CURRICULUM VITAÈ

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ACADEMIC APPOINTMENTS

2004-2007	Co-Director of the Molecular & Cellular Biology Sequencing Center, Harvard University
2007-2011	Assistant Professor, Department of Microbiology, Icahn School of Medicine.
2011-2013	Associate Professor, Department of Microbiology, Icahn School of Medicine.
2013-	Irene and Arthur Fishberg Professor of Medicine, Icahn School of Medicine.
2013-	Professor, Department of Microbiology, Icahn School of Medicine.
2014-2015	Visiting Professor, Pasteur Institute, Paris, France.
2015-	Icahn Scholar and Fishberg Professor Medicine, Icahn School of Medicine.
2015-	Director of the Virus Engineering Center for Therapeutics and Research (VECToR).

EDUCATION

2004-2007	Post Doctoral Studies: Harvard University, Department of Molecular Cell Biology Mentor: Dr. Tom Maniatis
1999-2004	Doctor of Philosophy: McGill University, Department of Medicine Mentor: Dr. John Hiscott
1995-1999	Bachelor of Science: McGill University, Department of Biology

HONORS/AWARDS/PATENTS

Honors and Awards

2014	Fulbright Award – Tocqueville Distinguished Chair Award.
2013	American Society of Virology Young Investigator Award.
2012	Vilcek prize for creative promise in the biomedical sciences
2012	American Society of Gene and Cell Therapy Young Investigator Award
2011	Burroughs Wellcome Award for Investigators in the Pathogenesis of Infectious Disease.
2011	Cozzarelli Prize in Biomedical Sciences.
2010	Mount Sinai School of Medicine Faculty Council Award for Academic Excellence.
2010	American Society for Microbiology Young Investigator Award.
2009	Mount Sinai School of Medicine's Dr. Harold and Golden Lamport Research Award.
2009-2014	Presidential Award (PECASE).
2009	International Society of Interferon and Cytokine Research Milstein Award.
2008-2012	Pew Biomedical Scholarship.
2008-2011	Army Research Office Young Investigator Award.
2004-2007	National Institute of Health Research (CIHR-IRSC) Postdoctoral Award
2000-2004	National Science and Engineering Research Council (NSERC) Doctoral Award.

Patents

June 2011 Recombinant microRNA containing RNA Viruses and Uses Thereof, PCT/US2011/039284.
Dec. 2010 Compounds for Modulating the Switch Between Replication and Transcription of Orthomyxovirus Viral Genomes and Methods of Use Thereof, PCT/US2010/062020.
March 2009 Live Attenuated Influenza Virus Vaccine Comprising MicroRNA Response Elements, PCT/US2010/000709

OTHER PROFESSIONAL APPOINTMENTS

2011- New York Academy of Science steering committee member for non coding RNAs
2010- Ad hoc member of the NIH Virology A and B study sections
2007- Ad hoc reviewer for Cell, Cell Host and Microbe, Cell Reports, Nature, Nature Biotechnology, Journal of Virology, and PNAS.
2007- Member of the American Society for Virology and the American Society of Microbiology

SELECTED PUBLICATIONS

1. Sharma S*, tenOever BR.*, Grandvaux N*, Zhou GP, Lin R, Hiscott J: Triggering the interferon antiviral response through an IKK-related pathway. *Science* 2003, 300:1148-1151. PMID: 12702806 *authors contributed equally.

2. tenOever BR., Ng, S, Chua, M. McWhirter, S. Garcia-Sastre, A. Maniatis T. Multiple Functions of the IKK-related Kinase IKKe in Interferon Mediated Antiviral Immunity. *Science*. 2007, 315:1274-1278. PMID: 17332413

3. Perez, JT., Pham, AM., Lorini, MH., Chua, MA., Steel, J., and BR. tenOever. microRNA-mediated species-specific attenuation of influenza A virus. *Nat Biotech*. 2009, 27: 572-576. PMID: 19483680

4. Perez, J. T., A. Varble, R. Sachidanandam, I. Zlatev, M. Manoharan, A. García-Sastre, and B. R. tenOever. Influenza A Virus-Generated Small RNAs Regulate the Switch from Transcription to Replication. *PNAS.* 2010, 107(25):11525-30. PMID: 20534471

5. Shapiro, J.S., A. Varble, and B. R. tenOever. Non-canonical cytoplasmic processing of viral microRNAs. RNA. 2010, 16: 2068-74. PMID: 20841420

6. Varble, A., M. A. Chua, J. T. Perez, B. Manicassamy, A. García-Sastre, and B. R. tenOever. Engineered RNA viral synthesis of microRNAs. *PNAS*. 2010, 107(25):11519-24. PMID: 20534531

7. Schmid, S., Mordstein, M., Kochs, G., García-Sastre, A. and B. R. tenOever. Transcription factor redundancy ensures induction of the antiviral state. *JBC*. 2010, 285(53): 42013-22. PMID: 20943654 (**F1000 recommendation**)

8. Langlois, R.A., Shapiro, J.S., Pham, A.M. and B. R. tenOever. *in vivo* delivery of cytoplasmic RNA virus-derived miRNAs. *Mol. Ther*. 2011, Nov. 15,(20)(2):367-75. PMID: 22086233

9. Ng, S.L., Friedman, B.A., Schmid, S., Gert, J, Myers, R.M., Maniatis, T., and B. R. tenOever. IKKe regulates the balance between the type I and type II interferon responses. *PNAS*. 2011, Dec 27; (108)(52):21170-5. PMID: 22171011

10. Pham, A.M., Langlois, R.A. and B. R. tenOever. Replication in cells of hematopoietic origin is necessary for dengue virus dissemination. *PLoS Path*. 2012, Jan;8(1). PMID: 22241991

11. Shapiro, J.S., Langlois, R.A., Pham, A.M. and B. R. tenOever. Evidence for a cytoplasmic microprocessor of pri-miRNAs. *RNA*. 2012, Jul;18(7): 1338-46. PMID: 22635403

12. Langlois, R.A., Varble, A., Chua, M.A., García-Sastre, A. and B. R. tenOever. Hematopoietic-specific targeting of influenza A virus reveals replication requirements for induction of antiviral immune response. *PNAS*. 2012, Jul;109(30): 1338-46. PMID: 22778433

13. Backes, S., Shapiro, J.S., Sabin, L.R., Pham, A.M. Reyes, I., Moss, B., Cherry*, S. and B.R. tenOever*. Degradation of host microRNAs by a viral poly(A) polymerase reveals terminal 2'-O-methylation as a protective anti-viral mechanism. *Cell Host and Microbe*. 2012, Aug;12(2): 200-210. PMID: 22901540

14. Perez, J.T., Zlatev, I., Aggarwal, S., Subramanian, S., Sachidanandam, R., Kim, B., Manoharan, M. and B.R. tenOever. A Small RNA Enhancer of Viral Polymerase Activity. *Journal of Virology*. 2012, Dec;86(24): 13475-85. PMID: 23035211

15. Chua, M.A., Schmid, S., Perez, J.T., Langlois, R.A. and B.R. tenOever. Influenza A Virus Utilizes Suboptimal Splicing to Coordinate the Timing of Infection. *Cell Reports*. 2013, 3(1) 23-39. PMID: 23333274

16. tenOever, B.R. RNA viruses and the host microRNA machinery. *Nature Reviews Microbiology*. 2013, 11(3): 169-80. PMID: 23411862

17. Langlois, R.A, Albrecht, R., Kimble, B., Sutton, T., Shapiro, J., Finch, C., Angel, M., Chua, M.A. Gonzalez-Reiche, A., Xu, K., Perez, D., García-Sastre, A. and B.R. tenOever. Molecular risk mitigation of gain-of-function studies with influenza viruses. *Nature Biotechnology*. 2013, Aug, 31, 844-847. PMID: 23934176

18. Varble, A., Benitez, A., Schmid, S., Sachs, D., Shim, JV, Rodriguez-Barrueco, R., Panis, M., Crumiller, M., Silva, J., Sachidanandam, R. and B.R. tenOever. RNAi screening *in vivo* identifies critical components to the antiviral response. *Cell Host & Microbe.* 2013, 14, 346-356. PMID: 24034620

19. Cullen, B. Cherry, S. and B.R. tenOever. Is RNA interference a physiological relevant innate antiviral immune response in mammals. *Cell Host & Microbe.* 2013, 14, 374-375. PMID: 24139396

20. Schmid, S. Sachs, D., and B.R. tenOever. MAP Kinase Mediated Licensing of Interferon Regulatory Factor 3/7 Reinforces the Cell Response to Virus. *JBC*. 2014, 3 (289): 299-311. PMID: 24275658

21. Schmid, S. Zony, X., and B.R. tenOever. A versatile RNA vector for delivery of coding and non-coding RNAs. *Journal of Virology.* 2014, 88(4), 2333-6. PMID: 24307584

22. Shapiro, J.S., Schmid, S., Aguado, L., Sabin, L.R., Cherry, S. and B.R. tenOever. Drosha is an interferon-independent antiviral factor. *PNAS. 2014. 111(19): 7108-7113.* PMID: 24778219\

23. Backes, S., Langlois, R., Schmid, S., Varble, A, Shim, J.V., Sachs, D., and B.R. tenOever. The mammalian response to virus infection is independent of small RNA silencing. *Cell Report*s. 2014 (14)1-9 PMID: 24953656.

24. Rajsbaum, R., Versteeg, G.A., Schmid, S., Maestre, A.M. Belicha-Villanueva, A., Martinez-Romero, C., Patel, J.A., Morrison, J., Pisanelli, G., Miorin, L., Laurent-Rolle, M.m Moulton, H.M., Stein, D.A., Fernandez-Sesma, A., tenOever, B.R., and A. Garcia-Sastre. Unanchored K48-linked poly-ubiquitin synthesized by the E3-ubiquitin ligase TRIM6 stimulates the interferon-IKKe kinase mediated antiviral response. *Immunity*. 2014 40(6):880-95 PMID: 24882218.

25. Moy, R.H., Cole, B.S., Yasunaga, A., Gold, B., Shankarling, G., Varble, A., Molleston, J., tenOever, B.R., Lynch, K.W., Cherry, S. Stem loop recognition by DDX17 facilitates miRNA processing and antiviral defense. *Cell*. 2014 158(4):764-77 PMID 25126784.

26. Laurent-Rolle, M., Morrisone, J. Rajsbaum, R., Macleod, JL, Pisanelli, G., Miorin, L, Pham, A., Ayllon, J., tenOever, B.R. and A. Garcia-Sastre. Type I interferon activates the interferon signaling antagonist function of yellow fever virus NS5 protein. *Cell Host & Microbe*. 2014,16(3): 314-327 PMID 25211074.

27. Heaton, N.S., Langlois R., Sachs, D., Lim, J., Palese, P., and B.R. tenOever. Long-term survival of influenza virus infected club cells drives immunopathology. *Journal of Experimental Medicine*. 2014, 211(9):1707-14 PMID 25135297.

28. Varble, A., Albrecht, R.A., Backes, S., Crumiller, M., Bouvier, N.M., Sachs, D. Garcia-Sastre, A., and B.R. tenOever. Influenza A Virus Transmission Bottlenecks Are Defined by Infection Route and Recipient Host. *Cell Host & Microbe*. 2014,16(5): 691-700 PMID 25356074

29. Benitez A.A., Panis, M., Xue, J., Varble, A., Shim, J.V., Frick, A.L., López, C.B., Sachs, D. and B.R. tenOever. In Vivo RNAi Screening Identifies MDA5 as a Significant Contributor to the Cellular Defense afainst Influenza A Virus. *Cell Reports*. 2015,11(11):1714-26.

30. Benitez A.A., Spanko, L.A., Bouhaddou, M., Panis, M., Sachs, D. and B.R. tenOever. Engineered mammalian RNAi can elicit antiviral protection that negates the requirements for the interferon response. *Cell Reports*. 2015, Nov 17;13(7):1456-66. PMID: 26549455

31. Aguado, L.C., Schmid, S., Sachs, D., Shim, J.V., Lim, J.K., and B.R. tenOever. microRNA function is limited to cytokine control in the acute response to virus. *Cell Host & Microbe*. 2015, *18*, 714-722. PMID: 26651947

32. B.R. tenOever. The Evolution of Antiviral Defense Systems. *Cell Host & Microbe*. 2016, *19(2)*, 142-149. PMID: *26867173*

Conference Presentations (Invited Speaker)
2009 “International Society for Interferon and Cytokine Research”, Lisbon, Portugal
2009 “Chemical and Biological Defense Science and Technology Conference”, Dallas TX
2010 “RNA and Host-Pathogen Interactions”, New York Academy of Sciences, New York, NY
2011 “Viruses and Cells”, Gordon Research Conference, Pisa, Italy
2011 “NYC Emerging Technologies Summit”, New York, NY
2011 “RNA Nucleases”, New York Academy of Sciences, New York, NY
2011 “American Society of Nephrology”, Philadelphia, PA
2012 “Cell Biology of Virus Entry, Replication and Pathogenesis”, Keystone Meeting, Whistler, BC, Canada
2012 “American Society of Gene and Cell Therapy”, Philadelphia, PA
2013 “microRNA: Targets & Tools for Therapeutic Development”, Cambridge, MA
2013 “Pathogenic Human Viruses”, Duke Symposium, Durham, NC
2013 “American Society of Virology”, State College, PA
2014 “American Society of Microbiology”, Washington, DC
2014 “Pediatric Infectious Diseases”, St. Jude Children’s Research Hospital. Memphis, TN
2015 “The Fulbright Commission”, École normale supérieure. Paris, France.
2015 “UK Society for General Microbiology”, Birmingham, UK
2015 “Viruses and Cells”, Gordon Research Conference, Girona, Spain
2015 “Non-coding RNAs” The Scientist Webinar Series
2016 “Positive Stranded RNA Viruses” Keystone Meeting, Austin, Texas
2016 “Viruses and the forefront of virus-host interactions”, Basel, Switzerland
2016 “26th Annual Meeting of the Society for Virology”, Münster, Germany
2016 “Options for the Control of Influenza IX Conference”, Chicago, Illinois

Institutional Seminars
2007 Department of Veterinary Medicine, University of Maryland, , Maryland, VA
2008 Grand Round presentation to the Division of Infectious Diseases. Mount Sinai Hospital, New York, NY
2009 Microbiology Department, Baylor University, Houston, TX
2010 Department of Pharmacology, University of Montreal, QC
2010 Department of Microbiology, Cornell University, NY
2011 Academia Week, McGill University. Montreal, QC, Canada
2011 Department of Immunobiology, University of Arizona. Tucson, AZ
2011 NIH Infectious Disease Training Program at UNC, Chapel Hill, NC
2011 Microbiology Department of Drexel University, Philadelphia, PA
2011 Microbiology and Immunology Department of Georgetown University, Washington DC
2011 Microbiology and Immunology Department of Washington University, St. Louis, MO
2011 Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD
2012 Research Institute Center of Cancer Therapeutics, University of Ottawa, Ottawa, ON, Canada

2012 Microbiology and Immunology Department of McMaster University, Hamilton, ON, Canada
2012 Microbiology and Immunology Department of University of Pennsylvania, Philadelphia, PA
2013 Microbiology Department of UMass Medical School. Worcester, MA
2013 Molecular Microbiology Graduate Program Symposium, UT Southwestern, Dallas, TX
2013 Immunology and Microbial Sciences Graduate Cluster Symposium, Northwestern University, Chicago, IL
2013 Department of Immunobiology, Fox Chase Cancer Center, Philadelphia, PA, CA
2013 Department of Microbiology, Stanford University. Stanford, CA
2014 Graduate Student Symposium, Penn State University. Hershey, PA
2014 Department of Microbiology, Penn State University. Hershey, PA
2014 Graduate Student Symposium, University of Washington. Seattle, WA
2014 The Ragon Institute of MGH, MIT, and Harvard. Boston, MA
2014 Department of Microbiology, University of Missouri. Columbia, MO
2014 Aaron Diamond AIDS Research Center. New York, NY
2014 Department of Microbiology, Vanderbilt University. Nashville, TN
2014 Department of Microbiology, University of Chicago. Chicago, IL
2015 Homeland Security RAPIDD program. University of Cambridge, Cambridge, UK
2015 Department of Molecular Biology, Centro Nacional de Biotecnología, Madrid, Spain
2015 Pirbright Institute, Woking, Surrey, UK
2015 Pasteur Institute-Paris, Paris France
2015 Imperial College, London, England, UK
2015 Pasteur Institute-Lyon, Lyon France
2015 Department of Microbiology, University of Rochester. Rochester, NY
2015 The Fred Hutchinson Cancer Research Center, Seattle, WA
2015 Microbiology and Immunology Department of University of Pennsylvania, Philadelphia, PA
2015 Scripps Florida, Jupiter, FL
2016 Harvard T.H. Chan School of Public Health, Harvard University, Boston, MA
2016 Perey Lecture, Immunology Dept., McMaster University, Hamilton, ON