# **CURRICULUM VITAE**

### RAMI KANTOR, M.D., M.

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**EDUCATION** 

1991 B.S. Bachelor of Medical Sciences, with Excellence

Sackler Medical School Tel-Aviv University

Israel

1995 M.D. Sackler Medical School

Tel-Aviv University

Israel

1999 M. Master and Diploma with Excellence

Postgraduate School of Internal Medicine

Sackler Medical School Tel-Aviv University

Israel

POSTGRADUATE TRAINING

1994 – 1995 Rotational Internship Barzilai and Sheba Medical Centers

Ben-Gurion and Tel Aviv Universities

Israel

1995-1999 Residency in Internal Medicine Sheba Medical Center

Tel-Aviv University

Israel

1998 Laboratory Research Tel-Aviv University

Israel

2000 – 2004 HIV Research Fellowship Stanford University

Stanford, CA

2005 – 2007 Infectious Diseases Brown University

Clinical Fellowship Providence, RI

# **POSTGRADUATE HONORS AND AWARDS**

1989 - 1990 Scholarship for best performance in medical studies Sackler Medical School, Tel-Aviv University, Israel 1991 - 1992 Scholarship for best performance in medical studies Sackler Medical School, Tel-Aviv University, Israel 1-4/1994 Internal Medicine scholarship Michael Reese Hospital, Chicago, IL 2003 Travel scholarship 10<sup>th</sup> Conference on Retroviruses and Opportunistic Infections Boston, MA 2010 M.A. ad eundem Brown University, Providence, RI, USA 2014 Annual Bruce M. Selya Award for Research Excellence; Lifespan 2018 Beckwith Family Award for Outstanding Teaching; Brown University

MILITARY SERVICE Israeli Defense Forces, Captain, 1983-1987

## PROFESSIONAL LICENSES

1995 License to practice Medicine, Israel

1999 Internal Medicine Specialty License, Israel

2005-2007 Training physician License, RI, USA

2007 - Medical Physician License, PA, USA

2009 - Academic Faculty Medical License, RI, USA

### **BOARD CERTIFICATION**

1994 USMLE Part II

1995 USMLE Part I

1998 ECFMG Indefinite Certificate

1999 Board Certification, Internal Medicine, Israel

2004 USMLE Part III

2010 American Academy of HIV Medicine Specialist

# **ACADEMIC APPOINTMENTS**

1999- Instructor of Medicine2005 Sackler Medical School Tel-Aviv University

Israel

2005- Assistant Professor of Medicine (Research)2009 Brown University Alpert Medical School

Providence, RI

2009- Assistant Professor of Medicine, Research Scholar

2011 Brown University Alpert Medical School

Providence, RI

2011- Associate Professor of Medicine, Research Scholar

**Brown University Alpert Medical School** 

Providence, RI

2017 - Professor of Medicine, Research Scholar

Brown University Alpert Medical School

Providence, RI

## **HOSPITAL APPOINTMENTS**

1995 - 1999 Residency in Internal Medicine

Sheba Medical Center/Tel Aviv University

Israel

2007-2008 Research Associate

Lifespan Providence, RI

2008 - Faculty Member

Division of Infectious Diseases University Medicine Foundation

Providence, RI

2009 - Attending Physician

The Miriam Hospital Providence, RI

2009 - Attending Physician

Rhode Island Hospital

Providence, RI

# OTHER APPOINTMENTS AND ACTIVITIES

Membership in Guidelines, Study Sections, Steering Committees, Advisory and Editorial Boards

2004 Reviewer, External Peer Review Panel; The National Center for HIV, STD, and TB

Prevention (NCHDTP);

Centers for Diseases Control and Prevention (CDC), Atlanta, GA

2005 -	Member, Steering Committee, TAQAS (TREAT Asia Quality Assessment Scheme)
2006 - 2011	Member, Steering Committee TASER (TREAT Asia Surveillance to Evaluate Resistance)
2009	Member, Scientific Advisory Board LAASER (Linked Asia-Africa Surveillance to Evaluate Resistance).
2010	Reviewer, Special Emphasis Panel Grant Review Study Section National Institute of Health, Bethesda, MD
2012	Reviewer, Fogarty International Center Grant Review for foreign investigators to begin basic science research careers (FIRCA and GRIPS) Study Section, May 31 to June 1, National Institute of Health, Bethesda, MD
2013	Reviewer, U.SChina Program for Biomedical Collaborative Research (R01) Study Section, January 24-25, National Institutes of Health, Bethesda, MD
2013	Reviewer, AIDS Clinical Studies and Epidemiology Study Section (ACE), November 17, National Institutes of Health, Bethesda, MD
2013- 2016	Editorial Board Member; Virulence
2013 -	Editorial Board Member; Journal of the International AIDS Society
2013 -	Member, AMPATH Research Executive Committee
2014	Reviewer, Small Business Innovation Research (SBIR): "Simple, inexpensive assay for 5 common HIV resistance mutations", February 2014, NIH, Bethesda, MD
2014	Reviewer, AIDS Clinical Studies and Epidemiology Study Section (ACE), November 5; National Institutes of Health, Bethesda, MD
2015	Reviewer, AIDS Clinical Studies and Epidemiology Study Section (ACE), March 4; National Institutes of Health, San Antonio, TX
2015	External Advisory Committee Member, University of Washington Center for AIDS Research; July 23-24, Seattle, WA
2015 -	Chartered Member, AIDS Clinical Studies and Epidemiology Study Section (ACE), National Institutes of Health, United States
2016 -	Panel Member, Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents; Department of Health and Human Services (DHHS)
2017	World Health Organization External Review Group (ERG) to develop guidelines on public health responses to elevated levels of pre-treatment HIV drug resistance
2017 -	Co-Leader, Viral Failure section, Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents; Department of Health and Human Services (DHHS)
2018 -	Deputy Editor, Journal of the International AIDS Society
2018 -	Member, American Academy for HIV Medicine, New England Chapter, Steering Committee

# OTHER APPOINTMENTS AND ACTIVITIES

2001	Co-Founder and Member; The HIV Non-Subtype B Working Group; an international collaboration of HIV researchers in 15 sites, 12 countries and 4 continents to study HIV diversity and drug resistance
2003	International conference organizer: 9th International Workshop on Virus Evolution and Molecular Epidemiology. Stanford University, Stanford, California, USA. August 13-23
2004	International workshop organizer and Faculty: TREAT Asia Workshop on HIV Drug Resistance. Chulalongkorn University, Bangkok, Thailand
2004 - 2011	Consultant TREAT Asia Network
2004 – 2010	Consultant World Health Organization Global HIV Drug Resistance Surveillance Network
2005	Organizer and Faculty, HIV Drug Resistance Workshop, YRG Care, Chennai, India
2005 -	Member, AIDS Clinical Trials Group, Study 5077
2007	Member, AIDS Clinical Trials Group Scientific Agenda Steering Committee International HIV Drug Resistance Research
2007	Grant reviewer, The National Medical Research Council (Singapore)
2008 -	Director of Research, Brown University-Kenya Program
2008 - 2017	Research Co-Director, Infectious Diseases Fellowship Program, Brown University
2009	Assessment for promotion of a candidate for the rank of Clinical Senior Lecturer, Tel-Aviv University, Israel
2010 -	Co-Director, Basic Science Working Group AMPATH (Academic Model Providing Access to Healthcare) Consortium
2010 -	Director, The Miriam Hospital HIV Drug Resistance Laboratory
2011	Grant reviewer, The South African Medical Research Council
2012	Writing Team Chair AIDS Clinical Trials Group, Study 5077
2012-	Member AIDS Clinical Trials Group, Study 5175
2012-	Writing Team Chair of Drug Resistance sub-Studies AIDS Clinical Trials Group, Study 5175
2012	Assessment for promotion of a candidate to the rank of Associate Professor, Swiss Federal Institute of Technology, Basel, Switzerland.
2014	Abstract Reviewer; 20 <sup>th</sup> International AIDS Society Conference, July 20-25, Melbourne, Australia

2014	Abstract Mentor, 20th International AIDS Conference, July 20-25 2014, Melbourne, Australia
2014	Grant Reviewer, Genome Canada, Genomic Applications Partnership Program, Ottawa, ON, Canada
2015	Assessment for promotion of a candidate for the rank of Clinical Senior Lecturer, Tel-Aviv University, Israel
2015	Abstract Reviewer; 8th International AIDS Society Conference, July 19-22, Vancouver, Canada
2015	Member, World Health Organization committee for HIV drug resistance dry panel for sequence analyses
2015	Assessment for promotion of a candidate to the rank of Professor, National Research Foundation (NRF), South Africa
2015 -	Member, Providence-Boston Center for AIDS Research Executive Committee
2015 -	Co-Director, Providence-Boston Center for AIDS Research Basic and Translational Science Core
2016	Abstract Reviewer; 21st International AIDS Conference, July 18-22, Durban, South Africa
2016	Evaluation of a Rated Researcher for the National Research Foundation (NRF), South Africa
2017	Abstract Reviewer; 9th International AIDS Society Conference, July 23-26, Paris, France
2017 -	Member, Division of Infectious Diseases Mentoring Committee, Brown University
2017	Assessment for promotion of a candidate for the rank of Senior Lecturer, Tel-Aviv University, Israel
2017	Assessment for promotion of a candidate for the rank of Assistant Professor (Tenure Track), University of North Carolina, Chapel Hill
2018	Abstract Reviewer; 22 <sup>nd</sup> International AIDS Conference, July 22-27, Amsterdam, Netherlands
UNIVERSI	TY COMMITTEES
2005 -	Member Brown University/Kenya Program Advisory Committee
2008 - 2015	Member, Executive Committee Brown/Tufts Fogarty AIDS International Training and Research Program
2009	Member Brown University Global Health Collaboratory Working Group

2016	Search Committee Member, Assistant Professor Research Scholar track, Department of Biostatistics/Center for Statistical Sciences, School of Public Health, Brown University
2016	Faculty Liaison; medical student exchange program, Alpert Medical School at Brown University and Technion Medical School, Israel
2017	Search Committee Member, Assistant Professor (Research), Department of Biostatistics/Center for Statistical Sciences, School of Public Health, Brown University

# **HOSPITAL COMMITTEES**

2009 - Member, Israel Steering Committee The Miriam Hospital

# MANUSCRIPT REVIEWER

2004 -	Antiviral Therapy
2005 -	HIV Clinical Trials
2005 -	Tropical Medicine and International Health
2006 -	Lancet
2006 -	PLOS Medicine
2006 -	Journal of Biomedical Informatics
2006 -	AIDS Research and Human Retroviruses
2007 -	Journal of Infectious Diseases
2007 -	Clinical Infectious Diseases
2007 -	Journal of AIDS
2007 -	Future Virology
2007 -	Retrovirology
2007 -	Journal of Medical Virology
2008 -	Indian Journal of Medical Research
2009 -	Journal of the International AIDS Society
2009 -	AIDS
2009 -	Expert Opinion On Drug Safety
2009 -	FASEB

2010 -	Medicinal Research Reviews
2010 -	PLOS One
2010 -	Journal of Computational Biology
2012 -	Journal of Medical Microbiology and Diagnosis
2012 -	Journal of Antimicrobial Chemotherapy
2014 -	JAMA (Journal of the American Medical Association)
2014 -	Antimicrobial Agents and Chemotherapy
2015 -	European Journal of Clinical Microbiology & Infectious Diseases
2015 -	AIDS Research and Therapy
2015 -	Open Forum Infectious Diseases
2016 -	Lancet HIV
2016 -	Virulence

### MEMBERSHIP IN SOCIETIES

- 1995 Israel Medical Association
- 2000 International AIDS Society
- 2005 Infectious Diseases Society of America
- 2005 HIV Medicine Association
- 2008 American Academy of HIV Medicine
- 2013 International Antiviral Society USA
- 2015 American Society of Microbiology

# ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

- R Kantor, M Salai, A Ganel. Orthopedic long-term aspects of bladder extrophy. Clinical Orthopedics and Related Research, 1997; 335: 240-245. PMID 9020224.
- 2. **R Kantor**, A Barzilai, D Varon, U Martinowitz, J Gershoni. Prevalence of a CCR5 Gene 32-bp Deletion in an Israeli Cohort of HIV-1-Infected and Uninfected Hemophilia Patients. Journal of Human Virology 1998; 4: 299-301. PMID 10195255.
- 3. **R Kantor**, R Pauzner, L Pali, Z Farfel. High alkaline phosphatase in subacute thyroiditis. Harefua 1999; 136: 599-602. PMID 10955064.
- 4. **R Kantor**, J Gershoni. Distribution of the CCR5 gene 32-Base Pair Deletion in Israeli Ethnic Groups. Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology 1999; 20: 81-84. PMID 9928734.
- R Kantor, H Mayan, N Reichert, Z Farfel. Kaposi's sarcoma post lung transplantation in a Sepharadi Jewish woman. Dermatology 2000; 200: 49-50. PMID 10681615.

- 6. **R Kantor**, H Mayan, L Puritz, D Varon, Z Farfel. Acquired Hemophilia Masked by Warfarin Therapy. Am J Med Sci 2000;319: 197-201. PMID 10746834.
- 7. **R Kantor**, R Machakeno, M Gonzales, K Dupnik, J Schapiro, R W Shafer. Human Immunodeficiency Virus Reverse Transcriptase and Protease Sequence Database: An Expanded Data Model Integrating Natural Language Text and Sequence Analysis. Nucleic Acids Research 2001; 29: 296-299. PMID 11125118. PMC 29795.
- H Mayan, R Kantor, U Rimon, N Golubev, Z Heyman, E Goshen, B Shalmon, P Weiss. Fatal liver infarction after transjugular intrahepatic portosystemic shunt procedure. Liver 2001; 21:361-4. PMID 11589774.
- 9. **R Kantor**, R Pauzner, N Golobev, A Shinfeld, Z Farfel, A Smolinski. Ascending aortic pseudoaneurysm following coronary bypass in a hemodialysis patient with FUO. Journal of Cardiovasvular Surgery 2001;42:633-4. PMID 11562590.
- H Mayan, R Kantor, A Volner, Z Farfel. Acute respiratory failure with massive pulmonary infiltrates six weeks after coronary artery bypass operation. Israel Medical Association Journal 2001; 3: 67-68. PMID 11344810.
- 11. H Mayan, **R Kantor**, Z Farfel. The Trans Tubular Potassium Gradient in patients with druginduced hyperkalemia. Nephron 2001; 89: 56-61. PMID 11528233.
- R Kantor, JW Fessel, A Zolopa, D Israelski, N Shulman, J Montoya, M Harbour, J Schapiro, RW Shafer. Evolution of primary protease inhibitor resistance mutations during protease inhibitor salvage therapy. Antimicrobial Agents and Chemotherapy 2002; 46:1086-92. PMID 11897594. PMC 127108.
- R Kantor, L Zijenah, RW Shafer, S Mutetwa, E Johnston, R Lloyd, A von Lieven, D Israelski D Katzenstein. HIV-1 subtype C reverse transcriptase and protease genotypes in patients from Zimbabwe failing antiretroviral therapy. AIDS Research and Human Retroviruses 2002; 18: 1407-13. PMID 12512512. PMC 2573400.
- M Gonzales, TD Wu, J Taylor, I Belitskaya, R Kantor, D Israelski, S Chou, A Zolopa, WJ Fessel, RW Shafer. Extended spectrum of HIV-1 reverse transcriptase mutations in patients receiving multiple nucleoside analog inhibitors. AIDS 2003; 17: 791-9. PMID 12660525. PMC 2573403.
- TD Wu, CA Schiffer, M Gonzales, J Taylor, R Kantor, S Chou, D Israelski, A Zolopa, JW Fessel, RW Shafer. Mutation Patterns and Structural Correlates in HIV-1 Protease Following Varying Degrees of Protease Inhibitor Treatment. Journal of Virology 2003; 77: 4836-47. PMID 12663790. PMC 152121.
- SY Rhee, MJ Gonzales, R Kantor, BJ Betts, J Ravela, RW Shafer. Human Immunodeficiency Virus Reverse Transcriptase and Protease Sequence Database. Nucleic Acids Research 2003: 31: 298-303. PMID 12520007. PMC 165547.
- 17. E Johnston, L Zijenah, S Mutetwa, **R Kantor**, C Kittinunvorakoon, D Katzenstein. High Frequency of syncytium-inducing and CXCR4-tropic viruses among human immunodeficiency virus type 1 subtype C infected patients receiving antiretroviral treatment. Journal of Virology 2003; 77: 7682-7688. PMID 12805470. PMC 164829.
- R Kantor, M Bakhanashvili, A Achiron. A mutated CCR5 gene in multiple sclerosis patients may have favorable prognostic implications in MS. Neurology 2003; 61: 238-240. PMID 12874407.
- 19. **R Kantor**, RW Shafer, S Follansbee, J Taylor, D Shilane, L Hurley, DP Nguyen, D Katzenstein, WJ Fessel. Evolution of drug resistance in HIV-1 among persons failing antiretroviral therapy. AIDS 2004;18:1503-11. PMID 15238768. PMC 2547474.
- Akinsete, D Hirigoyen, C Cartwright, R Schut, R Kantor, K Henry. K103N mutation in antiretroviral therapy (ART) naïve African patients infected with HIV-1. Clinical Infectious Diseases 2004; 39:575-8. PMID 15356825.
- 21. **R Kantor**, RW Shafer, D Katzenstein for the HIV-1 Non-subtype B Workgroup. The HIV-1 Non-subtype B Workgroup: An International Collaboration for the Collection and Analysis of HIV-1 Non-subtype B Data. Journal of the International AIDS Society 2005;7:71. PMID 19825127. PMC 2740791.
- 22. P Balakrishnan, N Kumarasamy, **R Kantor**, S Solomon, S Vidya, KH.Mayer, M Newstein, SP Thyagarajan, D Katzenstein, B Ramratnam. HIV-1 genotypic variation in an antiretroviral

- treatment naïve population in South India. Antiretroviral Research and Human Retroviruses 2005; 21: 301-5. PMID 15943572.
- 23. R Kantor, D Katzenstein, B Efron, AP Carvalho, B Wynhoven, M Soares, P Cane, J Clarke, J Snoeck, C Pillay, S Sirivichayakul, K Ariyoshi, A Holguin, P Weidle, H Rudich, R Rodrigues, MB Bouzas, P Cahn, L Brigido, Z Grossman, V Soriano, W Sugiura, P Phanuphak, L Morris, AM Vandamme, J Weber, D Pillay, A Tanuri, R Harrigan, R Camacho, J Schapiro RW Shafer. Impact of HIV-1 subtype and antiretroviral therapy on protease and reverse transcriptase genotypic evolution: results of a global collaboration. PLOS Medicine 2005; 2:e112. PMID 15839752. PMC 1087220.
- 24. EJ Lee, **R Kantor**, L Zijenah, W Sheldon, P Mateta, E Johnston, J Wells, A Shetty, H Coovadia, Y Maldonado, SA Jones, C Contag, M Bassett, D Katzenstein. Breast-milk shedding of drug resistant subtype C HIV-1 among women receiving single dose nevirapine. Journal of Infectious Diseases 2005; 192:1260-4. PMID 16136470.
- 25. J Snoeck, R Kantor, RW Shafer, K Van Laethem, K Deforche, AP Carvalho, B Wynhoven, MA Soares, P Cane, J Clarke, C Pillay, S Sirivichayakul, K Ariyoshi, A Holguin, H Rudich, R Rodrigues, MB Bouzas, F Brun-Vézinet, C Reid, P Cahn, LF Brigido, Z Grossman, V Soriano, W Sugiura, P Phanuphak, L Morris, J Weber, D Pillay, A Tanuri, RP Harrigan, R Camacho, JM Schapiro, D Katzenstein and AM Vandamme. Discordances between interpretation algorithms for genotypic resistance to protease and reverse transcriptase inhibitors of the Human Immunodeficiency Virus are subtype dependent. Antimicrobial Agents and Chemotherapy 2006; 50:694-701. PMID 16436728. PMC 1366873.
- 26. SY Rhee, R Kantor, D Katzenstein, R Camacho, L Morris, D Pillay, Z Grossman, P Phanuphak, P Cahn, V Soriano, LF Brigido, AM Vandamme, A Tanuri, J Weber, W Sugiura, JM Schapiro and RW Shafer. HIV-1 Pol mutation frequency by subtype and treatment experience: extension of the HIVseq program to seven non-B subtypes. AIDS 2006;20:643-51. PMID 16514293. PMC 2551321.
- 27. K Deforche, R Camacho, Z Grossman, T Silander, MA Soares, Y Moreau, RW Shafer, K Van Laethem, AP Carvalho, B Wynhoven, P Cane, J Snoeck, J Clarke, S Sirivichayakul, K Ariyoshi, A Holguin, H Rudich, R Rodrigues, MB Bouzas, P Cahn, LF Brigido, V Soriano, W Sugiura, P Phanuphak, L Morris, J Weber, D Pillay, A Tanuri, PR Harrigan, JM Shapiro, DA Katzenstein, R Kantor, AM Vandamme. Bayesian network analysis of resistance pathways against protease inhibitors. Infection, Genetics and Evolution 2007; 7:382-90. PMID 17127103.
- 28. K Deforche, T Silander, R Camacho, Z Grossman, MA Soares, K Van Laethem, **R Kantor**, Y Moreau, AM Vandamme. Analysis of HIV-1 pol sequences using Bayesian Networks: implications for drug resistance. Bioinformatics, 2006; 22:2975-9. PMID 17021157.
- 29. S Kassaye, E Lee, **R Kantor**, E Johnston, M Winters, L Zijenah, P Mateta, D Katzenstein. Evolution of drug resistance in plasma and breast-milk after single-dose nevirapine in subtype C HIV-1: population clonal and sequencing analyses. AIDS Research and Human Retroviruses 2007;23:1055-61. PMID 17725424.
- K Deforche, RJ Camacho, Z Grossman, MA Soares, K Van Laethem, DA Katzenstein, PR Harrigan, R Kantor, R Shafer, AM Vandamme, on behalf of the non-B workgroup. Bayesian network analyses of resistance pathways against efavirenz and nevirapine. AIDS 2008; 22:2107-15. PMID 18832874. PMC 4788388.
- 31. V Pillay, C Pillay, **R Kantor**, F Venter, L Levin, L Morris. HIV-1 subtype C drug resistance profiles among South African patients failing anti-retroviral therapy. AIDS Research and Human Retroviruses 2008;24:1449-54. PMID 19000027.
- 32. PA Chan, SE Wakeman, T Flanigan, S Cu-Uvin, E Kojic, **R Kantor**. HIV-2 diagnosis and quantification in high-risk patients. AIDS Research and Therapy 2008;5:18. PMID 18700986. PMC 2529329.
- SG Kassaye, E Johnston, B McColgan, R Kantor, Lynn Zijenah, D Katzenstein. Envelope coreceptor tropism, drug resistance, and viral evolution among subtype C HIV-1 infected individuals receiving non-suppressive antiretroviral therapy. JAIDS 2009;50:9-18-22. PMID 19295330. PMC 2818215.
- 34. D Bennett, R Camacho, D Otelea, D Kuritzkes, H Fleury, M Kiuchi, W Heneine, R Kantor, M Jordan, V Miller, J Schapiro, AM Vandamme, P Sandstrom, CAB Boucher, DVD Vijver, SY

- Rhee, T Liu, D Pillay, R Shafer. Drug resistance mutations for surveillance of transmitted HIV-1 drug resistance: 2009 update. PLOS One 2009;4:e4724. PMID 19266092. PMC 2648874
- 35. S Saravanan., M Vidya., P Balakrishanan, N Kumarasamy, SS Solomon, S Solomon, R **Kantor**, D Katzenstein, B Ramratnam, KH Mayer. Evaluation of Two Human Immunodeficiency Virus-1 Genotyping systems: the Viroseq<sup>™</sup> 2.0 and an in house method. Journal of Virological Methods 2009; 159: 211-6. PMID 19490976. PMC 2923210.
- 36. N Kumarasamy, V Madhavan, KK Venkatesh, S Saravanan, **R Kantor**, P Balakrishnan, B Devaleenal, S Poongulali, T Yepthomi, S Solomon, KH Mayer, C Benson, R Schooley. High Frequency of Clinically Significant Mutations after First Line Generic Highly Active Antiretroviral Therapy Failure: Implications for Second Line Options in Resource Limited Settings Clinical Infectious Diseases 2009; 49: 306-309. PMID 19522657.
- 37. S Land, P Cunningham, J Zhou, K Frost, D Katzenstein, R Kantor, YMA Chen, S Oka, A DeLong, D Sayer, J Smith, EM Dax, M Law, TAQAS network Quality Assessment Scheme to Standardize the outcome of Asian Laboratories. TREAT Asia Quality Assessment Scheme (TAQAS) to Standardize the Outcome of HIV Genotypic Resistance Testing in a Group of Asian Laboratories. Journal of Virological Methods 2009;159:185-93. PMID 19490972, PMC 2863146.
- 38. **R Kantor**, L Diero, A DeLong, L Kamle, S Muyonga, F Mambo, W Emonyi, P Chan, EJ Carter, J Hogan, N Buziba. Misclassification of first-line antiretroviral treatment failure based on immunological monitoring of HIV infection in resource-limited settings. Clinical Infectious Diseases 2009;49:454-62. PMID 19569972, PMC 4859427.
- 39. M Vidya, S Saravanan, S Uma, N Kumarasamy, SS Solomon, S Solomon, R Kantor, D Katzenstein, B Ramratnam, KH Mayer, P Balakrishanan. Genotypic HIV-1 drug resistance among patients with immunologic failure to first-line antiretroviral therapy in south-India. Antiviral Therapy 2009;14:1005-9. PMID 19918105. PMC 3816397.
- 40. Z El-Khatib, AK DeLong, D Katzenstein, AM Ekstrom, J Ledwaba, L Mohapi, F Laher, S Charalambous, A Karstaedt, M Petzold, L Morris, R Kantor. Drug resistance patterns and virus re-suppression among HIV-1 subtype C patients receiving non-nucleoside reverse transcriptase inhibitors in South Africa. Journal of AIDS and Clinical Research 2011;2:117-126. PMID 21927716. PMC 3174802.
- PA Chan, K Tashima, F Gillani, O Mintz, K Zeller, R Kantor. Transmitted Drug Resistance and Molecular Epidemiology in Antiretroviral Naïve HIV-1 Infected Patients Presenting to an Outpatient Clinic in Rhode Island. AIDS Research and Human Retroviruses 2011;7:275-81. PMID 20954831. PMC 3048815.
- 42. A Huang, **R Kantor**, A DeLong, L Schreier, S Istrail. QColors: An Algorithm for Conservative Viral Quasispecies Reconstruction from Short and Non-Contiguous Next Generation Sequencing Reads. Proceedings of Institute of Electrical and Electronics Engineers Conference on Bioinformatics and Biomedicine, Workshop on Computational Advances in Molecular Epidemiology 2011;1:130-136.
- 43. S Saravanan, V Madhavan, KG Murugavel, P Balakrishnan, SS Solomon, S Umapathy, R Kantor, N Kumarasamy, T Yepthomi, DM Smith, KH Mayer, S Solomon. The association between HIV-1 subtype C antiretroviral resistance and HLA prevalence in Southern India. Journal of AIDS 2011;57:e17-19. PMID 21775932. PMC 3154011.
- 44. S Saravanan, M Vidya, P Balakrishnan, R Kantor, SS Solomon, D Katzenstein, N Kumarasamy, T Yeptomi, S Sivamalar, S Rifkin, KH Mayer, S Solomon. Viremia and HIV-1 drug resistance mutations among patients receiving second-line highly active antiretroviral therapy in Chennai, Southern India. Clinical Infectious Diseases 2012; 54: 995-1000. PMID 22323567. PMC 3571716.
- 45. A DeLong, M Wu, D Bennett, N Parkin J Wu, J Hogan, **R Kantor**. Sequence Quality Analysis tool for HIV Type 1 Protease and Reverse Transcriptase sequence quality evaluation. AIDS Research and Human Retroviruses 2012;28:894-901. PMID 21916749. PMC 3399557.
- 46. A Huang, J Hogan, S Istrail, A DeLong, D Katzenstein, **R Kantor**. Global Analysis of Sequence Diversity Within HIV-1 Subtypes Across Geographic Regions. Future Virology 2012;7:505-17. PMID 22822410. PMC 3400699.

- 47. S Saravanan, V Madhavan, SS Solomon, R Kantor, D Katzenstein, S Sivamalar, N Kumarasamy, DM Smith, KH Mayer, S Solomon, P Balakrishnan. Reverse Transcriptase Substitution at Codons 208 and 228 Among Treatment-experienced HIV-1 Subtype-C Infected Indian Patients Is Strongly Associated with Thymidine Analogue Mutations. Journal of AIDS, 2012;59:e26-7. PMID 22245718. PMC 3259528.
- 48. S Saravanan, M Vidya, R Kantor, S Sivamalar, S Gomathi, SS Solomon, N Kumarasamy, DM Smith, RT Schooley, S Solomon, P Balakrishnan. Unusual Insertion and Deletion at Codon 67 and 69 of HIV Type 1 Subtype C Reverse Transcriptase Among First-Line Highly Active Antiretroviral Treatment-Failing South Indian Patients: Association with Other Resistance Mutations. AIDS Research and Human Retroviruses 2012; 28:1763-5. PMID 22404052. PMC 3505055.
- 49. B Westley, AK Delong, CS Tray, D Sophearin, EM Dufort, E Nerrienet, L Schreier, JI Harwell, R Kantor. Prediction of Treatment Failure using 2010 WHO Guidelines is Associated with High Misclassification Rates and Drug Resistance among HIV-Infected Cambodian Children Clinical Infectious Diseases, 2012;55:432-440. PMID 22539664. PMC 3491779.
- NE Alexander, PA Chan, T Rogo, Z Parillo, C Browning, B Isabell, C Calcione, S Chowdhury, P Simon, R Kantor. Interrupting Transmission of HIV and other Sexually Transmitted Infections in Rhode Island. Medicine and Health RI 2012;95:241-244. PMID 22970465. PMC 3770840.
- PA Chan, A Huang, R Kantor. Low prevalence of transmitted K65R and other tenofovir resistance mutations across different HIV-1 subtypes: Implications for pre-exposure prophylaxis. Journal of the International AIDS Society 2012;15:17701-5. PMID 23305651. PMC 3494163.
- 52. A Huang, **R Kantor**, A DeLong, L Schreier, S Istrail. QColors: An Algorithm for Conservative Viral Quasispecies Reconstruction from Short and Non-Contiguous Next Generation Sequencing Reads. In Silico Biology 2012;11:193-201. PMID 23202421. PMC 5530257.
- 53. A Jiamsakul, R Kantor, PCK Li, S Sirivichayakul, T Sirisanthana, P Kantipong, CKC Lee, A Kamarulzaman, W Ratanasuwan, R Ditangco, T Singtoroj, S Sungkanuparph. Comparison of Predicted Susceptibility between Genotype and Virtual Phenotype HIV Drug Resistance Interpretation Systems among Treatment-naive HIV-infected Patients in Asia: TASER-M Cohort Analysis. BMC Research Notes 2012;5:582-591. PMID 23095645. PMC 3505153.
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- 96. Y Xu, T Liu, **R Kantor**, A Mwangi, MJ Daniels, JW Hogan. Classification using Ensemble Learning under Weighted Misclassification Loss. Joint Statistics Meetings, July 29-August 3, 2017, Baltimore, MD.
- 97. A Guang, C Dunn, M Howison, M Coetzer, L Ledingham, M D'Antuono, PA Chan, **R Kantor.** Preserving intra-patient variance improves phylogenetic inference of HIV transmission networks. 24<sup>th</sup> HIV Dynamics & Evolution Conference, May 23-26, 2017, Isle of Skye, Scotland
- 98. T Liu, JW Hogan, MJ Daniels, M Coetzer, Y Xu, G Bove, AK DeLong, M Orido, L Diero, **R Kantor**. Marker-assisted HIV-1 viral load pooling deconvolution improves monitoring capacity. 9th IAS Conference on HIV Science, 23-26 July 2017, Paris, France.
- 99. W Nyandiko, R Vreeman, AK DeLong, M Coetzer, E Sang, C McAteer, J Aluoch, M Orido, S Sam, A Caliendo, S Ayaya, JW Hogan, **R Kantor**. HIV-1 Treatment Failure and Extensive

- Drug Resistance in Perinatally-Infected Children Failing 1st-Line Antiretroviral Therapy in Western Kenya. 26th International HIV Drug Resistance Workshop, November 6-8, 2017; Johannesburg, South Africa.
- 100. S. Goodrich, A. Gardner, C. Ngetich, S. Ali, J. Humphrey, B. Jakait, R. Kantor. Good short-term outcomes despite extensive pre-3rd-line HIV drug resistance in Kenya. 22nd International AIDS Conference, 23-27 July 2018, Amsterdam, Netherlands.
- 101. R Vreeman, W Nyandiko, A DeLong, M Coetzer, J Okoyo, C McAteer, E Sang, A Ngeresa, S Ayaya, J Hogan, R Kantor. Characterizing adherence and drug level effects on viral outcomes in HIV-infected Kenyan children. 22nd International AIDS Conference, 23-27 July 2018, Amsterdam, Netherlands.
- 102. Cunha MS, Correa IA, Coetzer M, Diero L, Orido M, Tanuri A, Costa LJ, **Kantor R**. Unrecognized protease inhibitor drug resistance mutations in HIV-1 subtype A. 22nd International AIDS Conference, 23-27 July 2018, Amsterdam, Netherlands.
- 103. A Noska, T Liu, I Kuo, M Coetzer, A Kurth, **R Kantor**, C Beckwith. Validity of Self-Reported HCV Status among Justice-Involved Persons Living with HIV. IDWeek, October 3-7, 2018, San Francisco, CA.

### SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

PEER-REVIEWED

# NON-PEER REVIEWED

- 1. **R Kantor**. TREAT Asia workshop explores drug resistance. TREAT Asia Report, July 2005. http://www.amfar.org/cgi-bin/iowa/asia/news/index.html?record=57
- 2. **R Kantor**, D Katzenstein. Antiretroviral Drug Resistance in Non-Subtype B HIV-1 Isolates from Treated Patients. http://www.hivresistanceweb.com/.
- 3. **R Kantor.** Antiretroviral drug resistance evolution in the context of HIV diversity. The YRG Care HIV/AIDS Newsletter, February 2009; 2(1):1-2.
- 4. Political turmoil affects HIV treatment. https://news.brown.edu/pressreleases/2013/03/conflict
- Political turmoil affects HIV treatment. http://www.theatlanticwire.com/national/2013/03/babies-are-evil-just-us/63028/
- HIV Treatment Hindered by Political Strife. http://scienceblog.com/61050/political-strifeundermines-hiv-treatment/
- 7. Department of Medicine Newsletter; Summer 2013. Kantor research awards. http://www.brownmedicine.org/2/welcome/newsletters/august2013.pdf
- 8. Virulence Profile: **R Kantor**. Virulence 2014;5:581-584. PMID 24804839. PMC 4063819.
- 9. Grant supports use of data science to optimize HIV care. http://news.brown.edu/articles/2014/12/kenya
- National Institutes of Health Grant to Fund Optimization of HIV Treatment: A Q&A with Rami Kantor, MD. http://www.miriamhospital.org/Newsroom/News.aspx?NewsId=68936/National-Institutes-of-Health-Grant-to-Fund-Optimization-of-HIV-Treatment:-A-Q&A-with-Rami-Kantor-MD/
- 11. Department of Medicine Newsletter; Summer 2015.Grant supports data science to optimize HIV care. http://www.brownmedicine.org/2/welcome/newsletters/summer2015.pdf
- 12. Team describes rapid, sensitive test for HIV mutations. October 2015. https://news.brown.edu/articles/2015/10/hivrna.
- 13. Kantor named to HIV treatment guidelines panel. 3/15/16. https://news.brown.edu/articles/2016/03/kantor

# **INVITED MEETINGS AND PRESENTATIONS**

### International

- 1. Drug resistance testing and interpretation in HIV-1 non-B subtypes. 15th International AIDS Conference, July 12-16, 2004; Bangkok, Thailand.
- 2. International workshop organizer and Faculty: TREAT Asia workshop on HIV drug resistance. October 12-13, 2004. Chulalongkorn University, Bangkok, Thailand.
- Mechanisms of HIV drug resistance; (ii) Drug Resistance Databases and Interpretation. National Consultation on Drug Resistance in Malaria, Tuberculosis, and HIV/AIDS, September 19-21, 2005; Mumbai, India
- 4. HIV Diversity and Drug Resistance. National Institution of Communicable Diseases Johannesburg, South Africa. September 8, 2005
- HIV sequence analyses; (ii) HIV sequence databases; (iii) Diversity and origin of HIV; (iv) HIV diversity and drug resistance. HIV TB Bioinformatics Conference Course, September 12-16, 2005; Cape Town, South Africa
- 6. Organizer and Faculty, Drug Resistance Workshop. September 23, 2005, YRG Care, Chennai, India.
- 7. Mechanisms of HIV drug resistance; (ii) Drug resistance interpretation. Low cost diagnostics and HIV drug resistance course. June 30-July 1, 2006, Harare, Zimbabwe.
- 8. HIV sequence quality assessment; (ii) HIV subtypes and drug resistance. South Africa Treatment and Resistance Network (SATuRN) planning meeting, July 4-6, 2006, Johannesburg, South Africa.
- 9. Sequence analyses quality control; (ii) HIV drug resistance genotypic interpretation. TREAT Asia Quality Assurance Scheme (TAQAS) Meeting, July 11, 2006, Bangkok, Thailand
- HIV data curation and analyses; (ii) HIV drug resistance mutation lists. Second South Africa Treatment and Resistance Network (SATuRN) meeting, June 4-5, 2007, Durban, South Africa.
- 11. Report of TAQAS meeting; (ii) Phenotypic study of drug resistance in HIV-1 non-B subtypes. 7<sup>th</sup> Annual TREAT Asia Network Meeting, September 7-10, 2007, Hanoi, Vietnam.
- 12. Base calling in HIV sequences; (ii) Technical issues with HIV-1 non-subtype B genotyping. TREAT Asia Quality Assurance Scheme Workshop, September 5, 2007, Bangkok, Thailand.
- 13. Principles of HIV drug resistance and interpretation. Chennai HIV antiretroviral treatment symposium (CART 2008); January 12, 2008; Chennai, India.
- 14. Principles in HIV drug resistance and interpretation. Kenya Medical Research Institute; April 16, 2008, Nairobi, Kenya.
- 15. HIV diversity and drug resistance in Western Kenya. Annual review meeting 2008 University of Nairobi STD/AIDS collaborative group; April 14-19, 2008, Nairobi, Kenya.
- 16. HIV drug resistance in multiple HIV subtypes within IEDEA. International Epidemiological Databases to Evaluate AIDS Executive Committee Meeting. August 1-2, 2008, Cuernavaca, Mexico.
- 17. HIV diversity and drug resistance. Workshop for HIV drug resistance in clinical practice. September 5, 2008, Cape-Town, South Africa.
- 18. HIV drug resistance research capacity building within TREAT Asia. 8<sup>th</sup> Annual TREAT Asia Network Meeting, October 17-19, 2008, Chiang-Mai, Thailand.
- 19. HIV drug resistance sequencing from filter paper. TREAT Asia Quality Assurance Scheme Workshop, October 15-16, 2008, Bangkok, Thailand.
- 20. Session Chair and Presenter: Epidemiology and principles of HIV drug resistance. Chennai HIV antiretroviral treatment symposium (CART 2009); January 9-10, 2009; Chennai, India.
- 21. Faculty and Presenter: TREAT Asia Resistance Data Management and Biostatistics Training Workshop; June 22-25, 2009, Bangkok, Thailand.
- 22. Improving HIV drug resistance sequencing and interpretation. 9<sup>th</sup> Annual TREAT Asia Network Meeting, October 10-13, 2009, Bangkok, Thailand.
- 23. Evolution and patterns of drug resistance in HIV-1 subtype C. Chennai HIV antiretroviral treatment symposium (CART 2010); January 9-10, 2010; Chennai, India.
- AMPATH Research Program Strategic Planning Retreat; January 28-29, 2010; Eldoret, Kenya.

- 25. HIV Drug Resistance Workshop; March 19-20, 2010; National AIDS Research Institute; Pune, India.
- 26. TASER (TREAT Asia Surveillance to Evaluate Resistance) Steering Committee meeting; March 25, 2010; Bangkok, Thailand.
- 27. LAASER (Linked Asia-Africa Surveillance to Evaluate Resistance) Scientific Advisory Board meeting, May 27, 2010; Amsterdam, Netherlands.
- 28. TREAT Asia Quality Assurance Scheme steering committee meeting; October 10, 2010, Bangkok, Thailand.
- 29. Faculty and Organizer: Second TREAT Asia HIV Drug Resistance Training Workshop; October 11-12, 2010, Bangkok, Thailand.
- 30. HIV diversity and drug resistance in subtype C. 5th South African HIV Drug Resistance and Treatment Monitoring Workshop, University of the Free State, 27-29 October, Bloemfontein, South Africa.
- 31. Drug resistance in HIV first line antiretroviral failure. Chennai HIV antiretroviral treatment symposium (CART 2011); January 8-9, 2011; Chennai, India.
- 32. TREAT Asia Quality Assurance Scheme (TAQAS). TREAT Asia Studies to Evaluate Resistance Meeting; Annual Network Meeting; November 9-11, 2011, Chiang-Mai, Thailand.
- 33. HIV drug resistance to first-line antiretroviral therapy. Chennai HIV antiretroviral treatment symposium (CART 2012); January 21-2, 2012; Chennai, India.
- 34. HIV diversity and drug resistance. HIV Science 2012 international symposium on HIV and infectious diseases; January 20-22, 2012; Chennai, India.
- 35. HIV diversity and drug resistance. November 1, 2012; University of Ghana Medical School, Accra, Ghana.
- 36. Resistance to second line antiretroviral therapy. Chennai HIV antiretroviral treatment symposium (CART 2013); February 9, 2013; Chennai, India.
- 37. 13th Annual TREAT Asia Network Meeting, October 10-11, 2013, Phuket, Thailand.
- 38. HIV Diversity and the Evolution of Drug Resistance. 2<sup>nd</sup> International Science Symposium on HIV and Infectious Diseases (HIV Science 2014); January 30 February 1, 2014, Chennai, India.
- 39. HIV drug resistance: where will it lead to?. Chennai HIV antiretroviral treatment symposium (CART 2014); April 26-27, 2014; Chennai, India.
- 40. Use of Point Mutation Assays for Resistance Testing in India: Challenges and Benefits NIH-and African Society of Laboratory Medicine- sponsored Collaborative Meeting on Defining Key HIV-1 Mutations for Determining Antiretroviral Resistance in Low and Middle Income Countries. December 5–6, 2014; Cape Town, South Africa.
- 41. Drug resistance profile among antiretroviral experienced individuals and their implication; Speaker and Session Chair. 7th National Conference of AIDS Society of India- ASICON Kolkata, India; 12-14 December 2014.
- 42. HIV drug resistance: what's new? Chennai HIV antiretroviral treatment symposium (CART 2015); March 28-29, 2015; Chennai, India.
- 43. World Health Organization Annual HIV Resistance Network (HIVResNet) Meeting; July 19, 2015, Vancouver, Canada.
- 44. World Health Organization HIV Resistance Network (HIVResNet) Laboratory Working Group Meeting; July 19, 2015, Vancouver, Canada.
- 45. Academic Model Providing Access To Healthcare (AMPATH) Research Retreat; October 8-9, 2015, Eldoret, Kenya.
- 46. What's new in HIV drug resistance? Invited Speaker and Session Chair. 8th National Conference of AIDS Society of India- ASICON, 29 October 1 November 2015, Mumbai, India (trip cancelled due to flight cancellations).
- 47. (i) Antiretroviral drug resistance in developing countries; (ii) HIV drug resistance in preexposure prophylaxis settings. Chennai HIV antiretroviral treatment symposium (CART 2016); April 16-17, 2016; Chennai, India.
- 48. HIV Drug Resistance: What's New? 9<sup>th</sup> National Conference of the AIDS Society of India ASICON, Mumbai, India; 7-9 October, 2016.
- 49. Point mutations assays and resistance testing in HIV management. 9<sup>th</sup> National Conference of the AIDS Society of India ASICON, Mumbai, India; 7-9 October, 2016.

- 50. Session Chair. 9<sup>th</sup> National Conference of the AIDS Society of India ASICON, Mumbai, India; 7-9 October, 2016.
- 51. Pretreatment HIV drug resistance is associated with treatment outcomes. Invited presentation in a WHO Webinar entitled 'Considering Programmatic Implications of Rising Levels of HIV Drug Resistance: Finalizing the Global Action Plan'; December 12, 2016.
- 52. (i) Point mutation assays and drug resistance testing in HIV management; (ii) Alternative mechanisms of HIV drug resistance. Chennai HIV antiretroviral treatment symposium (CART 2017); March 25-26, 2017; Chennai, India.
- 53. HIV Drug Resistance in Resource Limited Settings; Key Plenary Lecture. 10<sup>th</sup> National Conference of the AIDS Society of India ASICON, Hyderabad, India; 6-8 October, 2017.
- 54. World Health Organization HIV Drug Resistance ResNet Meeting. Johannesburg, South Africa, November 9-10, 2017.
- 55. Low abundance drug resistance variants: what is a meaningful threshold for reporting? Minisymposium on Bioinformatics strategies for NGS-based HIV drug resistance testing. National Microbiology Laboratory, Public Health Agency of Canada; Winnipeg, Manitoba, Canada; February 21-22, 2018.
- 56. Dolutegravir drug resistance and genetic barrier. Chennai HIV antiretroviral treatment symposium (CART 2018); April 28-29, 2018; Chennai, India.

# National

- 1. HIV drug resistance surveillance and monitoring. September 21, 2007, Centers for Disease Control, Atlanta, Georgia, USA.
- 2. World Health Organization HIV Resistance Network Laboratory Network Meeting; March 3, 2013; Atlanta, Georgia.
- 3. HIV-1 RNA Levels and Drug Resistance in Blood and Non-Blood Compartments from Infected Men and Women enrolled in ACTG A5077. 2014 Annual AIDS Clinical Trials Group Network Meeting; June 24, 2014; Washington DC, USA.
- 4. External Advisory Committee meeting, University of Washington Center for AIDS Research; July 23-24, 2015, Seattle, WA.
- Annual Retreat of the DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents. April 6, 2016, Rockville, MD.
- 6. Consultation on Global Trends of HIV Drug Resistance. May 3-4, 2016; National Institute of Allergy and Infectious Diseases; NIH; Rockville, MD.
- 7. Low Cost Nucleic Acid Testing Solving the Sample Prep Problem Convening. Bill & Melinda Gates Foundation. June 28-29. 2016. Seattle, WA.

# Regional/Local

- 1. Drug resistance in HIV-1 non-subtype B sequences. 9th International Workshop on Virus Evolution and Molecular Epidemiology, Stanford University, Stanford, California, USA. August 14, 2003.
- 2. HIV diversity and drug resistance. February 17, 2006, Center for Biostatistics for AIDS Research, Harvard School of Public Health, Harvard University, Boston, MA.
- 3. South African Treatment and Resistance Network meeting; February 3, 2008; Boston, MA
- 4. World Health Organization HIVResNet HIV Drug Resistance Surveillance Mutations Working Group; February 2, 2008; Boston, MA.
- 5. HIV update: progress and challenges. American Society of Clinical Laboratory Science: Central New England. May 6-8, 2008, Providence, RI, USA.
- 6. HIV Drug Resistance and Global Diversity. School of Public Health Bioinformatics Core, Harvard University; April 13, 2010; Boston, MA.
- 7. World Health Organization HIV Resistance Network Laboratory Working Group Meeting; March 2, 2014; Boston, Massachusetts.
- 8. World Health Organization Annual HIV Drug Resistance (HIVResNet) Meeting; March 3, 2014; Boston, Massachusetts.

- 9. HIV Drug Resistance: A Global Challenge. Memorial Hospital Medical Grand Rounds; 1 April 2015; Pawtucket, RI; USA.
- Lifespan/Brown/Tufts Center for AIDS Research Scientific Advisory Committee Meeting; October 2, 2015, Providence, RI, USA.
- 11. HIV drug resistance: a global challenge. Bruce Selya Excellence in Research Awardee Speaker; The Lifespan 23<sup>rd</sup> Annual Research Celebration, October 29, 2015, Providence, RI.
- 12. The Global HIV Drug Resistance Challenge. Can Biotechnology Help? Biotechnology and Global Health Symposium, February 11, 2016; Brown University, Providence, RI, USA.
- 13. HIV Drug Resistance: A Global Challenge. Guest lecture; 4/25/16; BIOL 0180, 'The Biology of AIDS' Course, Brown University.
- 14. HIV Drug Resistance: Global Challenges and Needs. ENGN 1930L; Biomedical Engineering, Design, Research and Modeling Course, Brown University; September 7, 2016.
- 15. Global challenges in HIV Drug Resistance and what we can do about it. Infectious Diseases Grand Rounds, Boston University, September 29, 2016.
- 16. The Global HIV Drug Resistance Challenge. Can Biotechnology Help? BIOL 1070; Biotechnology and Global Health, Brown University; November 15, 2016.
- HIV Drug Resistance. Stanley Street Treatment and Resources Clinics, Fall River, MA; September 18, 2017.
- 18. The Global HIV Drug Resistance Challenge. Can Biotechnology Help? Guest lecture, BIOL 1070; Biotechnology and Global Health, Brown University; October 24, 2017.
- 19. HIV Drug Resistance: A Global Challenge. Guest lecture; 11/27/17; BIOL 0180, 'The Biology of AIDS' Course, Brown University.
- 20. HIV career, research and challenges. HIV Prevention graduate seminar (PHP2330); Brown University, Providence, RI; 2/14/18.
- 21. Physicians involvement in global health; Primary Care Population Medicine (PCPM) Program for Medical Students, Brown University Alpert Medical School, Providence, RI, 8/2/18.

### **GRANTS**

## **CURRENT GRANTS**

- Real time phylogeny and contact tracing to disrupt HIV transmission. NIH R01 (Al136058);
   2017-2022; role Principal Investigator.
- 2. HIV drug resistance, monitoring and transmission. NIH K24 (Al134359); 2017-2022; role Principal Investigator.
- 3. Optimizing HIV Treatment Monitoring Strategies under Resource Constraints. NIH R01 (Al108441); 2014-2019; role-Principal Investigator.
- 4. Failure and resistance in Kenyan children. NIH R01 (Al120792); 2016-2020; role Principal Investigator
- 5. Resistance in HIV subtypes in Brazil. Brown Brazil initiative; 2015-2017; role-Principal Investigator.
- East Africa International Epidemiological Databases to Evaluate AIDS (IEDEA) Regional Consortium. NIH (UO1AI069911; Wools Principal Investigator); 2016-2021; role – co-Investigator.
- 7. Providence-Boston Center for AIDS Research, Basic Science Core; NIH Program Grant (P30AI042853; Cu-Uvin Principal Investigator); 1998-2017; role Core Co-Director.
- Combining social network, spatial and phylogenetic approaches to identify new HIV infections. NIH R21 (Al131979; Rudolph Principal Investigator); 2017-2019; role co-Investigator.

# **GRANT APPLICATIONS SUBMITTED**

1. Treatment failure and drug resistance in HIV-1 subtype C infected individuals starting dolutegravir-based first line therapy in India (Indo-US grant; CRDF Global).

### **PRIOR GRANTS**

- HIV in Diverse Settings; Focus on Israel. Famework Faculty Curriculum Development Grant; January 2018; role – Principal Investigator.
- 2. HIV drug resistance in Chennai, India. NIH R21 (Al106392); 2013-2016; role- Principal Investigator.
- 3. Extended Phylogenetic Inference of HIV Transmission Networks. Brown University DEANs Award; 2014-2015; role-Principal Investigator.
- 4. A point of Care Platform for HIV Drug Resistance. Brown University Inaugural Translational seed Award; 2013-2014; role-co Investigator.
- Antiretroviral treatment failure and drug resistance in HIV-infected patients on second line regimens in western Kenya. NIH Center for AIDS Research supplement grant (P30AI042853); 2010-2014; role-co-Investigator, principal researcher.
- HIV drug resistance in different HIV-1 subtypes. NIH RO1 (Al066922); 2008-2014; role-Principal Investigator.
- HIV drug resistance in different subtypes. NIH RO1 (Al066922) supplement; 2012-2014; role-Principal Investigator.
- 8. A point of Care Platform for HIV Drug Resistance. CFAR collaborative grant; 2013; role-co Investigator.
- HIV-1 Drug Resistance in Plasma and Genital Tract in Southern India. NIH Center for AIDS Research supplement grant (P30AI042853); 2008-2012; role-co-Investigator, principal researcher.
- 10. HIV-1 genotypic diversity and drug resistance in western Kenya at times of political crisis. NIH IEDEA supplement (U01AI069911); 2008-2012 role-co-Investigator, principal researcher.
- 11. HIV Genotypic diversity and drug resistance in Western Kenya. Brown/Tufts Center For AIDS Research Developmental Grant (P30AI042853); 2006-2008; role-Principal Investigator.
- 12. Improving adherence and cognition in substance-using HIV patients. NIH R34 (DA031057); 2010-2012; role-co-Investigator.
- 13. Kaposi's sarcoma in western Kenya. NIH Fogarty supplement. 2008-2009; role-co-Investigator.
- 14. HIV drug resistance and treatment outcomes in adults in western Kenya after a period of crisis. The Friendship Foundation; 2008-2010; role-Principal Investigator.
- 15. HIV diversity and drug resistance in Western Kenya. The Rhode Island Foundation; 2008-2010; role-Principal Investigator.

#### UNIVERSITY TEACHING ROLES

- 1. Brown University; BIOL 1980: HIV in Diverse Settings; Focus on Israel; 2018 winter session course. Role course developer and leader.
- 2. Mentoring and training

	Undergraduate Students
2008	Jacklyn Katz; Columbia University
2009	Orli Mintz; Brandeis University
2010	Shahzeb Kazi; University of Connecticut
2010 – 2011	Colette DeJong (Brown University); Amaad Rana (Emory University); Ilyse Blazar
	(Tulane University)
2011 – 2012	Matthew Tay (Brown University)
2011 -2014	Marissa Reitsma (Brown University)
2014 -2015	Lauren Ledingham (Brown University)
2014 - 2017	Matthew D'Antuono (Brown University)
2015	Ferdinand Mayer (Brown University)
6-8/2016	Elana Pyfrom (Brown University)
2018 -	Cindy Won (Brown University)

	Graduate Students
2005 - 2008	Vidya Sundararajan, PhD candidate, Madras University, Chennai, India
2005 – 2006	Katharine Schulze; Brown University Medical Student
2006	Edelwisa Segubre; Brown University Philippines Fogarty fellow
2009 – 2010	Lakshmi Rajesh; PhD candidate, Madras University, Chennai, India
2009 – 2010	Brady Tang; Masters candidate, Center for Statistical Sciences, Brown University
2009 – 2011	Ann Mwangi, PhD Candidate, Center for Statistical Sciences, Brown University;
	Member, PhD Dissertation Committee
2010 – 2012	Kenneth Morabito, PhD Candidate, Department of Engineering, Brown University;
	Member, PhD Dissertation Committee
2010	Ziad El-Khatib, PhD candidate, Karolinska Institute, Stockholm, Sweden
2010 – 2012	Marita Mann, Masters in Public Health candidate, Brown University
2012 – 2014	Maya Balamane, Masters in Public Health candidate, Brown University
2013	Millicent Orido, AMPATH Reference Laboratory, Eldoret, Kenya
2013 - 2015	Liangyuan Hu, PhD Candidate; Center for Statistical Sciences, Brown University
2010 2010	Member, PhD Dissertation Committee
2013	Sheela Krishnan, Brown University MD candidate
2014 – 2015	Katherine Brooks, Brown University MD candidate
2014 - 2015	Yizhen Xu, PhD Candidate, Center for Statistical Sciences, Brown University
2014 -	Member of Dissertation Committee
2014 -	August Guang, PhD Candidate, Ecology and Evolutionary Biology, Brown
2014 -	University
2016	Isadora Alonso, Masters candidate, Federal University of Rio de Janeiro, Brazil
2016 - 2017	
2017 -	Anna Makaretz, Masters Candidate, School of Engineering, Brown University
2017 -	Rachel Deraney, PhD Candidate, Brown University School of Engineering
	Post-doctoral Fellows
2007 - 2011	Philip Chan MD, Brown University Medicine resident, Infectious Diseases and
2007 - 2011	T32 Fellow.
2008 – 2010	Elizabeth Dufort MD, Brown University Pediatric Infectious Diseases Fellow
2009 – 2013	Austin Huang PhD, Post-doctoral Fellow; Brown University Division of Infectious
2009 – 2013	Diseases
2010 – 2011	
2010 – 2011	Benjamin Westley MD, Brown University Infectious Diseases Fellow
	Tanya Rogo MD, Brown University Pediatric Infectious Diseases Fellow
2015 – 2016	Rebecca Reece MD, Brown University Infectious Diseases Fellow
2017 -	Su Aung MD, Brown University Infectious Diseases Fellow
2005 - 2007	Faculty
2005 - 2007	Pachamuthu Balakrishnan PhD, Director of Laboratories, YRG CARE, Chennai,
	India
2000 2010	
2008 – 2010	Winston Nyandiko MD, Senior Lecturer; and AMPATH Associate Program
0000 0040	Manager-Research, Moi University, Eldoret, Kenya
2009 – 2013	Shanmugam Saravanan PhD, HIV Drug Resistance Laboratory Director, YRG
0000 0040	CARE, Chennai, India
2009 - 2012	Tao Liu PhD, Assistant Professor, Brown University Center for Statistical
0044 0040	Sciences
2011 - 2013	Joao Tavares MD, T32 Fellow, The Miriam Hospital, Brown University;
2010 -	
	Kwamena Sagoe PhD, Lecturer, University of Ghana Medical School, Accra,
	Ghana
2011 - 2015	Ghana Philip Chan MD, Assistant Professor, Division of Infectious Diseases, Brown
2011 - 2015	Ghana Philip Chan MD, Assistant Professor, Division of Infectious Diseases, Brown University; Primary Mentor, K-23 Award
	Ghana Philip Chan MD, Assistant Professor, Division of Infectious Diseases, Brown University; Primary Mentor, K-23 Award Karen Olshtain-Pops MD, Assistant Professor, Hadassah Medical Center,
2011 - 2015 2012	Ghana Philip Chan MD, Assistant Professor, Division of Infectious Diseases, Brown University; Primary Mentor, K-23 Award Karen Olshtain-Pops MD, Assistant Professor, Hadassah Medical Center, Jerusalem, Israel
2011 - 2015	Ghana Philip Chan MD, Assistant Professor, Division of Infectious Diseases, Brown University; Primary Mentor, K-23 Award Karen Olshtain-Pops MD, Assistant Professor, Hadassah Medical Center,

2013 - 2017	Suzanne Goodrich MD, Assistant Professor, Division of Infectious Diseases, Indiana University
2014 - 2015	Nicole Alexander MD, Assistant Professor of Medicine, Division of Infectious
	Diseases, Brown University
2016 -	Sabina Holland MD, Brown University Pediatric Infectious Diseases Division
2016 -	John Humphrey MD, Indiana University Division of Infectious Diseases
2016 -	Shamim Ali MD, Moi University Department of Medicine, Eldoret, Kenya

## HOSPITAL TEACHING ROLES

1999 Medical students' tutor

Internal Medicine

Sheba Medical Center, Israel

1999 - 2000 Lecturer

Infectious Diseases Course

Sheba Medical Center Nursing School, Israel

2007 - Lifespan/Brown University Infectious Diseases Fellows Lecture Series

1-2 lectures per year on HIV drug resistance

2008 - International Infectious Diseases

Brown University Internal Medicine Residency applicants

Up to 12 lectures per year on international infectious diseases at Lifespan/Brown

2008 - Teaching of Brown University internal medicine residents and medical students

on the Immunology (HIV) inpatient service, The Miriam Hospital, Providence, RI

2008 - Teaching of Brown University internal medicine residents and medical students in

the Immunology (HIV) outpatient clinic, The Miriam Hospital, Providence, RI

2008 – 2010 Member

Scholarship Oversight Committee

Dr. Elizabeth Dufort

Pediatric Infectious Diseases Fellow

Lifespan/Brown University

2011 – 2013 Member

Scholarship Oversight Committee

Dr. Tanya Rogo

Pediatric Infectious Diseases Fellow

Lifespan/Brown University