Curriculum Vitae

Ian B. Hogue, PhD

Assistant Professor
Biodesign Institute, Center for Immunotherapy, Vaccines, and Virotherapy
School of Life Sciences, Arizona State University
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Education:

2010-2017 Postdoc, Molecular Biology, Princeton University
2005-2010 PhD, Microbiology and Immunology, University of Michigan
2000-2003 BA, Molecular and Cell Biology, University of California, Berkeley

Research Experience:

2017-present Assistant Professor, Biodesign Institute, Center for Immunotherapy, Vaccines, and Virotherapy, and School of Life Sciences, Arizona State University

2010-2017 Postdoctoral Research, Molecular Biology, Princeton University
Mentor: Dr. Lynn Enquist
Project: Molecular mechanisms of pseudorabies virus egress and spread

2014-2017 Visiting Research Associate, Baylor College of Medicine
Collaborator: Dr. Wah Chiu
Project: Cryo-EM tomography of herpesvirus transport in neurons

2005-2010 Graduate Student, Microbiology and Immunology, University of Michigan
Mentor: Dr. Akira Ono
Dissertation: Multimerization and membrane distribution of HIV-1 Gag during assembly

2005-2008 Graduate Student, Microbiology and Immunology, University of Michigan
Mentor: Dr. Denise Kirschner
Project: Mathematical modeling of HIV/immune system interactions

2004-2005 Research Assistant II, University of Texas Southwestern Medical Center
Mentor: Dr. David Margolis
Project: Identification and quantification of latent HIV-1 cellular reservoirs

2003 Undergraduate Research, University of California, Berkeley
Mentor: Dr. Loy Volkman
Project: Baculovirus mutagenesis

2002-2003 Laboratory Assistant, Chiron Corp., Emeryville, CA
Mentor: Dr. John Polo
Project: Alphavirus vaccine vectors

2001 Laboratory Assistant, Texas Biotechnology Corp., Houston, TX

1999 Laboratory Assistant, Baylor College of Medicine

Grants and Fellowships:

2017-2019 NIH NIAID Career Transition Award K22 AI123159

2013-2015 American Cancer Society Postdoctoral Fellowship PF-13-050-01-MPC

2009-2010 Rackham Predoctoral Fellowship, University of Michigan

2006-2008 NIH Genetics Training Grant T32 GM07544, University of Michigan

Publications:

Google Scholar: https://scholar.google.com/citations?user=xeFtAEMAAAAJ
Pubmed: https://www.ncbi.nlm.nih.gov/pubmed/?term=hogue+ib

Hogue IB, Ambrosini AE, Deshmukh N, Berry MJ, Enquist LW. Alpha Herpesvirus Egress and Spread from Neurons Uses Constitutive Secretory Mechanisms and Does Not Depend on Action Potential Firing. In preparation.

Hogue IB, Jean J, Scherer J, Enquist LW. A Functional Carboxy-Terminal Fluorescent Protein Fusion to Pseudorabies Virus Small Capsid Protein VP26. Submitted.

Koyuncu OO, MacGibeny MA, **Hogue IB**, Enquist LW. Compartmented neuronal cultures reveal two distinct mechanisms for alpha herpesvirus escape from genome silencing. In press.

Hogue IB, Scherer J, Enquist LW. Exocytosis of Alphaherpesvirus Virions, Light Particles, and Glycoproteins Uses Constitutive Secretory Mechanisms. mBio 7(3): e00820-16, 2016.

Johnson BN, Lancaster KZ, **Hogue IB**, Meng F, Kong YL, Enquist LW, McAlpine, MC. 3D Printed Nervous System on a Chip. Lab on a Chip, 16(8):1393-1400, 2015.
Featured in: The Royal Society of Chemistry's *Lab on a Chip* 3D Printing Collection, 2016.

Bosse JB, Tanneti NS, **Hogue IB**, Enquist LW. Open LED Illuminator: A simple and inexpensive LED illuminator for fast multicolor particle tracking in neurons. PLOS One, 10(11):e0143547, 2015.

Hogue IB, Bosse JB, Engel EA, Scherer J, Hu J-R, del Rio T, Enquist LW. Fluorescent Protein Approaches in Alpha Herpesvirus Research. Viruses, 7:5933-5961, 2015.

Bosse JB, **Hogue IB**, Feric M, Thiberge SY, Sodeik B, Brangwynne CP, Enquist LW. Remodeling nuclear architecture allows efficient transport of herpesvirus capsids by diffusion. PNAS, 112(42):E5725-E5733, 2015.

Hogue IB, Bosse JB, Hu J-R, Thiberge SY, Enquist LW. Cellular Mechanisms of Alpha Herpesvirus Egress: Live Cell Fluorescence Microscopy of Pseudorabies Virus Exocytosis. PLOS Pathogens, 10(12):e1004535, 2014.

Nguyen TD, **Hogue IB**, Cung K, Purohit PK, McAlpine MC. Tension induced neurite growth in microfluidic channels. Lab on a Chip, 13(18):3735-3740, 2013.

Sun XR, Badura A, Pacheco DA, Lynch LA, Schneider ER, Taylor MP, **Hogue IB**, Enquist LW, Murthy M, Wang SS-H. Fast GCaMPs for improved tracking of neuronal activity. Nature Communications, 4:2170, 2013.

Koyuncu OO, **Hogue IB**, Enquist LW. Virus Infections in the Nervous System. Cell Host & Microbe, 13(4):379-93, 2013.

Hogue IB, Llewellyn GN, Ono A. Dynamic Association between HIV-1 Gag and Membrane Domains. Molecular Biology International, 2012.

Hogue IB, Grover JR, Soheilian F, Nagashima K, Ono A. Gag induces the coalescence of clustered lipid rafts and tetraspanin-enriched microdomains at HIV-1 assembly sites on the plasma membrane. J Virology, 85(19):9749-66, 2011.

Llewellyn GN, **Hogue IB**, Grover JR, Ono A. Nucleocapsid promotes localization of HIV-1 Gag to uropods that participate in virological synapses between T Cells. PLOS Pathogens, 6(10):e1001167, 2010.

Hogue IB, Hoppe A, Ono A. Quantitative fluorescence resonance energy transfer microscopy analysis of the human immunodeficiency virus type 1 Gag-Gag interaction: relative contributions of the CA and NC domains and membrane binding. J Virology, 83(14):7322-36, 2009.

Bauer AL, **Hogue IB**, Marino S, Kirschner DE. The Effects of HIV-1 Infection on Latent Tuberculosis. Mathematical Modelling of Natural Phenomena, 3(7):229, 2008.

Marino S, **Hogue IB**, Ray CJ, Kirschner DE. A methodology for performing global uncertainty and sensitivity analysis in systems biology. J Theoretical Biology, 254(1):178-96, 2008.

Hogue IB, Bajaria SH, Fallert BA, Qin S, Reinhart TA, Kirschner DE. The dual role of dendritic cells in the immune response to human immunodeficiency virus type 1 infection. J General Virology, 89(9):2228-2239, 2008.
Featured in: The Society for General Microbiology's *Microbiology Today*, November 2008.

Chukkapalli V, **Hogue IB**, Boyko V, Hu WS, Ono A. Interaction between Gag matrix domain and phosphatidylinositol-(4,5)-bisphosphate is essential for efficient Gag-membrane binding. J Virology, 82(5):2405-17, 2008.

Lehrman G, **Hogue IB**, Palmer S, Jennings C, Spina CA, Wiegand A, Landay AL, Coombs RW, Richman DD, Mellors JW, Coffin JM, Bosch RJ, Margolis DM. Depletion of latent HIV-1 infection in vivo: a proof-of-concept study. Lancet, 366(9485):549-55, 2005.

Professional Activities:

2011-present Member, American Society for Virology
Reviewer: J Theoretical Biology, ASM Press' *Microbe* textbook

Scientific Presentations

2017	American Society for Virology, Madison, WI
	School of Life Sciences Seminar, Arizona State University
	Dept. of Cell Biology and Physiology Seminar, Washington University in St. Louis
	Biological Sciences Seminar, Wayne State University
	Division of Biology Seminar, Kansas State University
	Basic Sciences Division Seminar, Institute for Human Virology, University of Maryland Baltimore
	Microbiology and Immunology Dept. Seminar, Medical College of Wisconsin
	Biophysics Dept. Seminar, University of Utah
	Microbiology and Immunology Dept. Seminar, Indiana University School of Medicine
2016	Center for Membrane Biology Seminar, University of Virginia
	Biology Dept. Seminar, Rensselaer Polytechnic Institute
	International Herpesvirus Workshop, Madison, WI
	Gordon Research Conference: Cell Biology of the Neuron, Waterville Valley, NH
	Microbiology and Immunology Dept. Seminar, Loyola University Chicago
	Microbiology Dept. Seminar, New York University
	Cell Biology and Molecular Genetics Dept. Seminar, University of Maryland
2015	International Herpesvirus Workshop, Boise, ID
	American Society for Virology, London, ON, Canada
	Molecular Virology and Microbiology Dept. Seminar, Baylor College of Medicine
	Molecular Biology Dept. Retreat, Princeton University
2014	Keystone Symposium: The Ins and Outs of Viral Infection, Breckenridge, CO
2013	Sapporo Summer Seminar for One Health, Hokkaido University, Japan
	International Herpesvirus Workshop, Grand Rapids, MI
2008-2010	Cold Spring Harbor Laboratory: Retroviruses, Cold Spring Harbor, NY

Teaching Experience:

Classroom Experience

2014-2017	Guest Lectures, "Cancer Viruses" in MOL 523, "Molecular Basis of Cancer", Princeton
2012, 2016	Lecturer in MOL 459/559, "Viruses: Strategy and Tactics", Princeton
2016	Guest Lecture in MOL 215, "Quantitative Principles in Cell and Molecular Biology", Princeton
2014, 2015	Guest Lectures, "What is a virus?", "Large DNA Viruses", & "Retroviruses" in MOL 459/559, "Viruses: Strategy and Tactics", Princeton
2011-2012	Volunteer for Princeton Summer Undergraduate Research Program
2007-2009	Volunteer for University of Michigan Summer Science Academy
2007	Teaching Assistant, MICRBIOL 350, "Microbiology Lab", University of Michigan

Mentoring Experience

2017	Graduate rotation student, Andrew Estevez, Princeton University
2015-2016	Undergraduate senior thesis student, Jolie Jean, Princeton University

2014 Graduate student, Ben Winer, Princeton University
2013 Graduate student, Alex Geller, Princeton University
2012-2013 Undergraduate senior thesis student, Jiun-Ruey Hu, Princeton University
2011-2012 Undergraduate senior thesis student, Derek Porter, Princeton University
2008-2010 Undergraduate honors thesis student, Jingga Inlora, University of Michigan

Public Lectures

2014-2015 Invited Speaker, American Cancer Society Jersey Shore Board of Advisers Meeting
Invited Speaker, American Cancer Society Luncheon
Invited Speaker, Princeton Area Alumni Association