment-experienced patients: the impact of medication adherence. XII International HIV Drug Resistant Workshop. Los Cabos, Mexico, June 10-14, 2003.
452. Paxinos EE, Wrin T, Galovich J, Beauchaine J, Little S, Richman DD, Petropoulos CJ. HIV-1 envelope gene evolution is driven by strong neutralizing antibody selection. 2nd IAS Conference on HIV Pathogenesis and Treatment. Paris, France, July 13-16, 2003 (Antiviral Therapy 8[Suppl 1], S191).
453. Miller L, McCutchan JA, Keiser P, Kemper C, Witt M, Leedom J, Forthal D, Hellmann N, Richman D, Seefried E, Rigby A, Haubrich R, the California Collaborative Treatment Group (CCTG). Accumulation of antiretroviral resistance in the treatment-experienced patients: the impact of medication adherence. 2nd IAS Conference on HIV Pathogenesis and Treatment. Paris, France, July 13-16, 2003 (Antiviral Therapy 8[Suppl 1], S418).
454. Lifson J, Rossio J, Piatak M Jr, Bess J Jr, Yuan F, Raz E, Richman D, Van Nest G, Bischofberger N, Pope M, Henderson L, Arthur L. Therapeutic vaccination of SIVmac239-infected rhesus macaques using inactivated SIV virions with functionally intact envelope glycoproteins. AIDS Vaccine 2003. New York, NY September 18-21, 2003.
455. Lifson J, Rossio J, Piatak M Jr, Bess J Jr, Yuan F, Schneider D, Cline A, Coalter V, Poore B, Raz E, Richman D, Van Nest G, Bischofberger N, Hoxie J, Pope M, Henderson L, Arthur L. Therapeutic immunization of rhesus macaques chronically infected with SIV MAC239, using chemically inactivated SIV virions with functionally intact envelope glycoproteins. 21st Annual Symposium on Nonhuman Primate Models for AIDS. Seattle, WA, October 22-25, 2003.

456. Smith D, Wong J, Hightower G, Koelsch K, Ignacio C, Daar E, Richman D, Little S. Incidence of HIV superinfection following primary infection. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
457. Frost SDW, Wrin T, Paxinos E, Chappay C, Galovich J, Beauchaine J, Petropoulos CJ, Little SJ, Richman DD. Autologous neutralizing antibody responses drive the evolution of HIV-1 *env* in recently infected patients. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
458. Little SJ, Koelsch KK, Ignacio CC, Wong JK, Lie Y, Frost SDW, Richman DD. Persistence of transmitted drug-resistant virus among subjects with primary HIV infection deferring antiretroviral therapy. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
459. Yu Q, Konig R, Pillai S, Kearney M, Palmer S, Richman D, Coffin J, Landau NR. Characteristics of mutations generated by AP0BEC3G on HIV-1 DNA. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
460. Gaicoechea M, Miller C, Spina C, Currier J, Kemper C, Witt M, Leedom J, Forthal D, Keiser P, McCutchan A, Richman D, Haubrich R, California Collaborative Treatment Group (CCTG). Quantitative CD38 expression on CD8 T cells as a predictor of CD4 T-Cell maintenance among patients failing salvage antiretroviral therapy. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
461. Stone GW, Kee K, Barzee S, Snarsky V, Richman D, Yu X-F, Kornbluth R. Multimeric soluble CD40 ligand as a potent DNA vaccine adjuvant. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
462. Lifson J, Piatak M Jr, Bess J Jr, Yuan F, Schneider D, Cline A, Coalter V, Poore B, Raz E, Richman D, Van Nest G, Bischofberger N, Hoxie J, Pope M, Arthur L. Therapeutic immunization of SIV_{mac239}-infected rhesus macaques, using inactivated SIV virions with intact functional envelope glycoproteins. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
463. Pillai S, Good B, Wong J, Strain M, Richman D, Smith D. Semen-specific genetic characteristics of HIV-1 *env*. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
464. Little SJ, Liu Y, Wrin T, Frost SDW, Chappay C, Smith DM, Petropoulos CJ, Richman DD. *env* sequences and neutralization of HIV from transmission partners of primary HIV infection. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
465. Ritola K, Pilcher C, Little S, Fiscus S, Hicks C, Eron J, Richman D, Swanson R. HIV-1 V1/V2 and V3 *env* diversity during primary infection suggests a role for multiply infected cells in transmission. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
466. Daar ES, Yang OO, Jamieson BD, Smith DM, Pitt JA, Petropoulos CJ, Richman DD, Little SJ, Leigh Brown AJ. Initial immune control of HIV-1 followed by superinfection and failure: significance of CTL specificity. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.

467. Smith D, Hightower G, Kosakovsky Pond S, Ignacio C, Richman D, Daar E, Little S, Frost S. Increasing viral diversity following primary HIV-1 infection reflects positive selection but does not correlate to changes in CD4 counts or viral loads. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
468. Havlir DV, Bassett R, Li XD, Pollard R, Richman D, Collier A, Tebas P, Hirsch M, Strain M, Ignacio CC, Wong JK. Revisiting maintenance therapy: evaluating HIV DNA and HIV RNA as predictors of virologic success. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
469. Kosakovsky Pond SL, Richman DD, McCutchan JA, Leigh Brown AJ, Frost SDW. Natural polymorphisms in HIV-1 protease, reverse transcriptase, and integrase are maintained by selection. 11th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, February 8-11, 2004.
470. Wang C, Menendez A, Zwick MB, Parren PWH, Pantophlet R, VanCott TC, Kingsley L, Little SJ, Rinaldo C, Burton DR, Richman DD, Scott JK. Evolution of the antibody response against envelope proteins during HIV-1 infection. Keystone symposia on ...?
471. Frost SDW, Wrin T, Kosakovsky Pond SL, Paxions E, Chappay C, Galovich J, Beauchaine J, Petropoulos CJ, Haubrich R, Little SJ, Richman DD. Evolution of resistance to neutralizing antibodies. 11th International Workshop on HIV Dynamics and Evolution. Stockholm, Sweden, April 29 - May 2, 2004.
472. Pillai S, Good B, Strain M, Ignacio C, Russell T, Grant I, Ellis R, Letendre S, McCutchan JA, Richman D, Wong JK. CSF-specific genetic characteristics of HIV-1 env. 11th International Workshop on HIV Dynamics and Evolution. Stockholm, Sweden, April 29 - May 2, 2004.
473. Koelsch K, Campos-Soto P, Little S, Ignacio C, Richman D, Spina C, Wong J. Rapid decay of linear unintegrated HIV-1 DNA in vitro and in vivo following suppression of virus replication. 11th International Workshop on HIV Dynamics and Evolution. Stockholm, Sweden, April 29 - May 2, 2004.
474. Little SJ, Grant RM, Daar ES, Markowitz M, Hecht FM, Johnson V, Allen T, Frenkel LM, Benson C, Routy JP, Conway B, Sun X, Richman DD, Frost SDW. Transmitted NNRTI drug resistance is associated with higher steady-state viral load measures in untreated subjects with primary HIV infection. XIII International HIV Drug Resistance Workshop: Basic Principles & Clinical Implications. Tenerife, Canary Islands, Spain, June 8-12, 2004.
475. Koelsch K, Campos-Soto P, Little S, Ignacio C, Havlir D, Young K, Shafer R, Robbins G, D'Aquila R, Haubrich R, Richman D, Spina C, Wong J. Dynamics of linear unintegrated and integrated HIV-1 DNA in vitro and in vivo. XV International AIDS Conference. Bangkok, Thailand, July 11-16, 2004.
476. Smith DM, Wong JK, Hightower G, Koelsch KK, Ignacio C, Daar E, Richman DD, Little SJ. Clinical consequences of HIV superinfection. XV International AIDS Conference. Bangkok, Thailand, July 11-16, 2004.
477. Richman DD. Prevention of viral drug resistance. HIV DART 2004: Frontiers in Drug Development for Antiretroviral Therapies. Montego Bay, Jamaica, December 12-16, 2004.

478. Little S, Drusano G, Schooley R, Haas D, Kumar P, Hammer S, McMahon D, Squires K, Asfour R, Richman D, Chen J, Saah A, Leavitt R, Hazuda D, Nguyen BY, Protocol 004 Study Team. Antiretroviral effect of L-000870810, a novel HIV-1 integrase inhibitor, in HIV-1-infected patients. 12th Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 22-25, 2005.
479. Frost S, Cheng S, Drumright L, Leigh Brown A, Richman D, Little S, Gorbach P. Bath-houses, bars, and bridges: patterns of sexual partner recruitment in a cohort of MSM with recent HIV infection. 12th Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 22-25, 2005.
480. Pillai S, Kosakovsky-Pond S, Woelk C, Richman D, Smith D. "Codon volatility" does not reliably measure selective pressure on HIV genes. .12th Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 22-25, 2005
481. Huang W, Fransen S, Toma J, Wring T, Little S, Richman D, Deeks S, Whitcomb J, Petropoulos C. R5 and X4 tropic HIV-1 envelope-mediated membrane fusion is associated with disease stage. 12th Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 22-25, 2005.
482. Kosakovsky Pond S, Frost S, Richman D, Leigh Brown A. Footprints in snow? Analyzing host vs population selection in HIV sequences. 12th Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 22-25, 2005.
483. Schrier R, Spina C, Richman D, Little S. T-Cell responses to HIV and opportunistic pathogens in early HIV infection. Keystone Symposium on HV Pathogenesis. Banff, Canada, April 9-15, 2005.
484. Richman DD. HIV pathogenesis: Twenty years of successes and failures. Keystone Symposium on HV Vaccines. Banff, Canada, April 9-15, 2005.
485. Gakhal AK, Schuitemaker H, Zwick MB, Richman D, Burton DR. In search of broadly neutralizing antibodies: Isolation and characterization of anti-HIV antibodies from an HIV-1 infected donor with broadly neutralizing serum. Keystone Symposium on HV Vaccines. Banff, Canada, April 9-15, 2005.
486. Law M, Selvarajah S, Richman D, Burton D. Understanding the antibody responses of HIV-1 infected patients and monomeric gp120-immunized humans for the rational design of HIV-1 vaccines. Keystone Symposium on HV Vaccines. Banff, Canada, April 9-15, 2005.
487. Richman DD. Bridging the sciences of vaccine and drug development. HIV Vaccine Research and Drug Development, Atlanta Georgia, May 19-20, 2005 (Global Antiviral Journal 1[Suppl 1]:39, 2005).
488. Smith DM, Wong JK, Mai HT, Moreno JM, Russell TM, Ignacio CC, Frost SDW, Richman D, Little SJ. Slow reversion of HIV transmitted drug resistance to non-nucleoside reverse transcriptase inhibitors in semen. XIV International Drug Resistance Workshop: Basic Principles & Clinical Implications. Quebec, Canada, June 7-11, 2005 (Antiviral Therapy 10[Suppl 1]:S128).
489. Lewis F, Frost SDW, Pillay D, Mathews WC, Richman DD, Little SJ, Leigh Brown AJ. Transmitted HIV drug resistance: effect of treatment intensification in limiting the epidemic. XIV International Drug Resistance Workshop: Basic Principles & Clinical Implications. Quebec, Canada, June 7-11, 2005 (Antiviral Therapy 10[Suppl 1]:S129).
490. Lehrman G, Hogue IB, Palmer S, Jennings C, Spina CA, Wiegand A, Landay AL Coombs RW, Richman DD, Mellors JW, Coffin JM, Bosch RJ, Margolis DM. Rapid depletion of latent HIV infection

- in vivo*. XIV International Drug Resistance Workshop: Basic Principles & Clinical Implications. Quebec, Canada, June 7-11, 2005 (Antiviral Therapy 10[Suppl 1]:S163).
491. Frost SDW, Kosakovsky Pond SL, Smith DM, Richman DD, Leigh Brown AJ. Using mixtures of amino acids to detect individual- and population-level selection of HIV-1 protease. XIV International Drug Resistance Workshop: Basic Principles & Clinical Implications. Quebec, Canada, June 7-11, 2005 (Antiviral Therapy 10[Suppl 1]:S173).
492. Bates M, Parkin N, Richman D, Little S, Ross L, Chappay C. *Gag* mutations identified in wild-type HIV-1 that impact viral replication capacity (RC) may represent cytotoxic T-lymphocyte (CTL) escape mutations. XIV International Drug Resistance Workshop: Basic Principles & Clinical Implications. Quebec, Canada, June 7-11, 2005 (Antiviral Therapy 10[Suppl 1]:S180).
493. Richman DD. The impact of chemotherapy on AIDS. The XIII International Congress of Virology. San Francisco, CA, July 23-28, 2005.
494. Richman D. Contending with HBV Resistance: Lessons Learned from HIV Resistance and its Management. Clinical Strategies for Preventing and Managing Resistance to Anti-HBV Agents. Proceedings of a Summit; Paris, France, October 2005.
495. Donners H, Amandeep K.G., Pantophlet R, Welkin J, Decker J, Shaw GM, Fang-Hua L, Doms RW, Richman DD, Vanham G, Burton DR. Dissecting the neutralizing antibody specificities of broadly neutralizing sera from HIV-1 infected donors., The Scripps Research Institute, La Jolla, CA, 2006.
496. Richman DD. Drug Resistance, Vaccine Development and Beyond. Bridging the Sciences, HIV, HBV, HCV and Emerging Viruses., Le Palais des Congres de Paris, France. May 31-June 2, 2006.
497. Richman DD. Escape Evolution: HIV Drug Resistance and Immune Evasion. The Australian Health & Medical Research Congress, Melbourne, Australia November 26-December 1, 2006.
498. Little S, Frost S, Smith D, May S, Parkin N, Richman D. Transmission of HIV Drug Resistance and Treatment Response, CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
499. Liu, Y, Wrin t, Parkin N, Petropoulos C, Frost S, Little, Richman D, Huang W. HIV-1 Envelopes from Acute and Chronic Infection Differ in Their Levels of Fusogenicity and Sensitivity to Inhibition with sCD4. CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
500. Kosakovsky Pond S, Posada D, Richman D, Frost S. Reliable Subtyping and Fine-grained Mosaic Mapping Reveal the Central Role of Recombination in the Evolution of HIV, CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
501. Zárate S, Little S, Wrin T, Liu Y, Chappay C, Petropoulous C, Richman D, Frost S. Correlating Similarity in Heterologous Neutralization with Genetic Similarity in HIV Envelopes Isolated from Recently HIV-infected Men Who Have Sex with Men, CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
502. Richman D, Dousson C, Storer R, Moussa A, Randall J. IDX12899 and IDX12989, Novel NNRTI with Potent Anti-Pharmacokinetic Profile, CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.

503. Weiman S, Terry V, Espeseth A, Hazuda D, Richman D, Spina C. Small Molecule Inhibitors of Histone Deacetylases as a Means to Induce HIV Expression from Latently Infected Infected CD4 T Cells. CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
504. Drumright L, Little S, Richman D, Frost S. Age Discordance and Drug Resistance Predict Clustering of HIV Among Recently Infected MSM in San Diego, California. CROI 2007, Los Angeles Convention Center, Los Angeles, CA February 25-28, 2007.
505. Richman DD, Smith DM, Little SJ. HIV Transmission. Keystone Symposia on Molecular and Cellular Biology, Whistler Resort, Whistler, British Columbia, CANADA, March 25-30, 2007.
506. Yang Yiu YL, Stawiski E, Frost S, Little S, Richman D, Petropoulos C, Winn T. Neutralization and Envelope Sequence Characteristics of a Subtype B HIV-1 Sexual Transmission Cluster: One Source and Four Recipients. Keystone Symposia on Molecular and Cellular Biology, Whistler Resort, Whistler, British Columbia, CANADA, March 25-30, 2007.
507. Scott KJ, Gupta R, Singh H, Wu, SST, Wang X, Chruscinski A, Montero M, Kunert R, Katinger H, Richman DD, Utz PJ. Reactivity Profiles of HIV-1-Neutralizing MAbs, 2F5 and 4E10, and the Anti-Cardiolipin MAb, CL15. Keystone Symposia on Molecular and Cellular Biology, Whistler Resort, Whistler, British Columbia, CANADA, March 25-30, 2007.
508. Binley JM, Wrin T, Pantophlet R, Phung P, Crooks E, Lapedes A, Korber T, Chappay C, Moore PL, Cavacini L, Stiegler G, Kunert R, Katinger H, Petropoulos, Richman D, Morris L, Sutthent R, Burton DR. Cross-clade neutralization analysis of plasmas from clade B, C, and CRF01_AE HIV-Infected donors. Keystone Symposia on Molecular and Cellular Biology, Whistler Resort, Whistler, British Columbia, CANADA, March 25-30, 2007.
509. Meditz A, MaWhinney S, Feser W, Markowitz M, Little S, Hecht R, Daar E, Collier C, Margolick J, Kilby M, Routy J, Conway B, Kaldor J, Levy J, Schooley R, Cooper D, Walker B, Richman D, Connick E. Clinical features of primary HIV-1 Infection in Women. 4th IAS Conference on HIV Pathogenesis Treatment and Prevention incorporating the 19th ASHM Conference, Sydney, Australia, July 22-25, 2007.
510. Binley J, Jiang P, Richman D, Shrestha D, Moore P, Robinson J, Crooks E. Mapping the Specificity of Neutralizing HIV Immune Sera. Clinical features of primary HIV-1 Infection in Women. 4th IAS Conference on HIV Pathogenesis Treatment and Prevention incorporating the 19th ASHM Conference, Sydney, Australia, July 22-25, 2007.
511. Smith DM, Pacold M, Woelk C, Drumright LM, May S, Butler DM, Kosakovsky-Pond S, Pesano R, Lie Y, Richman D, Frost S, Little S. Epidemiology of HIV Transmission: A Public Health Model for the Molecular Surveillance of HIV Transmission, 2nd International Workshop of HIV Transmission, Washington DC, August 26-28, 2007.
512. Richman D. Contending with Evolution and Escape by HIV. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
513. Pond Kosakovsky S, Woelk C, Poon A, Pillai S, Richman D, Frost S. Meta-evolutionary Analysis of

Selection on HIV and Other Viruses: Functional and Subtype Correlates. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.

514. Zarate S, Richman D, Overbaugh J, Frost S. Models of Neutralization and Sequence Variation in HIV-1. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
515. Hightower G, Letendre S, Cherner M, Gibson S, Ellis R, Ignacio C, Heaton R, Grant I, Richman, Smith D and San Diego HIV Neurobehavioral Res Ctr (HNRC) Group. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
516. Golinsky M, Richman D, Frost S. Modeling HIV-1 Escape from Neutralizing Antibodies: Effect of Original Antigenic Sin and Viral Fitness. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
517. Pacold M, Frost S, Poon A, Smith D, Richman D, Pond-Kosakovsky S. The Depth of CTL Epitope Coverage Correlates with Strength of Selection in Gag p17 for Subtype B but Not Subtype C. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
518. Markowitz M, Vaida F, Little S, Hare C, Balfour H, Ferguson E, Schafer K, Richman D and the AIN 501 and ACTG 5216 Study Team. An Open-label Randomized Trial to Determine the Virologic and Immunologic Effects of 4-Weeks of Cyclosporine A Given in Combination with ART during Acute and Early Infection. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
519. Butler D, Smith D, Cachay E, Hightower G, Nugent T, Richman D, Little S. Correlates of HIV Transmission among MSM. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
520. Richman D, Jakubik J, Chapron C, Hubbard L, Gray L, Seifer M, Standing D. Genotypic Resistance and Phenotypic Cross-resistance Profile *in vitro* for a Novel NNRTI: IDX899. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
521. Wie SH, Rought S, Du P, Richman D, Woelk C. Type I Interferons Vary in Their Ability to Inhibit HIV Replication in Primary Macrophages. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
522. Poon A, Richman D, Frost S. Tracing Pathways of Resistance to Reverse Transcriptase Inhibitors from Sequencing Mixtures in HIV-1. CROI 2008 15th Conference on Retroviruses and Opportunistic Infections, Hynes Convention Center, Boston, MA, February 3-6, 2008.
523. Golinski M, Richman D, Frost S. Modeling HIV-1 Escape from Neutralizing Antibodies in Individuals Infected From a Common Source: Effect of Original Antigenic Sin and Variable Mutational Pathways on Viral Fitness. 15th International Workshop: HIV Dynamics & Evolution, Hotel Santa Fe, Santa Fe, NM, April 27-30, 2008.

524. Kosakovsky Pond S, Scheffler K, Poon A, Gravenor M, Woelk C, Zarate S, Nickle D, Pillai S, Leigh Brown A, Richman D, Frost S. Evolutionary Fingerprinting of Viral Genes, 15th International Workshop: HIV Dynamics & Evolution, Hotel Santa Fe, Santa Fe, NM, April 27-30, 2008.
525. Richman DD. State of the Art: How HIV Acquires Resistance, American Association for the Study of Liver Diseases, Hepatitis Single Topic Conference: Viral Hepatitis Therapy: Lessons To Be Learned from HIV. Westin Chicago River North Hotel, Chicago, Illinois, July 24-26, 2008.
526. Pacold M, Little S, Daar E, Ignacio C, Jordan P, Richman D, Smith D. Standard screening methods underestimate the prevalence of HIV dual infection. XVII International AIDS Conference, Mexico City, Mexico, August 3-8, 2008.
527. Pacold M, Ignacio C, Jordan P, Richman D, Smith D. Using synonymous mixtures in population-based sequences as a method to screen for dual HIV infection. XVII International AIDS Conference, Mexico City, Mexico, August 3-8, 2008.
528. Goicoechea M, Jain S, Kemper C, Daar E, tilles J, Ha B, Flaherty J, Richman D, Louie S, Haubrich R. California Collaborative Treatment Group, Viral Dynamics and Pharmacokinetics *in vivo* of Tenofovir Disoproxil Fumarate and Abacavir: Evidence of a Non-additive Antiviral Effect. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
529. Pacold M, Little S, Daar E, Ignacio C, Rostami S, Jordan P, Richman D, Smith D. Prevalence and Incidence of HIV Intraclade Co- and Super-infection. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
530. Yukl S, Pillai S, Pasutti W, Havlir D, Günthard H, Richman D, Daar E, Little S, Wong J. Latently Infected CD4⁺ T Cells Are enriched for HIV-1 Tat Virants with Impaired Transactivation Activity. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
531. Butler D, Lakdawala M, Richman D, Little S, Smith D. Cell-free Virus in Seminal Plasma is the Origin of Sexually Transmitted HIV among Men Who Have Sex with Men. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
532. Smith D, May S, Perez J, Haubrich R, Richman D, Benson C, Little S. Pooled viral Load testing Increases the Efficiency of Screening for ART Failure. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
533. Hightower G, Letendre S, Gibson S, Ellis R, Ignacio C, Heaton R, Grant I, Richman D, Smith D. Discordance in ARV Resistance Profiles between Blood and Cerebrospinal fluid is Associated with Current ARV Use. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
534. Weerawat M, Butler D, Richman D, Mehta S, Pacold M, Perez J, Smith D. Protease Polymorphisms in HIV-1 CRF01_AE: Selection by Drug and Immune Pressure. 16th Conference on Retroviruses and Opportunistic Infections, Montreal Canada, February 8-11, 2009.
535. Manosuthi W, Butler DM, Chantratita W, Sukasem C, Richman DD, Smith DM. Mutations associated with etravirine resistance among patients infected with HIV-1 subtype CRF01_AE and failing first-line nevirapine- and efavirenz-based regimens. XVIII International HIV Drug Resistance Workshop, June

9-13, 2009, Fort Myers, FL.

536. Liu L, May S, richman D, Pond Kosakovsky S, Frost S, Little S, Smith D. Comparison of resistance algorithms to determine prevalence of transmitted drug resistance. XVI International Drug Resistance Workshop, June 12-16, 2009, Hilton Barbados, Barbados.
537. Little SJ, Parkin NT, Chappay C, Smith DM, Richman DD, Frost SDW. Differences in viral load and replication capacity in individuals harbouring virus with or without drug resistance. XVI International Drug Resistance Workshop, June 12-16, 2009, Hilton Barbados, Barbados.
538. Hightower GK, Lentendre SL, Cachay ER, Cherner M, Givson S, Ellis R, Richman DD, Ignacio CC, Smith DM. Antiretroviral resistance and neuropsychological performance among HIV-infected individuals. XVI International Drug Resistance Workshop, June 12-16, 2009, Hilton Barbados, Barbados.
539. Wie S-H, Rought S, Du P, Bethell-Beliakova N, Richman D, Woelk C. HIV Down-regulates the Transcription of Interferon-stimulated Genes in Macrophages. 17th Conference on Retroviruses and Opportunistic Infections, Moscone Center West, San Francisco, California, February 16-19, 2010.
540. Young M, Richman D, Spina C. Establishment of Latency in Naïve and Central Memory T Cells in a Primary CD4 Cell Model. 17th Conference on Retroviruses and Opportunistic Infections. Moscone Center West, San Francisco, California, February 16-19, 2010.
541. Bethell-Beliakova N, Zhao Y, Du P, Rought S, Pérez-Santiago J, Goicoechea M, Richman D, Smith D, Little S, Woelk S. Gene Expression Can Predict the Extend of CD4⁺ T Cell Recovery in HIV-infected Individuals during Suppressive ART. 17th Conference on Retroviruses and Opportunistic Infections, Moscone Center West, San Francisco, California, February 16-19, 2010.
542. Pérez-Santiago J, Kosakovsky Pond S, Vaida F, Poddar S, Pacold M, Little S, Richman D, Smith D. Non-synonymous Mixtures Reveal fixation of Viral Population after 3 Years of Infection. 17th Conference on Retroviruses and Opportunistic Infections, Moscone Center West, San Francisco, California, February 16-19, 2010.
543. Pacold M, Kosakovsky Pond S, Little S, Ignacio C, Jordan P, Cheng P, Richman D, Smith D. Ultra-deep Sequencing Accurately Detects HIV Intraclade Dual Infection. 17th Conference on Retroviruses and Opportunistic Infections, Moscone Center West, San Francisco, California, February 16-19, 2010.
544. Young J, Smith D, Richman D, Little S, Kosakovsky Pond S. Phylogenetic Linkage and Correlate Analysis in HIV-1 Cohorts: A Complete Software Solution. 17th Conference on Retroviruses and Opportunistic Infections, Moscone Center West, San Francisco, California, February 16-19, 2010.
545. Richman D. Tackling HIV Latency, HIV DART 2010, (Global Antiviral Journal 6), 2010.
546. Hightower G, Wong J, Letendre S, Umlauf A, Ellis R, Ignacio C, Heaton R, Grant I, Richman D, Smith D and CHARTER Group. Higher HIV-1 Genetic Diversity is Associated with AIDS and Neurophysiological Impairment. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
547. Soto P, Spina C, Richman D, Varki I. Impact of Siglec-5 Expression on Activation- and HIV-1-induced Cell Death in Human and Chimpanzee CD4 T Cells. 18th Conference on Retroviruses and

- Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
548. Pacold M, Kosakovsky Pond S, Wagner G, Delport W, Bourque D, Little S, Richman D, Smith D. Clinical and Virologic Consequences of HIV-1 superinfection and the Influence of HLA. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
549. Walker L, Richman D, Kosakovsky Pond S. Epitope Detection and Antibody Titer Prediction Utilizing 3-D Protein Structure Data: A Kernel-based Approach. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
550. Hepler N, Richman D, Kovakovsky Pond S. Leveraging Structure, Mutual Information, and Support Vector Machines to Predict HIV-1 Antibody Epitopes. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
551. Choi JY, Kosakovsky Pond S, Vazquez H, Williams S, McCammon A, Richman D, Smith D. Molecular Features of the V1-V4 Coding Region of Sexually Transmitted HIV-1 Envelope. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
552. Gianella S, Strain M, Vargas M, Little S, Richman D, Spina C, and Smith D. Levels of CMV and HIV-1 in Seminal Plasma Correlate Positively with the Numbers and Activation Status of Lymphocytes in Semen. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
553. Hightower G, May S, Mehta S, Perez-Santiago J, Yanez D, Little S, Richman D, Kosakovsky Pond S, Smith D. Velocity of HIV-1 *p*o/Evolution following Primary Infection. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
554. Gianella S, Delport W, Pacold M, Young J, Choi JY, Little S, Richman D, Kosakovsky Pond S, Smith D. Detection of Minority Resistance during Early HIV-1 Infection: Natural Variation and Spurious Detection Rather than Transmission and Evolution of Multiple Viral Variants. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
555. Morris S, Smith D, Young J, Garfein R, Richman D, Little S. Declining Incident HIV among MSM Seeking HIV Testing in San Diego. 18th Conference on Retroviruses and Opportunistic Infections. Hynes Convention Center, Boston, Massachusetts, February 27-March 2, 2011.
556. Walker L, Richman D, Kosakovsky Pond S. A Kernel Method for Analysis of 2-Dimensional Sequence Data – Application to Predicting Neutralizing Antibody Titers. 18th International Workshop on HIV Dynamics and Evolution. Galway, Ireland, May 1-4, 2011.
557. Hepler N, Richman D, Burton D, Kosakovsky Pond S. Leveraging Mutual Information and Support Vector machines to Predict HIV-1 Antibody Epitopes. 18th International Workshop on HIV Dynamics and Evolution. Galway, Ireland, May 1-4, 2011.

558. Little S, Osorio G, Liu L, Young J, May S, De Gruttola V, Hecht F, Markowitz M, Daar E, Routy J, Collier A, Margolick J, Connick E, Richman D. Prevalence and Treatment Implications of Transmitted Drug Resistance Among Subjects with Primary HIV Infection. *Antiviral Therapy* 16, Suppl 1: A76, 2011.
559. Richman D, Margolis D, Delaney M, Greene W, Hazuda D, Pomerantz R. The Challenge of Finding a Cure for HIV Infection. Seventh Sino – US Symposium on Medicine in the 21st Century. Salk Institute, La Jolla, California, September 21-23, 2011.
560. Chung Y, Little S, Bhattacharya T, Kim E – Y, Richman D, Malim M, Wolinsky S. Longitudinal Analysis of APOBEC3- mediated Changes in HIV *gag* and *vif* Sequences from Patients' Isolates. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
561. Beliakova-Bethell N, Zhang J, Singhania A, Terry V, Spina C, Richman D, Woelk C. Off-Target Effects of Suberoylanilide Hydroxamic Acid in Resting CD4 T Cells. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
562. Hepler N, Richman D, Burton D, Kosakovsky Pond S. HIV-1 Antibody Epitope Prediction for Real-Time Computational Surveillance of Antibody Resistance. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
563. Choi J, Heaton R, Grant I, Marcotte T, Ellis R, Letendre S, Marra C, Clifford D, Richman D, Smith D. Genetic Features of CSF-derived Subtype B HIV-1 *tat*. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
564. Mehta S, Kosakovsky Pond S, Yung J, Richman D, Little S, Smith D. Associations between Phylogenetic Clustering and HLA Profile Among HIV+ Individuals: San Diego, California. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
565. Wertheim J, Fourment M, Richman D, Smith D, Kosakovsky Pond S. Inconsistencies in Estimating the Age of HIV-1 Subtypes due to Heterotachy. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
566. Hepler N, Smith M, Delport W, Young J, Poon A, Gutierrez J, Flores R, Wyles D, Richman D, Kosakovsky Pond S. A Bioinformatics Pipeline for the Analysis and Interpretation of Ultra-deep Sequencing Data. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
567. Perez-Santiago J, Weir C, Karris M, Jordan P, Young J, Mehta S, Richman D, Little S, Smith D. Higher CD4 Is Associated with Specific Gut Bacterial Flora during HIV Acute Infection. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
568. Gianella S, Morris S, Anderson C, Vargas M, Richman D, Little S, Smith D. Frequency and Impact of Herpes Virus Shedding in the Genital Tract of HIV+ Men. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
569. Wagner G, Gianella S, Pacold M, Pond S, Vigil E, Little S, Morris S, Richman D, Smith D. HIV-1 CXCR4 Co-receptor Tropism in Primary and Dual Infection Estimated with Ultra-deep Pyrosequencing. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March

5-8, 2012.

570. Young J, Mote D, Martinez M, Mueller J, Weaver S, Smith D, Richman D, Little S, Kosakovsky Pond S. OCCAMS: An Open Source Clinical Content Analysis and Management System and Its Application to HIV Primary Infection Research. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
571. Tilghman M, May S, Perez-Santiago J, Ignacio C, Little S, Richman D, Smith D. Combined Testing for ART and Drug Resistance in Resource-limited Settings. 19th Conference on Retroviruses and Opportunistic Infections. Seattle, WA, March 5-8, 2012.
572. Wertheim J, Hepler N, Mehta S, Smith D, Richman D, Kosakovsky Pond S. Reconstruction of the Global HIV-1 Group M Transmission Network. 19th International HIV Dynamics and Evolution Conference. Asheville, NC, April 25-29, 2012.
573. Strain M, Rought S, Lada S, Luong T, Terry V, Spina C, Andrade A, Kuritzkes D, Richman D. Initial Therapy with Raltegravir Selectively Reduces 2-LTR Circles but not Total HIV DNA. 19th International HIV Dynamics and Evolution Conference. Asheville, NC, April 25-29, 2012.
574. Hepler N, Smith M, Delport W, Poon A, Scheffler K, Richman D, Kosakovsky Pond S. A Bioinformatics Pipeline for 454 Deep Sequencing and Applications. 19th International HIV Dynamics and Evolution Conference. Asheville, NC, April 25-29, 2012.
575. Richman D, Strain M, Rought S, Lada S, Schrier R, Terry V, Spina C. Measuring the Latent Reservoir. Keystone Symposia on Molecular and Cellular Biology: Frontiers in HIV Pathogenesis, Therapy and Eradication. Whistler, BC, Canada, March 26-31, 2012.
576. Soto P, Karris M, Spina C, Richman D, Varki A. A Cell-intrinsic Mechanism Involving Siglec-5 Contributes to Differential Outcomes of HIV-1 Infection in Human and Chimpanzee CD4+ T cells. Keystone Symposia on Molecular and Cellular Biology: Frontiers in HIV Pathogenesis, Therapy and Eradication. Whistler, BC, Canada, March 26-31, 2012.
577. Yukl S, Chun T, Strain M, Siliciano J, Eisele E, Buckheit R, Ho Y, Wong J, Busch M, Huetter G, Richman D, Siliciano R, Deeks S. Challenges Inherent in Detecting HIV Persistence During Potentially Curative Interventions. Antiviral Therapy 2012; 17 Suppl 1:A47.
578. Tilghman M, Osorio G, Perez-Santiago J, Little S, Richman D, Matthews W, Haubrich R, Smith D. Community HIV-1 Drug Resistance is Associated with Transmitted Drug Resistance. Antiviral Therapy 2012; 17 Suppl 1:A168.
579. Richman D. The Challenge of a Cure: Is Eradication Possible? HIV DART 2012: Frontiers in Drug Development for Antiretroviral Therapies. San Diego, CA, December 4-7, 2012.
580. Karris M, Kao Y, Viada F, Spina C, Richman D, Little S, Smith D. Predictors of Virologic Suppression in Persons Who Start ART During Primary HIV Infection. 20th Conference on Retroviruses and Opportunistic Infections. Atlanta, GA, March 3-6, 2013.
581. Hatano H, Strain M, Scherzer R, Sinclair E, Palmer S, Busch M, Bacchetti P, Hsue P, Richman D, Deeks S. Increase in 2-LTR Circles after Raltegravir Intensification on HAART-suppressed Patients with High CD4+T Cell Counts: A Randomized, Controlled Trial. 20th Conference on Retroviruses and

- Opportunistic Infections. Atlanta, GA, March 3-6, 2013.
582. Persaud D, Gay H, Ziemniak C, Chen Y, Piatak M, Chun T, Strain M, Richman D, Luzuriaga. Functional HIV Cure After Very Early ART of an Infected Infant. 20th Conference on Retroviruses and Opportunistic Infections. Atlanta, GA, March 3-6, 2013.
583. Nijhuis M, Kwon M, Kuball J, Ellerbroek P, Berenguer J, Stam A, Symons J, Richman D, Diez-Martin JL, Wensing A, European HIV Cure and Transplant Consortium. Early Viral Dynamics after Cord Blood Stem Cell Transplantation (with and without CCR5Δ32) Combined with HLA Mismatched Donor in 2 HIV+ Patients. 20th Conference on Retroviruses and Opportunistic Infections. Atlanta, GA, March 3-6, 2013.
584. Kosakovsky Pond S, Hepler N, Richman D, Sok D, Burton D, Poignard P, Smith D. The evolution of Broadly Neutralizing Antibodies: What Can Deep Sequencing Tell Us? 20th International HIV Dynamics & Evolution. Utrecht University Medical Center Utrecht, The Netherlands, May 8-11, 2013.
585. Hepler N, Paxinos E, Brown M, Chin J, Alexander D, Marks P, Guo Y, Richman D, Smith D, Kosakovsky Pond S. A Comprehensive, Accurate, Fast, Cross-Platform and User Friendly Pipeline for the Analysis of HIV-1 Next Generation Sequencing Data. 20th International HIV Dynamics & Evolution. Utrecht University Medical Center Utrecht, The Netherlands, May 8-11, 2013.
586. Mehta S, Chaillon A, Lowenstein H, Little S, Wertheim J, Richman D, Pond S, Smith D. Spatial Distribution and Phylogeography of the HIV Transmission Network in San Diego, California. 20th International HIV Dynamics & Evolution. Utrecht University Medical Center Utrecht, The Netherlands, May 8-11, 2013.
587. Massanella M, Gianella S, Richman D, Little S, Spina C, Vargas M, Lada S, Daar E, Dube M, Haubrich R, Morris S, Smith D and the CCTG 592 Team. Seminal Cytomegalovirus (CMV) Replication is Associated with Increased CD4+ T-Cells Immune Activation and Higher Levels of Proviral HIV DNA Reservoir in Effectively Treated HIV-1-Infected Men who Have Sex with Men (MSM). Sixth Annual International Workshop on HIV Persistence during Therapy. Miami, FL, December 3-6, 2013.
588. Wensing A, Nijhuis M, Kwon M, Ellerbroek P, Miralles P, Stam A, Symons J, Richman D, Diez-Martin J, Kuball J. Small Peripheral Blood HIV-1 Reservoir after Allogeneic (Cord Blood) Stem Cell Transplantation. Sixth Annual International Workshop on HIV Persistence during Therapy. Miami, FL, December 3-6, 2013.
589. Margolis D, Archin N, Kuruc J, Bateson R, Dahl N, Crooks A, Allard B, Kashuba A, Kearney M, Strain M, Richman D, Bosch R, Coffin J, Cohen M, Barnard R, Hazuda DJ, Eron J and the Collaboratory of AIDS Researchers for Eradication (CARE). Translational Challenges in Targeting Latent HIV Infection. Sixth Annual International Workshop on HIV Persistence during Therapy. Miami, FL, December 3-6, 2013.
590. Procopio FA, Fromentin R, Kulpa D, McNulty A, Bebin-Blackwell AG, Ramgopal M, Strain MC, Siliciano RF, Richman DD, O'Doherty U, Palmer S, Siliciano JD, Hecht F, Deeks SG, Sékaly RP, Chomont N. A novel assay that precisely measures the size of the latent HIV reservoir reveals that ART-naïve individuals harbour a large pool of latently infected CD4+ T cells. IAS Toward an HIV Cure Symposium. Melbourne, Australia, July 19th-20th, 2014.
591. Richman DD, Massanella M, Yek C, Lada S, Spina C, Strain M. Measuring the latent reservoir.

Mechanisms of HIV Persistence: Implications for a Cure. Boston, Massachusetts, USA, April 26th-May 1st, 2015.

592. Lee S, Chomont N, Fromentin R, Siliciano R, Siliciano J, Richman D, O'Doherty U, Palmer S, Burbelo P. Anti-HIV antibody responses reflect the quantifiable HIV reservoir size. Mechanisms of HIV Persistence: Implications for a Cure. Boston, Massachusetts, USA, April 26th-May 1st, 2015.
593. Woelk CH, White CH, Johnston H, Manousopoulou A, Spina CA, Richman DD, Garbis S, Beliakova-Bethell N. A systems biology characterization of the anti-cancer compound Vorinostat. 23rd Annual International Conference on Intelligent Systems for Molecular Biology & 14th European Conference on Computational Biology. Convention Center Dublin, Ireland.
594. Papasavvas E, Kang G, Azzoni L, Aberra F, Tebas P, Mounzer K, Kostman JR, Richman D, Li Q, Montaner L. Reduced rectal HIV RNA after Peg-IFN- α 2b added to ART together with ART interruption. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
595. Bruner KM, Pollack R, Murray A, Soliman M, Laskey SB, Strain MF, Richman DD, Deeks SG, Siliciano J, Siliciano R. Rapid Accumulation of Defective Proviruses Complicates HIV-1 Reservoir Measurements. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
596. Chaillon A, Smith DM, Little SJ, Caballero G, Richman DD, Wagner G. Intrahost Viral Competition and Archiving Dynamics in HIV-1 Superinfection. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
597. Chaillon A, Gianella S, Little SJ, Anderson C, Caballero G, Barin F, Kosakovsky Pond S, Richman DD, Smith DM, Mehta SR. Characterizing the Multiplicity of HIV Founder Variants During Sexual Transmission. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
598. Papasavvas E, Kang G, Azzoni L, Aberra F, Tebas P, Mounzer K, Kostman JR, Richman DD, Li Q, Montaner LJ. Reduced Rectal HIV RNA After Peg-IFN- α 2b Added to ART Together with ART Interruption. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
599. Lada S, Ignacio C, Richman DD, Strain MF. Measurement of Integrated HIV DNA by Pulse-Field Gel Electrophoresis and ddPCR. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
600. Chaillon A, Mehta SR, Werthiem JO, Murrell B, Little SJ, Richman DD, Smith DM, Gianella S. No Evidence of Sexual Transmission of Minority HIV Drug Resistance Mutations in MSM. Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, February 2016.
601. Massanella M, Yek C, Lada S, Shefa N, Strain MC, Richman DD. Improved Assays to Measure the Inducible Latent HIV Reservoir. Keystone Symposia on Molecular and Cellular Biology. Olympic Valley, California. March 20-24, 2016.
602. Rosenbloom D, Bacchetti P, Stone M, Dimapasoc M, Deng X, Bosch R, Richman D, Siliciano J, Mellors J, Deeks S, Hoh R, Lanteri M, Keating S, Massanella M, Lai J, Sobolewski M, Busch M, Reservoir

Assay Validation and Evaluation Network (RAVEN) Study Group. Assessing intra-lab precision and inter-lab repeatability of outgrowth assays of HIV-1 latent reservoir size. Strategies for an HIV Cure 2016. November 14, 2016.

603. Hermans LE, Moorhouse MA, Carmona S, Grobbee D, Hofstra LM, Richman DD, Tempelman H, Venter WD, Wensing A. Increased Risk of cART Failure After Low-Level Viremia Under WHO Guidelines. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
604. Wagner GA, Jordan PS, Kosakovsky Pond SL, Price MA, Hunter E, Allen S, Kilembe W, Richman DD, Chaillon A. HIV-1 Superinfection After Recent Infection is Uncommon in Sub-Saharan Africa. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
605. Wagner GA, Chaillon A, Caballero G, Franklin D, Kosakovsky Pond SL, Heaton RK, Richman DD, Smith DM. Frequent Intrasubtype HIV Dual Infection in Treated Chronically Infected Individuals. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
606. Lada S, VanBelzan J, Ignacio C, Strain M, O'Doherty U, Richman DD. Novel Assay to Measure Integrated HIV DNA in PBMC from ART-Suppressed Persons. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
607. Abewe H, Mukim A, Deshmukh S, Spina CA, Richman DD, Beliakova-Bethell N. Role of High-Mobility Group A1 (HMGA1) Gene Expression in Reactivation of Latent HIV. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
608. Cummins N, Rizza S, Baker J, Chomont N, Chun TW, Lichterfeld M, Richman DD, Schacker T, Yao JD, Badley A. Two Hundred Eighty-Eight-Day Drug-Free Remission From HIV Rebound by Allogeneic PBSCT. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
609. Azzoni L, Papasavvas E, Chomont N, Li Q, Howell BJ, Richman DD, Tebas P, Mounzer K, Kostman J, Montaner L. Pegylated IFN-Alpha-2B Decreases Latent HIV Measures in ART-Suppressed Subjects. Conference of Retroviruses and Opportunistic Infections. Seattle, Washington 2017.
610. White CH, Beliakova-Bethell N, Lada S, Breen M, Magiorkinis G, Richman DD, Frater J, Holloway J, Woelk CH. Dysregulation of Human Endogenous Retroviruses in Primary CD4 T Cells Following Vorinostat Treatment. 25th Conference on Intelligent Systems for Molecular Biology and the 16th European Conference on Computational Biology. Prague Congress Center, Prague, Czech Republic 2017.
611. Imamichi H, Smith M, Pau A, Rehm CA, Catalfamo M, Lane HC. Evidence of Production of HIV-1 Proteins From "Defective" HIV-1 Proviruses in Vivo: Implication for Persistent Immune Activation and HIV-1 Pathogenesis. 9th IAS Conference on HIV Science (IAS 2017). Paris, France 2017.
612. Stone M, Rosenblom D, Bacchetti P, Deng X, Busch M, Dimapasoc M, Keating S, Richman D, Mellors J, Deeks S, Siliciano J, Chomont N, Ptak R, RAVEN Study Group. Next Generation Viral Outgrowth Assays As Proxies for Classic QVOA to Measure HIV-1 Reservoir Size. Eighth International Workshop on HIV Persistence during Therapy. Miami, Florida 2017.
613. Fromentin R, Massanella M, Vandergeeten C, Barton K, Hiener B, Chiu WW, Looney D, Ramgopal M, Richman DD, Trautmann L, Palmer S, Chomont N. In Vivo Massive Expansion of a T-Cell Clone Carrying a Defective HIV Genome: Implication for the Measurement of the HIV Reservoir. Eighth

International Workshop on HIV Persistence during Therapy. Miami, Florida 2017.

- 614 Bakkour S, Keating SM, Deng X, Stone M, Worlock A, Deeks S, Bacchetti P, Dimapasoc M, Lau J, Montalvo L, Hauenstein S, Richman D, Busch MP, Reservoir Assay Validation and Evaluation Network (RAVEN) Study Group. Eighth International Workshop on HIV Persistence during Therapy. Miami, Florida 2017.
- 615 Keating SM, Stone M, Deng X, Mellors J, Bakkour S, Richman D, Gorelick R, Lifson J, Jennings C, Stengelin M, Wu G, Howell BJ, Bacchetti P, Busch MP, Reservoir Assay Validation and Evaluation Network (RAVEN) Study Group. Eighth International Workshop on HIV Persistence during Therapy. Miami, Florida 2017.
- 616 Das J, Sadanand S, Chung A, Suscovich TJ, Streeck, H, Smith DM, Little SJ, Lauffenburg D, Richman DD, Alter G. Temporal Variation of IgG Subclasses Differentiates HIV Controllers and Progressors. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March 2018.
- 617 Chaillon A, Gianella S, Lada S, Karris M, Richman DD, Mehta SR, Little SJ, Wertheim JO, Smith DM. The HIV Reservoir During Early Antiretroviral Therapy and Maraviroc Intensification. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March 2018.
- 618 Keating SM, Stone M, Deng X, Bakkour S, Mellors JW, Richman DD, Gorelick R, Lifson JD, Jennings C, Stengelin M, Wu G, Howell BJ, Bacchetti P, Busch MP. Blinded Evaluation of Ultrasensitive Assays of the HIV in Plasma. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March 2018.
- 619 Stone M, Rosebloom DS, Bacchetti P, Deng X, Dimapasoc M, Keating SM, Richman DD, Mellors JW, Deeks SG, Siliciano J, Chomont N, Ptak R, Busch MP. Next-Gen Viral Outgrowth Assays as Proxies for Classic QVOA to Measure HIV Reservoir. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March 2018.
- 620 Ita S, Ignacio C, Mohan S, Kumar V, Murrell B, Richman DD, Smith DM, Wagner GA. SMRT Sequencing of Full-Length POL Amplicons to Investigate HIV-1 Drug Resistance. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March 2018.
- 621 Bakkour S, Keating SM, Deng X, Stone M, Worlock A, Deeks SG, Bacchetti P, Dimapasoc M, Lau J, Montalvo L, Hauenstein S, Richman DD, Busch MP. Replicate Aptima VL Testing Detects Residual Viremia in Most ART-Treated Adults. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March, 2018.
- 622 Hermans LE, Tempelman H, Carmona S, Nijhuis M, Grobbee D, Richman DD, Moorhouse MA, Venter WD, Wensing A. High Rates of Viral Resuppression on First-line ART After Initial Virological Failure. 25th Conference of Retroviruses and Opportunistic Infections. Boston, Massachusetts, March, 2018.

OTHER PUBLICATIONS

1. Richman DD. HIV Drug Resistance. *Retroviruses of Human AIDS and Related Animal Diseases "Colloque Des Cent Gardes"*, October, 1989, Quatrième Des Cent Gardes 4:295-298, 1989.

2. Richman DD. Prospects for antiretroviral therapy. *Retroviruses of Human AIDS and Related Animal Diseases "Colloque Des Cent Gardes"*, October, Cinquieme Des Cent Gardes 5:271-273, 1990.
3. Richman DD. Propagation of AZT-resistant clinical isolates. *AIDS Research and Reference Reagent Program Courier* 90-03:7-14, 1990.
4. Richman DD. Clinical Virology Quiz manuscript "Recent Advances in Antiretroviral Therapy Part 2: Emerging Resistance", Triclinica Communications, Inc. Vol. 2, March 1991.
5. Richman DD. Emerging patterns of resistance to zidovudine. *HIV Advances in Research and Therapy* 1:8-12, 1991.
6. Richman DD. Plaque reduction and cytotoxicity assays of HIV sensitivity to antiviral compounds. *AIDS Research and Reference Reagent Program Courier* 90-01:6-9, 1990.
7. Richman DD, Wainberg MA. Drug resistance in isolates of HIV. *Toltzis Communications, Inc.* Burroughs Wellcome, Inc. 1992.
8. Bozzette SA, McCutchan JA, Spector SA, Richman DD. Reply to letter: "Does early zidovudine treatment prevent the emergence of syncytium-inducing human immunodeficiency virus?" *J Infect Dis* 170:1042, 1994.
9. Richman DD. "The background to combination therapy" (meeting report). Consensus Symposium on Combined Antiviral Therapy, Lisbon, Portugal, July 25-27, 1995. *International Antiviral News*, 3:129, 1995.
10. Richman DD. Antiviral chemotherapy: new drugs and new perspectives. *Retroviruses of Human AIDS and Related Animal Diseases. Dixième Colloque des Cent Gardes*, pp 337-342, 1995.
11. Progress in Development and Use of Antiviral Drugs and Interferon. Report of an informal consultation. World Health Organization. Geneva, Switzerland, March 13-15, 1995.
12. Richman DD. Antiviral chemotherapy: new drugs and new perspectives. In: *Retroviruses of Human AIDS and Related Animal Diseases (From the 10th Anniversary of the Cent Gardes Meeting - Retroviruses of Human AIDS and Related Animals Diseases, Paris, France, Oct 23-25, 1995)*. Edited by Girard M, Dodet B. Elsevier Editions Scientifiques, Paris, pp. 337-344, 1996.
13. Richman DD. Resistance to Drugs for HIV Infection. What you can do to keep your HIV treatment working. International Association of Physicians in AIDS Care (monograph for lay readers), 31 pages, 1998.
14. Richman D. HIV eradication. Is it possible with current available drugs? Fundació irsiCaixa: Is it Possible to Eradicate HIV? Edited by Bonaventura Clotet Sala and Charles A. Boucher. Merck Sharp & Dohme de España & Harcourt Brace de España , pp 1-12,1998.
15. Horn T, Cox S. A No-Nonsense Guide to HIV Drug Resistance Testing. Ed. Richman DD [Monograph]. Provided as an educational service by: Virologic, Inc. South San Francisco, CA, 1999
16. 15a. Horn T, Cox S. Una Guía con Sentido sobre Resistencia a los Medicamentos Contra el VIH. Ed. Richman DD [Monograph]. Provided as an educational service by: Virologic, Inc. South San

- Francisco, CA, 1999 (Spanish Version).
17. Richman DD. What can be learned from the induction-maintenance trials? *HIV Advances in Research and Therapy* 9:25-29, 1999.
 18. Richman DD. New insights in HIV eradication. II International Workshop on HIV Eradication Ed. Clotet B, Coucher CA. Fundació/irsiCaixa, November, 1999.
 19. (Writing Committee). The Durban Declaration. *Nature* 406:15-16, 2000.
 20. Richman DD. Mechanisms, emergence, and epidemiology of resistance in the nucleoside-experienced HIV-infected population. *The AIDS Reader International Supplement*: S13-S20, 2001.
 21. Little SJ, Richman DD. Drug resistance among patients recently infected with HIV (Letter to the Editor). *N Engl J Med* 347:1889-1890, 2002.
 22. Richman DD, Schooley RT, Kuritzkes DR, Saag MS, Eron JJ Jr. Utilizing HIV Drug Resistance Test Reports: Targeting Treatment Decisions. Sponsored by UCSD School of Medicine, Supported by ViroLogic. Helix Medical Communications LLC, June 2003.
 23. Richman DD. Rapid evolution of the neutralizing antibody response to human immunodeficiency virus type 1 infection and viral escape. In: *Retroviruses of Human AIDS and Related Animal Diseases (From the XIIIth Cent Gardes Symposium, Annecy, France, Oct 27-29, 2003)*. Edited by Girard M, Vicari M, Dodet B. Elsevier Editions Scientifiques, Paris, pp. 65-66, 2003.
 24. Leigh Brown AJ, Frost SDW, Mathews WC, Dawson K, Hellmann NS, Daar ES, Richman DD, Little SJ. Correspondence. *J Infect Dis* 188, 2003.
 25. Blue Ribbon Committee for Laboratory Science: Report to the Office of Research & Development Veterans Health Administration, June 2003 (Accessed October 8, 2003 at www.va.gov/resdev/fr/blue_ribbon/LabSci_report.cfm).
 26. ACT-HBV: Advancing the Clinical Treatment of Hepatitis B Virus. A comprehensive educational resource for Infectious Disease Specialists. Program Faculty: Richman DD, Sherman KE. (CD-ROM).
 27. The XIVth International HIV Drug Resistance Workshop (Review). Quebec City, Canada 2005.
 28. Ahuja SK, Aiuti F, Berkhout B, biberfeld P, Burnton DR, Colizzi V, Deeks SG, Desrosiers RC, Dierich MP, Doms RW, Emerman M, Gallo RC, Girard M, Greene WC, Hoxie JA, Hunter E, Klein G, Korber B, Kuritzkes DR, Lederman MM, Malim MH, Marx PA, McCune JM, McMichael A, Miller C, Miller V, Montagnier L, Montefiori DC, Moore JP, Nixon DF, Overbaugh J, Pauza CD, Richman DD, Saag MS, Sattentau Q, Schoolet RT, Shattock R, Shaw GM, Stevenson M, Trkola A, Wainberg MA, Weiss RA, Wolinsky S, Zack JA. A Plea for Justice for Jailed Medical Workers. Letters: *Science* Vol. 314, 924, 2006.
 29. Perrillo RP, Richman DD, Sherman KE, Said A, 2009 Pocket Guide To Hepatitis B, University of Wisconsin, School of Medicine.
 30. Richman DD. (2011). Commentary on HIV with Reduced Sensitivity to Zidovudine (AZT) Isolated During Prolonged Therapy. *Science* 243: 1731-1734, 31 March 1989.

<http://www.hivvaccineenterprise.org/hive/feature/661>.

31. Richman DD. Nouveaux Défis Dans L'infection À Vih: Comprendre la persistance dans les réservoirs Construire des stratégies d'éradication. Lettre de l'Infectiologue- de la microbiologie à la clinique, 2011.
32. Richman D. Contending with the Challenges of HIV: A Firsthand Account. Douglas D. Richman speaks to Jacob McCarthy, Commissioning Editor. Future Virology. 7(7) 645-648, 2012.
33. Cambridge Working Group Consensus Statement on the Creation of Potential Pandemic Pathogens (PPPs). www.cambridgeworkinggroup.org/.