FRANK MALDARELLI, M.D., PH.D.

CURRICULUM VITAE

Education:

1978	B.A. (Biology), Johns Hopkins University, Baltimore, Maryland
1985	Ph.D. (Biomedical Sciences), City University of New York, New York, New York Advisor: Mary Jane Yagi
1985	M.D., Mount Sinai School of Medicine, New York, New York

Board Certification:

1998, 2008	Infectious Diseases
1989	Internal Medicine

Brief Chronology of Employment:

2018-present	Senior Investigator and Head, Clinical Retrovirology Section, HIV Dynamics and Replication Program, National Cancer Institute, Frederick, Maryland
2012-2018	Investigator and Head, Clinical Retrovirology Section, HIV Drug Resistance Program (renamed HIV Dynamics and Replication Program in 2015), National Cancer Institute, Frederick, Maryland
1999-2012	Staff Physician, HIV Drug Resistance Program, National Cancer Institute, Frederick, Maryland
1998-1999	Clinical Associate, HIV Drug Resistance Program, National Cancer Institute, Frederick, Maryland
1996-1998	Clinical Associate, NIAID, NIH, Bethesda, Maryland
1995-1996	Senior Staff Fellow, Laboratory of Molecular Microbiology, NIAID, NIH, Bethesda, Maryland
1988-1995	Medical Staff Fellow, Laboratory of Molecular Microbiology, NIAID, NIH, Bethesda, Maryland
1985-1988	Internship/Residency, Internal Medicine, The Presbyterian Hospital, New York, New York
1978-1985	M.D.-Ph.D. Student, Mount Sinai School of Medicine, New York, New York
1977-1978	Research Assistant, Johns Hopkins Medical Institutions, Baltimore, Maryland
1975-1977	Research Assistant, Baltimore Cancer Research Center, Baltimore, Maryland

Honors and Other Special Scientific Recognition:

NCI Tenure, October 2018
NCI Director's Award, NCI HIV Integration Sites Analysis Group, 2015
NCI Leading Diversity Award, 2010
Staff Recognition Awards, 2001, 2003-2006
NIH Fellows Committee Training Recognition, 2001
Special Act/Service Award, 2000
Merck Award for Clinical Excellence, 1985
Mt. Sinai Graduate Training Grant, 1982-1985
Alpha Omega Alpha, 1984
Medical Scientist Training Grant, 1978-1982
Omicron Delta Pi, Johns Hopkins University Chapter, 1978
Desmond Costello Memorial Scholarship, 1974-1978

NIH Intramural Funding Awards:

2018	Bench-to-Bedside Award: Novel Bacteriophage T4 Nanoparticle for Targeted Gene Disruption ($135,000 for 1 year)
2014-2018	U01 Award: Safety and Feasibility of Stem Cell Gene Transfer Following R-EPOCH for Non-Hodgkin Lymphoma in AIDS Patients Using Peripheral Blood Stem/Progenitor Cells Treated with a Lentivirus Vector-Encoding Multiple Anti-HIV RNAs (NIH Collaborating Investigator)
2017	Supplemental OAR Discretionary Funding "Obtaining Full Length HIV Sequences from Early HIV Epidemic Samples Stored at NIH" ($85,000 for 1 year)
2017	Intramural AIDS Targeted Antiviral Program: Mechanisms of Persistence During Antiretroviral Therapy ($85,000 for 2 years)
2015	Intramural AIDS Targeted Antiviral Program: Impact of TB on HIV Reservoirs: Implications for a Scalable HIV Cure ($40,000 yearly for 2 years)
2014	Bench-to-Bedside Award: Localizing Reservoirs of HIV Persistence in Lymphoid Tissue ($50,000 yearly for 2 years; with B. Wood, NIH Clinical Center, M. Kearney, DRP, and J. Mellors, University of Pittsburgh)
2013	Intramural AIDS Targeted Antiviral Program: Origin of HIV Persistence during Suppressive Antiretroviral Therapy ($200,000 over two years)
2010	Bench-To-Bedside Award: New Bioinformatic Approach to Determine HIV Incidence ($135,000 yearly for 2 years, with E. Daar, UCLA, and J. Margolick, Johns Hopkins Bloomberg School of Public Health)
2010	Bench-To-Bedside Award: Role of Gut-Associated Lymphoid Tissue in HIV-1 Persistence **($**135,000 total award yearly for 2 years, with D. McMahon, University of Pittsburgh, and A. Ganesan, National Naval Medical Center)
2010	Bench-To-Bedside Award: Control of XMRV Replication in PBMCs and Prostate Carcinomas ($10,000 yearly for 2 years; V. Pathak, PI, F. Maldarelli, Co-PI, with H.-J. Kung, University of California Davis)

2007	Bench-to-Bedside Award: New Strategies to Decrease and Eradicate HIV-1 Reservoirs ($135,000 yearly for 2 years with E. Reid, University of California San Diego)
2007	Bench-to-Bedside Award: Development and Evaluation of a Quantitative Nanoparticle HIV-1 p24 Antigen Assay for Potential Use in Monitoring Antiretroviral Treatment ($135,000 yearly for 2 years, with I. Hewlett, FDA, and L. Frenkel, University of Washington)
2006	NIAID SAIC Contract with University of Pittsburgh for Clinical Research ($190,000)
2005	Bench-to-Bedside Award: Genetic Characteristics of HIV-1 during Suppressive Antiretroviral Therapy ($100,000/year for 2 years with D. Persaud, The Johns Hopkins Medical Institutions)
2004	Bench-to-Bedside Award: Role of HIV-1 RNase H in Developing Resistance to Nucleoside Analogs ($100,000/year for 2 years with V. Pathak, DRP)
2003	Bench-to-Bedside Award: Role of HIV Recombination in HIV-1 Drug Resistance in Vitro and in Vivo ($100,000/year for 2 years)

Editorial Activities:

Editorial Board:
Journal of Virology, 2016-present
Frontiers in Microbiology, 2015-present
AIDS Research and Therapy, 2012-present
Current Treatment Options in Infectious Diseases, 2002-2003

Ad Hoc Reviewer:
AIDS Research and Human Retroviruses, 2014, 2018-present
Journal of Clinical Investigation, 2017-present
PLoS Pathogens, 2009-present
Retrovirology, 2009-present
Antimicrobial Agents and Chemotherapy, 2006-present
Journal of Virology, 2005-present
Journal of Infectious Diseases, 2003-present
Virus Evolution, 2016
Journal of the American Medical Association, 2014
HIV Medicine, 2011
Proceedings of the National Academy of Sciences USA, 2007-2008, 2011
Antiviral Therapy, 2010
PLoS One, 2006-2009

Conference Chairmanships and Organizing Activities:

Scientific Committee, International Workshop on HIV Drug Resistance, 2013-present
Co-Chair, Session on Children and Adolescents: Clinical Implications of Resistance for Treatment and Prevention Strategies, XXV International HIV Drug Resistance Workshop, Boston, Massachusetts, 2016

Committees and Boards:

Member, Selection Committee, OX-CAM NIH MD-Ph.D. program 2019-present
Chair, NCI Non-Human Primate Scientific Review Committee, 2017-present
Member, Swiss National Science Foundation Review, 2015-2019
Faculty, FAES Human Virology course, 2014-2018
Member, Ad hoc Review Panel for Wellcome Trust Fellowship, 2013-present
Faculty, NIH Medical Research Scholars Program, 2012-present
NCI Liaison, HIV Molecular Monitoring Core (LEIDOS), 2011-present
Member Scientific Advisory Committee, American Federation of AIDS Research, 2011-present
Member FDA Antimicrobial Drugs Advisory Committee (formerly Anti-Infective Drugs Advisory Committee), 2008-present
Faculty, NIH Translational Research in Clinical Oncology course (TRACO), 2006-present
Consultant to the Division of Antiviral Drug Products, Food and Drug Administration, 2002-present
Faculty, CBC Infectious Diseases Board Review Course, J. Bennett and H. Masur, Directors, 2000-present
Member NIAID Scientific Review Committee, 2000-present
Member, Center of Excellence in HIV/AIDS & Cancer Virology, Center for Cancer Research, National Cancer Institute, 2000-present
Member, NIH Infectious Disease Advisory Board, 1999-present
Member, NIAID Safety Monitoring Committee for IND 137523
Judge, SSSC Retreat, 2017-2019
Reviewer, NCI Graduate Student Recruiting Program, 2017
Member, Review Panel, AIDS FONDS Netherlands, Amsterdam, Netherlands, 2010-2016
Member, NIAID Safety Monitoring Committee, Protocol 16-CC-0112
Member, NIAID Safety Monitoring Committee, Protocol 13-I-0081
Member, NIAID Safety Monitoring Committee, Protocol 11-I-0259
Member, Ad hoc Committee Intramural Research Integrity Investigation, 2014
Member, Ad hoc Review Panel for KU Leuven Research Council, University of Leuven, Belgium, 2013
Member, Ad hoc Review Panel for Supplemental CFAR Grant Funding, 2013
Member, Ad hoc Review Panel for Supplemental Delaney Grant Funding, 2012
Member, Review Panel, National Institutes of Allergy and Infectious Diseases, P01 Special Emphasis Panel Review, 2012
Member, Review Panel, Henry M. Jackson Foundation for the Advancement of Military Medicine, proposal, 2011
Member NIH National Graduate Student Research Festival (NGSRF) Abstract Review, 2010
Member, Review Panel, NIH Challenge Grants in Health and Science Research, 2009
Member, Review Panel, NIH Support for Conferences and Scientific Meetings, 2009
Chair, NIAID Institutional Review Board (IRB), 2005-2006
Faculty, International Society of Infectious Disease (IDSA) HIV Training Program, 1999-2006
Member IDSA Standards and Practices Guidelines Committee, 2004-2006
Member, NIAID Institutional Review Board (IRB), 1999-2006

Vice-Chair, NIAID Institutional Review Board (IRB), 2004-2005
Faculty, PHIDISA (South Africa Partnership) Clinical Research Training Program, 2004-2005
Member, Review Committee, University of California University-wide AIDS Research Program, 2001-2004
Faculty, American Society of Consultant Pharmacists HIV/AIDS Pharmacotherapy Traineeship, 1999-2004
Member, NIAID Introduction to Biomedical Research Program, 1991-1997
Member, Review Committee, National Cooperative Drug Discovery Groups for the Treatment of HIV Infections (NCDDG-HIV), 1996

Clinical Activities:

2003-present	Attending NIAID/CCMD Clinic
1998-present	Clinic Staff Physician, NIAID/CCMD Clinic
1999-2008	Attending, NIH Infectious Disease Consult Service
1998-2002	Attending, NCI HIV and AIDS Malignancy Program
1999-2001	Attending, NIH General Medicine Consult Service

Clinical Protocols, Principal Investigator:

2013-present	A Double Blind Randomized Placebo Controlled Study Examining the Effects of a Non-absorbable (Rifaximin) Antibiotic on the Chronic Immune Activation Observed in HIV-infected Subjects
2011-present	Effect of Interferon Alpha 2b Intensification on HIV-1 Residual Viremia in Individuals Suppressed on Antiretroviral Therapy
2008-present	Analysis of HIV-1 Replication During Antiretroviral Therapy
2002-present	HIV Expression in Patients with Viral Loads Suppressed on HAART
2001-present	An Assessment of the Relationship Between Antiretroviral Drug Genotype/ Phenotype (IC_{50}) and Antiretroviral Activity in HIV-Infected, Drug-Experienced Patients with Suboptimal Suppression of Plasma Viral Load
2006-2017	A Randomized Placebo Controlled Trial of Atorvastatin in HIV Positive Patients Not on Antiretroviral Medications with the Specific Aims of Studying the Effects of Atorvastatin on HIV Viral Load and Immune Activation Markers
2007-2008	Use of Combination Antiviral Therapy to Delineate the Identity and Longevity of Persistent Reservoirs of HIV-1 Infection and Replication
2001-2008	Clinical, Virologic, and Immunologic Evaluation and Monitoring of Patients with Known or Suspected HIV Infection (Co-PI)
2000-2008	Analysis of Genetic Variation in Patients prior to Initiation of Highly Active Antiretroviral Therapy
2006	Use of TMC-114 for Post-Exposure Prophylaxis to Drug Resistant HIV-1 (Emergency IND)

2001-2002	Voriconazole – An Open Label Noncomparative Protocol for the Emergency Use of Voriconazole Who Are Failing on Currently Available Antifungal Agents

Clinical Protocols, Associate Investigator (Selected):

2016-present	Phase 1 Trial of Pomalidomide in Combination with Liposomal Doxorubicin in Patients with Advanced or Refractory Kaposi Sarcoma
2016-present	Phase I Study of MK-3475 (Pembrolizumab) in Patients with Human Immunodeficiency Virus (HIV) and Relapsed/Refractory or Disseminated Malignant Neoplasm
2015-present	Safety and Feasibility of Stem Cell Gene Transfer following r-EPOCH for Non-Hodgkin Lymphoma in AIDS Patients Using Peripheral Blood Stem/ Progenitor Cells Treated with a Lentivirus Vector Encoding Multiple Anti-HIV RNAs
2013-present	Characterization and Management of Patients with HIV-1 Infection Who Experience Virologic Failure Despite Combination Antiretroviral Therapy
2011-present	Collection of Blood, Bone Marrow, Tumor, or Tissue Samples from Patients with HIV Infection, KSHV Infection, Viral-related Pre-malignant Lesions, and/or Cancer
2002-present	Leukapheresis Procedures to Obtain Plasma and Lymphocytes for Research Studies on Antiretroviral Naive HIV-Infected Individuals
2011-2015	A Pilot Trial Assessing the Feasibility of Delivering Topical MTS-01 to Reduce Dermatitis in Patients Receiving Intensity Modulated Radiation with Concurrent 5-Fluoruracil and Mitomycin-C for Stage I-III Carcinoma of the Anal Canal
2002-2005	Therapeutic Drug Monitoring and Viral Resistance Testing in the Treatment of HIV-Infected Children
2002-2004	Phase I Study of Tenofovir Disoproxil Fumarate (PMPA Prodrug), a Nucleotide Analog Reverse Transcriptase Inhibitor in Children with HIV Infection

Teaching and Mentoring:

2018-present	Postdoctoral Fellow (Kristi Huik,PhD.)
2018-present.	Intramural Research Training Fellow (Natalie Lindo)
2015-present	Postdoctoral Fellow (Camille Lange, Ph.D.)
2014-present	Georgetown Faculty (Seble Kassaye, M.D.)
2012-present	Infectious Diseases Laboratory Research Graduate Fellow and Research Collaborator (Sarah Watters, M.S., University College London)
1998-present	Clinical Infectious Disease Attending: supervising infectious disease fellows, medical residents, medical students
2017-2018	Medical Student (Paula Rote)
2013-2016	Research Fellow (Junko Hattori, Ph.D.)
2011-2016	Intramural Research Training Fellow (Elizabeth Anderson)
2014-2015	Medical Student (Charmaine Peters, University of Utrecht)

2013-2015	Postdoctoral Fellow (Francesco Simonetti, M.D.)
2012-2013	Intramural Research Training Fellow (Daniel Kordella)
2011-2012	Infectious Disease Research Fellow (Eleanor Wilson, M.D.)
2009-2011	Staff Clinician (Karoll Cortez, M.D.)
2008-2010	Intramural Research Training Fellow (Tiffany Tanzosh)
2008-2010	Intramural Research Training Fellow (Carrie Poethke)
2008-2009	Postdoctoral Fellow (Francesca Cossarini, M.D.)
2002-2008	Greater Washington Infectious Disease Society, NIH Presentations Coordinator
2007	Mentor for CROI Graduate Student Young Investigator Grant Awardee (Nadia Urban)
2006	Mentor for CROI Graduate Student Grant Awardee (Shalika Basnayake, M.D.)
2005-2006	NIH Mentor, NIH Medical School Summer Student Program
2004	NIH Mentor, The Washington Center
1994-1997	NIAID Senior Staff Fellow: supervising research fellow (E. Berthold, Ph.D.)
1991-1997	Mentor, NIAID Introduction to Biomedical Research Program: supervising college and medical students
1986-1988	Medical Resident: supervising medical interns, residents, and medical students

Employee Invention Reports:

"Identification of Recent HIV-1 Infection by Genotypic Analysis"; submitted 2009; Inventor: Frank Maldarelli; Co-Inventors: Wei Shao, Mary Kearney, Robin Dewar, Tauseef Rehman, John M. Coffin, and John W. Mellors.

"A Feasible, Affordable Strategy to Obtain Single Genome Sequences (SGS) of HIV-1 from Patient Plasma"; submitted 2007; Inventor: John M. Coffin; Co-Inventors: Sarah Palmer, Mary Kearney, Frank Maldarelli, and John W. Mellors.

Societies:

American Society for Microbiology, 2013-present
Greater Washington Infectious Disease Society, 1997-present
Infectious Diseases Society of America, 2004

Invited Talks (Since 2001):

Plenary Speaker, 33rd National Meeting of Japanese Society for AIDS Research, Kumamoto, Japan, 2019
Palm Springs Symposium on HIV/AIDS, "New Horizons in AIDS Research," Palm Springs, California, 2019
University of Iowa, Iowa City IA, 2019
St Vincent's Center for Applied Medical Research, Sydney, Australia, 2018

Kirby Institute/New South Wales, Sydney, Australia, 2018
Indonesian Health Care PROACTIV Study, Jakarta, Indonesia, 2018
PACT Project Neighborhood Lecture Series, Washington, D.C., 2008-present
Invited Lecturer, The Johns Hopkins University Post-Graduate Programs, Baltimore, Maryland, 2003-2018
George Mason University, Manassas, Virginia, 2018
Uniformed Services University of the Health Sciences, Bethesda, Maryland, 2018
Yale University School of Medicine, Microbiology Department, New Haven, Connecticut, 2018
NIH Intramural NeuroHIV Research Workshop, Bethesda, Maryland, 2018
Laboratory of Viral Diseases, NIAID, Bethesda, Maryland, 2018
Annual CFAR Symposium, Cleveland, Ohio, 2017
Infectious Disease Clinical Research Program (IDCRP), Uniformed Services University of the Health Sciences, Bethesda, Maryland, 2016
Carroll Community College STEM Festival, Westminster, Maryland, 2016
Johns Hopkins University, Department of Biology, Baltimore, Maryland, 2016
NIH Intramural NINDS Neuro HIV Retreat, Bethesda, Maryland, 2016
23rd International HIV Dynamics and Evolution Conference, Woods Hole, Massachusetts, 2016
8th Stem Cell Clonality and Genome Stability Retreat, New Orleans, Louisiana, 2015
Georgia Regents University Hospital Medical Grand Rounds, Augusta, Georgia, 2014
Grand Rounds, Suburban Hospital, Bethesda, Maryland, 2014
AIDS Day Commemoration, University of Pittsburgh PA/MidAtlantic AIDS Education and Training Program, Pittsburgh, Pennsylvania, 2014
16th Annual Norman P. Salzman Memorial Virology Symposium, Bethesda, Maryland, 2014
University of North Carolina Virology Colloquium, Chapel Hill, North Carolina, 2014
Institute for Human Virology 16th Annual Meeting, Baltimore, Maryland, 2014
HIV/AIDS in Eastern Europe and Central Asia, Moscow, Russia, 2014 (unable to attend on advice from U.S. State Department)
NIH Clinical Grand Rounds, Bethesda, Maryland, 2012, 2013, 2014
Frederick Faculty Seminar Series, NCI-Frederick, Frederick, Maryland, 2011, 2013, 2014
20th Conference on Retroviruses and Opportunistic Infections, Atlanta, Georgia, 2013
National Institute of Infectious Disease, Tokyo, 2013 (unable to attend due to U.S. government shutdown)
Nagoya University, Nagoya, Japan, 2013
Invited Lecturer, Uniformed Services University of the Health Sciences School of Medicine, Bethesda, Maryland, 2007, 2009, 2011, 2013
Viruses, Genes, and Cancer, Instituto Veneto di Scienze, Lettere ed Arti, Venice, Italy, 2012
Banbury Conference on Chronic Fatigue Syndrome, Cold Spring Harbor, New York, 2012
Keynote Speaker, Johns Hopkins Biotechnology, Center for Talented Youth, Rockville, Maryland, 2012
Keynote Speaker, AIDS Day Commemoration, Austin, Texas, 2011
Consultation on Advancing HIV Incidence Surveillance, Centers for Disease Control and Prevention, Atlanta, Georgia, 2011
IAS Controversies in HIV Cure Research, Rome Italy, 2011
American Society for Microbiology Conference of Undergraduate Educators, Baltimore, Maryland, 2011

Division of AIDS Prevention Sciences Program Potential Biomarkers for HIV Incidence Assay Development, Bethesda, Maryland, 2011
IAS Pre-Conference Workshop: Towards a Cure: HIV Reservoirs and Strategies to Control Them, Vienna, Austria, 2010
Mount Sinai School of Medicine Infectious Diseases Grand Rounds, New York, New York, 2010
National Institute of Infectious Disease, Tokyo, Japan, 2010
Nagoya University, Nagoya, Japan, 2010
SAIC Translational Research Seminar Series, Frederick, Maryland, 2010
17th Conference on Retroviruses and Opportunistic Infections, San Francisco, California, 2010
Keynote Speaker, Johns Hopkins Biotechnology, Center for Talented Youth, Rockville, Maryland, 2010
Division of AIDS, Bethesda, Maryland, 2010
Aaron Diamond AIDS Research Center, New York, New York, 2009
CCR Grand Rounds, Bethesda, Maryland, 2009
NIH Clinical Grand Rounds, Bethesda, Maryland, 2009
XVII International HIV Drug Resistance Workshop, Sanibel Island, Florida, 2009
NIAID Division of AIDS, Bethesda, Maryland, 2009
Workshop on Eliminating Viral Persistence and Eradicating HIV Infection, Washington, D.C., 2008
XVI International HIV Drug Resistance Workshop, Sitges, Spain, 2008
Grand Rounds, Washington Hospital Center, Washington, D.C., 2008
NIAID Grand Rounds, NIH, Bethesda, Maryland, 2007
Viral Genomics Workshop, Broad Institute, MIT/Harvard, Cambridge, Massachusetts, 2007
Retroviruses Meeting, Cold Spring Harbor, New York, 2007
13th Conference on Retroviruses and Opportunistic Infections, Denver, Colorado, 2007
17th Annual HIV Symposium, Nassau University Medical Center, East Meadow, New York, 2006
Pennsylvania/Mid-Atlantic AIDS Education and Training Center, Fairfax, Virginia, 2006
HIV Advanced Clinical Update AIDS Education and Training Center, Fairfax, Virginia, 2005-2006
PACT project Neighborhood Lecture Series, Washington, D.C., 2005
NCI-Frederick Lecture Series, Frederick, Maryland, 2005
XIV International HIV Drug Resistance Workshop, Quebec City, Canada, 2005
Retroviruses Meeting, Cold Spring Harbor, New York, 2003-2005
NIAID Grand Rounds, Bethesda, Maryland, 2001-2005
XIII International HIV Drug Resistance Workshop, Tenerife, Spain, 2004
DOD-TACC Joint Meeting, Bethesda, Maryland, 2004
NIH Demystifying Medicine Lecture Series, Bethesda, Maryland, 2004
XII International HIV Drug Resistance Workshop, Cabo St. Lucas, Mexico, 2004
10th International Workshop on HIV Dynamics and Evolution, Lake Arrowhead, California, 2003
Washington Hospital Center I.D. Lecture Series, Washington, D.C., 2002
NIAID Laboratory of Immunoregulation Lecture Series, Bethesda, Maryland, 2002
NIAID Grand Rounds, Bethesda, Maryland, 2001-2002

FRANK MALDARELLI, M.D., PH.D.

BIBLIOGRAPHY

Peer-Reviewed Research Publications:

1. Patro SC, Brandt LD, Bale MJ, Halvas EK, Joseph KW, Shao W, Wu X, Guo S, Murrell B, Wiegand A, Spindler J, Raley C, Hautman C, Sobolewski M, Fennessey CM, Hu WS, Luke B, Hasson JM, Niyongabo A, Capoferri AA, Keele BF, Milush J, Hoh R, Deeks SG, **Maldarelli F**, Hughes SH, Coffin JM, Rausch JW, Mellors JW, Kearney MF. Combined HIV-1 sequence and integration site analysis informs viral dynamics and allows reconstruction of replicating viral ancestors. Proc Natl Acad Sci U S A. 2019 Dec 17;116(51):25891-25899

2. Musick A, Spindler J, Boritz E, Pérez L, Crespo-Vélez D, Patro SC, Sobolewski MD, Bale MJ, Reid C, Keele BF, Capoferri A, Shao W, Wiegand A, Simonetti FR, Mellors JW, Hughes SH, Coffin JM, **Maldarelli F**, Kearney MF.
HIV Infected T Cells Can Proliferate in vivo Without Inducing Expression of the Integrated Provirus. Front Microbiol. 2019 Oct 1;10:2204.

3. Reid EG, Suazo A, Lensing SY, Dittmer DP, Ambinder RF, **Maldarelli F**, Gorelick RJ, Aboulafia D, Mitsuyasu R, Dickson MA, Wachsman W; AIDS Malignancy Consortium (AMC).
Pilot Trial AMC-063: Safety and Efficacy of Bortezomib in AIDS-associated Kaposi Sarcoma. Clin Cancer Res. 2019 Oct 17. doi: 10.1158/1078-0432.

4. Grossman Z, Avidor B, Girshengoren S, Katchman E, **Maldarelli F**, Turner D. Transmission Dynamics of HIV Subtype A in Tel Aviv, Israel: Implications for HIV Spread and Eradication.
Open Forum Infect Dis. 2019 Jul 1;6(7). pii: ofz304. doi: 10.1093/ofid/ofz304.

5. Bozzi, G., F.R. Simonetti, S.A. Watters, E.M. Anderson, M. Gouzoulis, M.F. Kearney, P. Rote, C. Lange, W. Shao, R. Gorelick, B. Fullmer, S. Kumar, S. Wank, J. Hattori, S. Hill, J. Bell, C. Rehm, Z. Grossman, R. Yarchoan, T. Uldrick, and **F. Maldarelli**. 2019. No evidence of ongoing HIV-1 replication in tissue compartments during cART. Sci. Adv. Eaav2045

6. Coffin, J.M., D. Wells, J.M. Zerbato, J.D. Kuruc, S. Guo, B.T. Luke, J.J. Eron, M. Bale, J. Spindler, F.R. Simonetti, S. Hill, M.F. Kearney, **F. Maldarelli**, X. Wu, J.W. Mellors, and S.H. Hughes. 2019. Clones of infected cells arise early in HIV infected individuals. JCI Insight.pii 128432

7. Wonderlich,E.R., Subramanian, K., Cox,B., Wiegand, A., Lackman-Smith, C., Bale, M.J., Stone, M., Hoh, R., Kearney, M.F., **Maldarelli, F**., Deeks, S., Busch, M. P., Ptak, R.G., Kulpa, D.A., Effector memory differentiation promotes increased detection of replication-

competent HIV-l in resting CD4+ T cells from virally suppressed individuals. 2019. PLOS Pathogens. e1008074.

8. Winchester NE, **Maldarelli F**, Mejia Y, Dee N, Dewar R, Laidlaw E, Kuriakose SS, Stoll P, Proschan M, Lane HC, Pau AK.
8-Day Inpatient Directly Observed Therapy for ART Failure: A Tool For Preventing Unnecessary ART Changes and Optimizing Adherence Support.
Clin Infect Dis. 2019 Jul 11. pii: ciz590. doi: 10.1093/cid/ciz590

9. Hataye, J.M., Casazza, J.P., Best, K., Liang, C.J. Taina, Immonen, T., Ambrozak, D.R., Darko, S., Henry, A.R., Laboune,F. **Maldarelli, F**., Douek, D.C., Hengartner, N.W., Yamamoto, T., Keele, B.F., Perelson, A.S., and Koup, R.A. 2019. Principles Governing Establishment versus Collapse of HIV-1 Cellular Spread. Cell and Host Microbe, in press.

10. Gibson, K.M., M.C. Steiner, S. Kassaye, **F. Maldarelli**, Z. Grossman, M. Perez-Losada, and K.A. Crandall. 2019. A 28-year history of HIV-1 drug resistance and transmission in Washington, DC. Front. Microbiol. **10**:369.

11. Fennessey, C.M., C. Camus, T.T. Immonen, C. Reid, **F. Maldarelli**, J.D. Lifson, and B.F. Keele. 2019. Low-level alternative tRNA priming of reverse transcription of HIV-1 and SIV in vivo. Retrovirology **16**:11.

12. Reid, E.G., D. Looney, **F. Maldarelli**, A. Noy, D. Henry, D. Aboulafia, J.C. Ramos, J. Sparano, R.F. Ambinder, J. Lee, E. Cesarman, S. Yahyaei, R. Mitsuyasu, and W. Wachsman. 2018. Safety and efficacy of an oncolytic viral strategy using bortezomib with ICE/R in relapsed/refractory HIV-positive lymphomas. Blood Adv. **2**:3618-3626.

13. Pastrana, D.V., A. Peretti, N.L. Welch, C. Borgogna, C. Olivero, R. Badolato, L.D. Notarangelo, M. Gariglio, P.C. FitzGerald, C.E. McIntosh, J. Reeves, G.J. Starrett, V. Bliskovsky, D. Velez, I. Brownell, R. Yarchoan, K.M. Wyvill, T.S. Uldrick, **F. Maldarelli**, A. Lisco, I. Sereti, C.M. Gonzalez, E.J. Androphy, A.A. McBride, K. Van Doorslaer, F. Garcia, I. Dvoretzky, J.S. Liu, J. Han, P.M. Murphy, D.H. McDermott, and C.B. Buck. 2018. Metagenomic discovery of 83 new human papillomavirus types in patients with immunodeficiency. mSphere **3**:e00645-18.

14. Grossman, Z., S.V. Rico, K. Cone, W. Shao, C. Rehm, S. Jones, G. Bozzi, S. Dean, R. Dewar, T. Rehman, J. Purdy, C. Hadigan, A.K. Pau, and **F. Maldarelli**. 2018. Early presence of HIV-1 subtype C in Washington, D.C. AIDS Res. Hum. Retroviruses **34**:680-684.

15. George, J.M., S.S. Kuriakose, N. Dee, P. Stoll, T. Lalani, R. Dewar, M.A. Khan, M.T. Rehman, Z. Grossman, **F. Maldarelli**, and A.K. Pau. 2018. Rapid development of high-level resistance to dolutegravir with emergence of T97A mutation in 2 treatment-

experienced individuals with baseline partial sensitivity to dolutegravir. Open Forum Infect. Dis. **5**:ofy221.

16. Anderson, E.M., and **F. Maldarelli**. 2018. Quantification of HIV DNA using droplet digital PCR techniques. Curr. Protoc. Microbiol. **51**:e62.

17. Anderson, E.M., and **F. Maldarelli**. 2018. The role of integration and clonal expansion in HIV infection: Live long and prosper. Retrovirology **15**:71.

18. Colby, D.J., L. Trautmann, S. Pinyakorn, L. Leyre, A. Pagliuzza, E. Kroon, M. Rolland, H. Takata, S. Buranapraditkun, J. Intasan, N. Chomchey, R. Muir, E.K. Haddad, S. Tovanabutra, S. Ubolyam, D.L. Bolton, B.A. Fullmer, R.J. Gorelick, L. Fox, T.A. Crowell, R. Trichavaroj, R. O'Connell, N. Chomont, J.H. Kim, N.L. Michael, M.L. Robb, N. Phanuphak, J. Ananworanich, and **RV411 study group**. 2018. Rapid HIV RNA rebound after antiretroviral treatment interruption in persons durably suppressed in Fiebig I acute HIV infection. Nat. Med. **24**:923-926.

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<u>Submitted Manuscripts</u>:

1. Elbezanti, W., Lin, A., Schirling, A., Jackson, A., Marshali, M., Maldarelli, F., Sardo, L., Klase. Z. 2019. A novel use of FDA approved benzodiazepines as potential HIV-1 latency reversing agents. Submitted to J. Biol. Chem.
2. Anderson E.M., Simonetti F.R., Gorelick R. J., Hill S., Gouzoulis M., Bell J., Rehm C. Perez L., Boritz E., Wu X., Wells D., Hughes S.H., Rao V., Coffin, J.M., Kearney M.F., Maldarelli F. Dynamic Shifts in the HIV Proviral Landscape During Long Term Combination Antiretroviral Therapy: Implications for Persistence and Control of HIV Infection

Invited Book Chapters, Reviews, and Commentaries:

1. Simonetti, F., R. Dewar, and **F. Maldarelli.** 2019. Detection of human immunodeficiency virus infection. In: Principles and Practice of Infectious Diseases (G.L. Mandell, J.E. Bennett, and R. Dolin, eds.). Churchill Livingstone, Humana Press.

2. **Maldarelli, F.** 2018. HIV biology. In: Cecil Textbook of Medicine 26th Edition (W. Sheld, et al., eds). Churchill Livingstone, Humana Press.

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