SARAH M. SHORT

Molecular Microbiology and Immunology
Johns Hopkins School of Public Health, E3410
615 N. Wolfe St. Baltimore, MD 21205

Lab phone: 410.955.3223
Email: sshort7@jhu.edu
Website: sarahmshort.com

Education and Training:

2012 – present Postdoctoral Research Fellow, Molecular Microbiology and Immunology.
Johns Hopkins Bloomberg School of Public Health, Baltimore MD
Advisor: George Dimopoulos

2012 Ph.D. in Genetics, **Cornell University**, Ithaca NY
Advisor: Brian P. Lazzaro

2005 B.S. in Biology, **Xavier University**, Cincinnati OH

Related experience:

2005 – 2006 Research Assistant, Department of Pathology, Cleveland Clinic Association

Manuscripts:

Published:

- J. L. Ramirez*, **S. M. Short***, A. Bahia, R. Saraiva, Y. Dong, S. Kang, A Tripathi, G. Mlambo and G. Dimopoulos. 2014. *Chromobacterium Csp_P* reduces malaria and dengue infection in vector mosquitoes and has entomopathogenic and *in vitro* anti-pathogen activities. *PLoS Pathogens* 10(10): e1004398. ***Co-first author**

- **S.M. Short** and B.P. Lazzaro. 2013. Reproductive status alters transcriptomic response to infection in female *Drosophila melanogaster. Genes*|*Genomes*|*Genetics* 3:827-840.

- M. L. del Campo, R. Halitschke, **S.M. Short**, B.P. Lazzaro and A. Kessler. 2013. Dietary plant phenolic mediates tolerance to bacterial infection in *Manduca sexta* caterpillars. *Entomologia Experimentalis et Applicata*, 146:321-331.

- **S.M. Short**, M.F. Wolfner and B.P. Lazzaro. 2012. Female *Drosophila melanogaster* suffer reduced defense against infection due to seminal fluid components. *J. Insect Physiol*., 58:1192-1201.

- **S.M. Short** and B.P. Lazzaro. 2010. Female and male genetic contributions to post-mating immune defence in female *Drosophila melanogaster. Proceedings of the Royal Society B*, 277:3649-3657.

- **S.M. Short**, B.J. Yoder, S.M. Tarr, N.L. Prescott, S. Laniauskas, K. Coleman, E. Downs-Kelly, J. Pettay, T.K. Choueiri, J.P. Crowe, R.R. Tubbs, G.T. Budd, D.G. Hicks. 2007. The

expression of the cytoskeletal focal adhesion protein paxillin in breast cancer correlates with HER2 over-expression and may help predict response to cytotoxic chemotherapy. *The Breast Journal*, 13(2):130-139.

- D.G. Hicks, B.J. Yoder, **S.M. Short**, S.M. Tarr, N. Prescott, J. P. Crowe, A. E. Dawson, G. T. Budd, S. Sizemore, M. Cicek, T. K. Choueiri, R. R. Tubbs, D. Gaile, N. Nowak, M. A. Accavitti-Loper, A. R. Frost, D. R. Welch, and G. Casey. 2006. Loss of Breast Cancer Metastasis Suppressor 1 Protein Expression Predicts Reduced Disease-Free Survival in Subsets of Breast Cancer Patients. *Clin Cancer Res*, 12: 6702-6708.

- D.G. Hicks, **S.M. Short**, N.L. Prescott, S.M. Tarr, K.A. Coleman, B.J. Yoder, J.P. Crowe, T.K. Choueiri, A.E. Dawson, J. Pettay, G.T. Budd, R.R. Tubbs, G. Casey, R.J. Weil. 2006. Breast cancers with brain metastases are more likely to be estrogen receptor negative, express the basal cytokeratin CK5/6 and overexpress HER2 or EGFR. *Am J Surg Pathol*, 30:1097-1104.

In Revision:

- **S.M. Short,** E.F. Mongodin, O.A.C. Talyuli and G. Dimopoulos. Amino acid metabolic signaling influences *Aedes aegypti* midgut microbiome variability. *PLoS Neglected Tropical Diseases.*

In Prep:

- **S.M. Short,** S Van Tol*, B. Smith, Y. Dong, and G. Dimopoulos. *Chromobacterium Csp_P* has broad-spectrum insecticidal activity against multiple disease vector mosquito species.
- **S.M. Short,** H.J. MacLeod*, and G. Dimopoulos. *Chromobacterium Csp_P* larvicidal activity is mediated by bacterial production of hydrogen cyanide.

  * Student mentee

Book Chapters:

B. Blumberg, **S.M. Short**, G. Dimopoulos. Employing the mosquito microbiome for disease control. *Genetic Control of Malaria and Dengue*, ed. Z.N. Adelman, 2015.

Grants/Fellowships:

2014 – 2017	Ruth L. Kirschstein National Research Service Award
2008 **–** 2011	Ford Foundation Pre-doctoral Diversity Fellowship
2009, 2011, 2012	Cornell University Graduate School Conference Grant
2006 **–** 2007	Cornell University Presidential Life Sciences Fellowship
2006	Indiana Metabolomics and Cytomics Initiative Award (declined)
2001 **–** 2005	St. Francis Xavier Scholarship, Xavier University

Honors and Awards:

2016	Johns Hopkins School of Public Health Student Assembly Postdoctoral Recognition Award

2015	Young Investigator Award, American Society of Tropical Medicine and Hygiene
2009	Royal Entomological Society National Science Meeting, First place poster presentation
2007	Rita and Joe Calvo Teaching Award

Teaching Experience:

Co-instructor	2015	Vector Biology and Vector-Borne Diseases, Johns Hopkins Bloomberg School of Public Health
	2014	Medical Entomology, University of Puerto Rico, Medical Sciences Campus
Contributor	2016	Vector Biology and Vector-Borne Diseases, Johns Hopkins Bloomberg School of Public Health (Topic: Arthropod-borne viruses)
	2014	The Summer Institute in Tropical Medicine and Public Health, Johns Hopkins (Topics: Introduction to insects vectors, basic theory of vector biology, vector ecology and control)
	2013	Molecular Entomology, Johns Hopkins (Topic: Microbiota of insect vectors)
	2011	Guest lecturer for Sex, Genes and Evolution, Cornell University (Topic: Sexual selection and immunity)
Teaching Assistant	2008	Genetics, Cornell University
	2007	Human Genetics and Society, Cornell University

Invited presentations:

2016	International Congress of Entomology, Orlando, FL
	University of Georgia, Department of Entomology, Athens, GA
	Emory University, Population Biology, Ecology and Evolution Graduate Program, Atlanta, GA
2015	National Evolutionary Synthesis Center Catalysis meeting: Ecological Immunology Applied to Vector Biology and Vector-Borne Diseases, Durham, NC
	Johns Hopkins Bloomberg School of Public Health, Malaria Interest Group, Baltimore, MD
2013	NIAID-sponsored workshop: Effect of Vector innate Immunity and Human-Derived Immune Molecules on the Transmission of Vector-Borne Pathogens, Washington DC
2012	Yale School of Public Health, Department of Epidemiology of Microbial Diseases, New Haven, CT

Research presentations:

2015	*Oral presentation*: American Society of Tropical Medicine and Hygiene, Philadelphia PA
	Oral presentation: Keystone Symposia Conference, The Arthropod Vector: The

	Controller of Transmission, Taos, NM *Poster presentation*: The Future of Malaria Research: A Young Scientists' Meeting, Rockville, MD
2014	*Poster presentation:* Keystone Symposia Conference, Mechanisms and Consequences of Invertebrate-Microbe Interactions, Tahoe City, CA *Poster presentation*: Baltimore-Washington Johns Hopkins Malaria Research Institute Symposium: Microbe-based malaria control, Rockville, MD
2013	*Poster presentation:* American Society of Tropical Medicine and Hygiene, Washington DC
2012	*Poster presentation: Drosophila* Research Conference, Chicago, IL.
2011	*Oral presentation: Drosophila* Research Conference, San Diego, CA
2010	*Poster presentation:* Ecology and Evolution of Infectious Disease meeting, Ithaca, NY *Oral presentation:* Ecology and Evolutionary Biology Graduate Student Symposium, Ithaca, NY *Poster presentation: Drosophila* Research Conference, Washington DC *Poster presentation:* Royal Entomological Society National Science Meeting, Sheffield, United Kingdom
2009	*Oral presentation:* Conference of Ford Fellows, Irvine, CA
2008	*Poster presentation: Drosophila* Research Conference, San Diego, CA

Professional Service:

2015-present	Organizer, Johns Hopkins School of Public Health Postdoctoral Committee.
2015	Organizer, Postdoctoral Summer Forum, Johns Hopkins Department of Molecular Microbiology and Immunology.
2015-present	Organizer, Molecular Microbiology and Immunology Postdoctoral Fellow's Group.
2013-2016	Johns Hopkins Postdoctoral Association Policy and Advocacy Committee.
2012-present	*Ad hoc* peer reviewer: Genetics (2016), Journal of Medical Entomology (2016), PLoS One (6x 2012-2016), Evolutionary Ecology Research (2010), FEBS Letters (2010).

Educational Outreach and Broader Impacts:

2016	Instructor, Baltimore Underground Science Space, Baltimore MD Baltimore Underground Science Space gives the general public the opportunity to learn about science and conduct scientific research.
	Participant, Project Bridge, Baltimore MD. Presented science demonstrations to the general public at the local farmer's market.
2014	Organizer, *Speak out for Science!*, Washington D.C. Met with congressional representatives to appeal for increased government funding for research.
2009-2012	Conference co-chair, Expanding Your Horizons, Cornell University. Expanding Your Horizons is a one-day conference aimed at encouraging 7th-9th grade girls to pursue interests in science, math and engineering-related areas of study.

2007-2009: Diversity Chair

2011	Organizer and Instructor, College Enhancement Program, MacCormick Secure Center, Brooktondale NY. I helped develop an educational program for juvenile offenders focused on science and logical reasoning in everyday life.
2007-2011	Participant and exhibit organizer, Insectapalooza, Cornell University. Insectapalooza is an insect-themed event where members of the community can learn about diverse areas of entomology.

Pedagogical Training:

2014	Service Learning: Implementing Service-Learning in the Stem Disciplines conducted by the Center for the Integration of Research, Teaching and Learning.
2013-2014	Johns Hopkins Preparing Future Faculty Teaching Academy Fellow
2014	*Institute for Excellence in Education Summer Teaching Camp*, Johns Hopkins School of Medicine.
2013	*Eyes on Teaching Workshop* conducted by the Johns Hopkins Center for Educational Resources.

Professional Training:

2015	Prokaryotic Comparative Genomics Workshop, Institute for Genome Sciences University of Maryland School of Medicine.
2014	Research Leadership Course, Johns Hopkins Medical Institutions Professional Development Office.

Professional society memberships:

2015-present	National Postdoctoral Association
2013-present	The American Society for Tropical Medicine and Hygiene.
2008-2013, 2015	Genetics Society of America