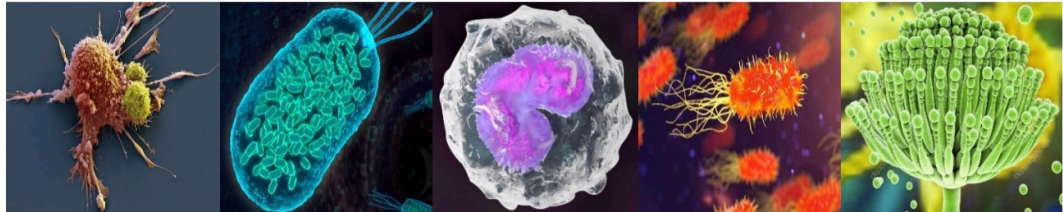


Molecular Genetics & Microbiology Program

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Graduate Student Achievements

2019 PUBLICATIONS

Bhattacharya, S., Holowka, T., **Orner, E.P.**, and Fries, B.C. (2019). Gene duplication associated with increased fluconazole tolerance in *Candida auris* cells of advanced generational age. *Science Reports* 9(1): 5052.

Colombo, A.C., Rella, A., **Normile, T.**, Joffe, L.S., Tavares, P.M., Araujo, Glauber R. de S., Frases, S., **Orner, E.P.**, Farmoud, A.M., Fries, B.C., Sheridan B., Nimrichter, L., Roodrigues, M.L., and Del Poeta, M. (2019). *Cryptococcus neoformans* glucuronoxylomannan and sterylglucoside are required for host protection in an animal vaccination model. *mBio* 10(2): e02909-18.

Gaudino, S.J., and Kumar, P. (2019). Cross-talk between antigen presenting cells and T cells impacts intestinal homeostasis, bacterial infections, and tumorigenesis. *Frontiers in Immunology*, doi 10.3389/fimmu.2019.00360.

Kopping, E.J., Doyle, C.R., Sampath, V., and Thanassi, D.G. (2019). Contributions of TolC orthologs to *Francisella tularensis* Schu S4 multidrug resistance, modulation of host cell responses, and virulence. *Infection and Immunity* 87(4). doi: 10.1128/IAI.00823-18.

McLaughlin, P.A., Bettke, J.A., **Tam, J.W.**, Leeds, J., Bliska, J.B., Butler, B.P., and van der Velden, A.W.M. (2019). Inflammatory monocytes provide a niche for Salmonella expansion in the lumen of the inflamed intestine. *PLoS Pathogens* 15(7): e1007847.

Medici, N., Rashid, M., and Bliska, J.B. (2019). Characterization of pyrin dephosphorylation and inflammasome activation in macrophages as triggered by the Yersinia effectors YopE and YopT. *Infection and Immunity* 87(3).

2019 PUBLICATIONS (CONTINUED)

Medici, N.P. & Bliska, J.B. (2019). Methods for detection of pyrin inflammasome assembly in macrophages infected with *Yersinia* spp. *Biology of Yersinia Infection*, Methods in Molecular Biology Protocols edition, Vol. 2010. *Springer Nature*.

Motley, M., Banerjee, K., and Fries, B.C. (2019). Monoclonal antibody-based therapies for bacterial infections. *Current Opinions in Infectious Diseases* 32(3): 210-216.

Orner, E.P., Bhattacharya, S., Kalenja, K., Hayden, D., Del Poeta, M., and Fries, B.C. (2019). Cell wall-associated virulence factors contribute to increased resilience of old *Cryptococcus neoformans* cells. *Frontiers in Microbiology* 10: 2513.

Orner, E.P., Zhang, P., Jo, M.C., Bhattacharya, S., Qin, L., and Fries, B.C. (2019). High-throughput yeast aging analysis for *Cryptococcus* (YAAC) microfluidic device streamlines aging studies in *Cryptococcus neoformans*. *Communications Biology* 2: 256.

Patel, H.V., Li, M., and Seeliger, J.C. (2019). Opportunities and challenges in activity-based protein profiling of mycobacteria. *Current Topics in Microbiology and Immunology* 420: 49-72.

Psonis, J.J., and Thanassi, D.G. (2019). Therapeutic approaches targeting the assembly and function of the chaperone-usher pili. *EcoSal Plus* 8(2). doi: 10.1128/ecosalplus.ESP-0033-2018.

Psonis, J.J., Chahales, P.N., Henderson, N.S., Tong, M., Rigel, N.W., Seeliger, M.A., Hoffman, P.S., and Thanassi, D.G. (2019). The small molecule nitazoxanide selectively disrupts Bam-mediated folding of the outer membrane usher protein. *Journal of Biological Chemistry* 294: 14241-14256.

Salama, M.F., Liu, M, Clarke, C.J., **Espailat, M.P.**, Haley, J.D., Jin, T., Wang, D., Obeid, L.M., and Hannun, Y.A. (2019). PKC α is required for Akt-mTORC1 activation in non-small cell lung carcinoma (NSCLC) with EGFR mutation. *Oncogene* 38(48): 7311-7328.

Werneberg, G.T., Nguyen, A., Henderson, N.S., Rackley, R.R., Shoskes, D.A., Le Sueur, A.L., Corcoran, A.T., Katz, A.E., Kim, J., Rohan, A.J., and Thanassi, D.G. (2019). The natural history and composition of urinary catheter biofilms: early uropathogen colonization with intraluminal and distal predominance. *Journal of Urology* doi 10.1097/JU.0000000000000492.

2019 PUBLICATIONS (CONTINUED)

Xu, H., **Perez, R.D.**, Frey, T.R., **Burton, E.M.**, Mannemuddhu, S., Haley, J.D., McIntosh, M.T., and Bhaduri-McIntosh, S. (2019). Novel replisome-associated proteins at cellular replication forks in EBV-transformed B lymphocytes. *PLoS Pathogens* 15(12): e1008228. <https://doi.org/10.1371/journal.ppat.1008228>

2019 PRESENTATIONS

Bettke, J.A., **Tam, J.W.**, Bliska, J.B., Butler, B.P., and van der Velden, A.W.M. (2019). Essential Role for Inflammatory Monocytes in Early and Late Control of Persistent Salmonella Infection. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Burton, E., Koganti, S., Li, X., and Bhaduri-McIntosh, S. (2018). Decline in TRIM28/KAP1 Sparks EBV Lytic Activation. 2018 International Conference on EBV and KSHV. July 28 - August 1, Madison, WI.

Chikhalya, A., Dittmann, M., **Zheng, Y.**, Rice, C.M., and Hearing, P. (2019). Effects of Interferon-induced Protein with Tetratricopeptide 3 (IFIT3) on Adenovirus Replication. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Chikhalya, A., **Zheng, Y.**, Dittmann, M., Rice, C., and Hearing, P. (2018). Recombinant Adenovirus Vectors for Gene Therapy. Showcasing Women's Research in STEM, April 6. Graduate Women in Science and Engineering, Stony Brook, NY.

Chikhalya, A., **Zheng, Y.**, Dittmann, M., Rice, C., and Hearing, P. (2018). Effect of IFIT3 on Adenovirus Replication. 37th Annual Meeting of the American Society for Virology, July 14-18, College Park, MD.

Chu, T.H., Khairallah, C., Cho, R., Zhang, Y., Lin, X., Bliska, J.B., and Sheridan, B.S. (2019). *Yersinia pseudotuberculosis* Outer Proteins Inhibit Adaptive gamma delta T Cell Functions. Institute of Chemical Biology & Drug Discovery 13th Annual Symposium, Oct. 10, Stony Brook University, Stony Brook, NY.

Chu, T.H., Khairallah, C., Zhang, Y., **Lin, X.**, Bliska, J.B., and Sheridan, B.S. (2019). *Yersinia pseudotuberculosis* Outer Proteins Inhibit Adaptive $\gamma\delta$ T Cell Functions. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY

2019 PRESENTATIONS (CONTINUED)

Dasilva, D., **Normile, T.**, You, J.K., and Del Poeta, M. (2019). High Throughput Screen against Fungal Ceramide Synthase I. Institute of Chemical Biology & Drug Discovery 13th Annual Symposium, Oct 10, Stony Brook University, Stony Brook, NY.

Frank, D.M., Naseem, S., Russo, G.L., **Parashar, K.**, Konopka, J.B., and Carpino, N. (2019). Phagocytes from Sts-/- Mice have an Enhanced Anti-fungal Response to *C. albicans*. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Gaudino, S.J., Huang, H., Jean-Pierre, M., Beaupre, M., **Lin, X.**, and Kumar, P. (2019). Intestinal Interleukin (IL)-22RA1 Signaling Regulates the Reciprocal Control of IL-22 and Onset of High Fat Diet-induced Metabolic Disorders. Immunology 2019, American Association of Immunologists, May 9-13, San Diego, CA.

Gaudino, S., Huang, H., Jena-Pierre, M., Beaupre, M., **Lin, X.**, and Kumar, P. (2019). Intestinal Interleukin (IL)-22Ra1 Signaling Regulates the Reciprocal Control of IL-22 and Onset of High Fat Diet-induced Metabolic Disorders. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Joffe, L.S., **Kronbauer de Oliveira, N.**, **Normile, T.**, Doering, T.L., and Del Poeta, M. (2019). Understanding the Role of *Cryptococcus* Capsule and Sterylglucoside in the Host Protection. Institute of Chemical Biology & Drug Discovery 13th Annual Symposium, Oct. 10, Stony Brook University, Stony Brook, NY.

Lin, X., **Gaudino, S.**, Kolls, J., and Kumar, P. (2019). Nrf2 Selectively Regulates IL-22 and IL-17A Production in Th17 Cells. Immunology 2019, American Association of Immunologists, May 9-13, San Diego, CA.

McEvoy, K., Normile, T., Byran, A., and Del Poeta, M. (2019). Sphingosine Kinase 1 Regulated Clearance of *Cryptococcus neoformans* Δ *sgII* Mutant. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

McEvoy, K., **Normile, T.**, **Bryan, A.**, and Del Poeta, M. (2019). Sphingosine Kinase I Regulates Clearance of *Cryptococcus neoformans* Δ *sgII* mutant. Institute of Chemical Biology & Drug Discovery 13th Annual Symposium, Oct. 10, Stony Brook University, Stony Brook, NY.

2019 PRESENTATIONS (CONTINUED)

McLaughlin, P.A., Bettke, J.A., **Tam, J.W.**, Leeds, J., Bliska, J.B., Butler, B.P., and van der Velden, A.W.M. (2019). Inflammatory Monocytes Establish a Niche for *Salmonella* Expansion in the Lumen of the Gut. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Medici, N.P., and Bliska, J.B. (2019). Studies on Bacterial RhoA Modifying Toxins and their Regulation of the PIRIN Inflammasome. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Montoya, V., Luke, J.D., Torres, A., McLaughlin, P.A., **Kullas, A.L.**, Terala, H., Qiu, Z., Sheridan, B.S., and van der Velden, A.W.M. (2019). Role of Asparagine Metabolism in T Cell Activation and Function. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Normile, T.G., Colombo, A.C., Rella, A., **Bryan, A.**, and Del Poeta, M. (2019). Unraveling the Immunological basis of Protection Elicited by *Cryptococcus neoformans* Δ *sgII*. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

Normile, T.G., Rella, A., and Del Poeta, M. (2019). *Cryptococcus neoformans* Δ *sgII* is an Efficacious Vaccine Candidate in an Immunocompromised Mouse Model of Infection. Institute of Chemical Biology & Drug Discovery 13th Annual Symposium, Oct. 10, Stony Brook University, Stony Brook, NY.

Schutt, W.R., Mladinich, M.C., and Mackow, E.R. (2019). Zika Virus Post-transcriptionally Inhibits IFN β / λ Secretion in Order to Persistently Infect Primary Human Brain Microvascular Endothelial Cells. 2019 Symposium on Harnessing Immunity to Combat Infection and Disease, April 29, Stony Brook University, Stony Brook, NY.

2019 AWARDS

Gaudino, S.J. (2019). Travel award to present at Immunology 2019, American Association of Immunologists, May 9-13, San Diego, CA.

Ketchum, S. (2019). Distinguished Service Award, Department of Microbiology and Immunology, Stony Brook University.

2019 AWARDS (CONTINUED)

Motley, M.P. (2019). National Institutes of Health F30 Pre-doctoral Fellowship, “Studying the Role of the Anti-capsular Antibodies in Mediating Pathogenesis of Carbapenem-resistant *Klebsiella pneumoniae*”.

Perez, R.D. (2019). W. Burghardt Turner Dissertation Fellowship, Stony Brook University, 2019 - 2021.

Psonis, J. (2019). Irving Abrahams Award for Outstanding Scientific Achievement. Department of Microbiology and Immunology, Stony Brook University.

Smith, K.R. (2019). Teresa Haire Award. Department of Microbiology and Immunology, Stony Brook University.

2019 Graduates

Dr. John Psonis, Ph.D. defended his dissertation on June 13, 2019; John, an MSTP student, began his clinical rotations in July.

Dr. Eric Burton, Ph.D. defended his dissertation on August 7, 2019. Eric is currently a postdoctoral fellow at Harvard Medical School in the laboratory of Dr. Benjamin Gewurz.

Dr. Arielle Bryan, Ph.D. defended her dissertation on July 26, 2019. Arielle joined Ingenious Targeting Laboratory in Ronkonkoma, NY following graduation.

Dr. Natasha Medici, Ph.D. defended her dissertation on November 25, 2019. Natasha is continuing her research in Dr. James Bliska’s laboratory at Dartmouth University as a postdoctoral fellow.

Dr. Erika Orner, Ph.D. defended her dissertation on December 2, 2019. Erika has accepted a position as a PhD research scientist in the Clinical Microbiology Laboratory at the Montefiore Medical Center.