

Molecular Genetics & Microbiology Graduate Program Newsletter

Fall 2016 Vol. 9, No. 3



2016 Publications

Bhagwat, A.S., Roe, J.S., Mok, B.Y., Hohmann, A.F., Shi, J., and Vakoc, C.R. 2016. BET bromodomain inhibition releases the mediator complex from select *cis*-regulatory elements. *Cell Reports* 15(3): 519-530.

Bridges, R.G., Sohn, S.Y., Wright, J., Leppard, K.N., and Hearing, P. 2016. The adenovirus E4-ORF3 protein stimulates SUMOylation of general transcription factor TFII-I to direct proteasomal degradation. *MBio* 7(1): e02184-15.

Bryan, A.M., and Del Poeta, M. 2016. Secretory aspartyl proteinases induce neutrophil chemotaxis *in vivo*. *Virulence* 30: 1-3.

Chahales, P., Hoffman, P.S., and Thanassi, D.G. 2016. Nitazoxanide inhibits pilus biogenesis by interfering with folding of the usher protein in the outer membrane. *Antimicrobial Agents and Chemotherapy* 60(4): 2028-2038.

Chung, L.K., and Bliska, J.B. 2016. *Yersinia* vs. host immunity: how a pathogen evades or triggers a protective response. *Current Opinion in Microbiology* 29: 56-62.

Chung, L.K., and Bliska, J.B. 2016. Gut check: IFN γ delays mucosal recovery during antibiotic therapy. *Cell Host Microbe* 20(2): 128 - 129.

Chung, L.K., Park, Y.H., Zheng, Y., Brodsky, I.E., Hearing, P., Kastner, D.L., Chae, J.J., and Bliska, J.B. 2016. The *Yersinia* virulence factor YopM hijacks host kinases to inhibit type III effector-triggered activation of the pyrin inflammasome. *Cell Host Microbe* doi: 10.1016/j.chom.2016.07.018.

Cieniewicz, B., **Santana, A.L.**, Minkah, N., and Krug, L.T. 2016. Interplay of murine gammaherpesvirus 68 with NF-kappaB signaling of the host. *Frontiers in Microbiology* 7: 1202-.

Cieniewicz, B., Santana, A.L., **Minkah, N.**, and Krug, L.T. 2016. Interplay of murine gammaherpesvirus 68 with NF-kappaB signaling of the host. *Frontiers in Microbiology* 7: 1202-.

Fan, G., **Zhang, S.**, Gao, Y., Greer, P.A., and Tonks, N.K. 2016. HGF-independent regulation of MET and GAB1 by nonreceptor tyrosine kinase FER potentiates metastasis in ovarian cancer. *Genes and Development* 30(13): 1542-1557.

Publications (continued)

Ivanova, E., and Carpino, N. 2016. Negative regulation of TCR signaling by ubiquitination of Zap-70 Lys-217. *Molecular Immunology* 73: 19-28.

Jain, N., Bouklas, T., Gupta, A., Varshney, A.K., **Orner, E.P.**, and Fries, B.C. 2015. ALL2, a homologue of ALL1, has a distinct role in regulating pH homeostasis in the pathogen *Cryptococcus neoformans*. *Infection and Immunity* 84(2): 439-451.

Mukherjee, K., **Gardin, J.**, Fitcher, B., and Leatherwood, J. 2016. Relative contributions of the structural and catalytic roles of Rrp6 in exosomal degradation of individual mRNAs. *RNA* 22(9): 1311-1319.

Nomakuchi, T.T., Rigo, F., Aznarez, I., and Krainer, A.R. 2016. Antisense-oligonucleotide-directed inhibition of nonsense-mediated mRNA decay. *Nature Biotechnology* 34(2): 164-166.

Pham, T., Henderson, N.S., **Werneburg, G.T.**, Thanassi, D.G., and Delcour, A.H. 2016. Electrostatic networks control plug stabilization in the PapC usher. *Molecular Membrane Biology* 16: 1-10.

Pham, T., **Werneburg, G.T.**, Henderson, N.S., Thanassi, D.G., and Delcour, A.H. 2016. Effect of chaperone-adhesin complex on plug release by the PapC usher. *FEBS Letters* 590(14): 2172-2190.

Sarowar, S., Hu, J., **Werneburg, G.T.**, Thanassi, D.G., and Li, H. 2016. The *Escherichia coli* P and type 1 pilus assembly chaperones PapD and FimC are monomeric in solution. *Journal of Bacteriology* 198(17): 2360-2390.

Schoberle, T.J., **Chung, L.K.**, McPhee, J.B., Bogin, B., and Bliska, J.B. 2016. Uncovering an important role for YopJ in the inhibition of caspase-1 in activated macrophages and promoting *Yersinia pseudotuberculosis* virulence. *Infection and Immunity* 84(4): 1062-1072.

Torres, A., Luke, J.D., **Kullas, A.L.**, Kapilashrami, K., botbol, Y., Koller, A., Tonge, P.J., Chen, E.I., Macian, F., and van der Velden, A.W. 2016. Asparagine deprivation mediated by *Salmonella* asparaginase causes suppression of activation-induced T cell metabolic reprogramming. *Journal of Leukocyte Biology* 99(2): 387-398.

Zheng, Y., Stamminger, T., and Hearing, P. 2016. E2F/Rb family proteins mediate interferon-induced repression of adenovirus immediate early transcription to promote persistent viral infection. *PLoS Pathogens* 12(1): e1005415.

✦ 2016 Presentations

Bridges, R.G., Sohn, S.-Y., Wright, J., Leppard, K.N., and Hearing, P. The Adenovirus E4-ORF3 Protein Stimulates SUMOylation of the General Transcription Factor TFII-I to Direct Proteasomal Degradation. DNA Tumor Virus Meeting 2016. July 18-23, Montreal, Canada.

Burton, E., Koganti, S., Li, X., and Bhaduri-McIntosh, S. Kruppel-associated Box (KRAB)-associated protein (KAP)-1 is Repressed and Post-translationally Modified Early During Epstein-Barr virus Lytic Cycle. 17th International Symposium on Epstein-Barr Virus and Associated Diseases. August 8-12, 2016, Zurich, Switzerland.

Chung, L. Infection by Injection: How Pathogenic *Yersinia* Activate and Subvert Immune Responses. Provost's Graduate Student Lecture Series. March 24, 2016, Stony Brook, NY.

Espaillet, M.P. The Lipids in Your Gut: Defining the Role of Sphingolipids in Inflammatory Bowel Disease. Research Café Series, Center for Inclusive Education. March 21, 2016. Stony Brook, NY.

Fan, G., Bonham, C., **Zhang, S.**, Haque, A., and Tonks, N.K. Interplay between PARP1 and PTP1B Modulates Signaling in Insulin-Resistant HepG2 Cells. The PARP Family and ADP-Ribosylation. April 13-16, 2016. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Kopping, E.J., and Thanassi, D.B. TolC-Dependent Modulation of Host Cell Death by *F. novicida*. Gordon Research Conference on Microbial Toxins and Pathogenicity. July 10-15, 2016. Waterville Valley, NH.

Werneberg, G. Dissection of Usher-Chaperone-Subunit Interactions during Pilus Biogenesis in *Escherichia coli*. Provost's Graduate Student Lecture Series. March 24, 2016, Stony Brook, NY.

Zhang, S., Hao, Y., Hammell, M., Wilkinson, J.E., and Tonks, N.K. A Functional Study in Animal Models Identifies PTPN23 as a Tumor Suppressor in Breast Tumorigenesis through Modulation of FYN Activity. 81st Cold Spring Harbor Laboratory Symposium on Quantitative Biology. June 1-5, 2016. Cold Spring Harbor, NY.

✦ 2016 Awards

Bridges, R. 2016 SBU Sigma Xi Travel Award, \$150.

Bridges, R. 2016 MGM Annual Retreat Poster Award, \$100.

Bryan, A. 2016 Teresa Haire Award, \$250.

Burton, E. Third Place Oral Presentation Award. 17th International Symposium on Epstein-Barr Virus and Associated Diseases. August 8-12, 2016, Zurich, Switzerland.

Chung, L. 2016 Abrahams Award for Outstanding Achievement by a Graduate Student, \$1000.

Kopping, E. 2016 Distinguished Travel Award, \$700. Stony Brook University Graduate Student Organization.

✦ 2016 Awards (continued)

Kopping, E. 2016 Distinguished Service Award, \$350.

Zhang, S. (2016) MGM Annual Retreat Poster Award, \$100.

✦ 2016 Graduations

Dr. Anand Bhagwat, PhD (Mentor: Christopher Vakoc). Anand is in the clinical phase of the Medical Scientist Training Program at Stony Brook University.

Dr. Lawton Chung, PhD (Mentor: James Bliska). Lawton has accepted a postdoctoral research position in the laboratory of Dr. Manuella Raffatellu in the Department of Microbiology and Molecular Genetics at the University of California at Irvine School of Medicine.

Dr. Elitza Ivanova, PhD (Mentor: Nicholas Carpino). Ellie has accepted a postdoctoral research position in Sergei Korolov's group in the Department of Pathology at NYU.

Dr. Tomoki Nomakuchi, PhD (Mentor: Adrian Krainer). Tomoki is in the clinical phase of the Medical Scientist Training Program at Stony Brook University.

Dr. Hirel Patel, PhD (Mentor: Jessica Seeliger). Hiren, a member of the Medical Scientist Training Program, is in the clinical phase of his medical school training.

Dr. Glenn Werneberg, PhD (Mentor: David Thanassi). Glenn is in the clinical phase of the Medical Scientist Training Program at Stony Brook University.

Dr. Yueting Zheng, PhD (Mentor: Patrick Hearing). Ting recently began her postdoctoral training in Cliona Rooney's group at the Center for Cell and Gene Therapy at Baylor College of Medicine.

✦ Welcome to the Incoming Class of 2016

Todd Benziger, B.A. in Biology, Hartwick College

Steven Ketchum, B.A. in Biochemistry, Drew University

Nicole Loeven, B.A. in Biochemistry and Molecular Biology, Wells College

Valeria Montoya, B.S. in Biochemistry, Stockton University

William Schutt, B.S. in Biology, SUNY Geneseo

Kyle Smith, B.S. in Biology and Psychology, University at Buffalo; M.A. in Biology, Queens College

Michael Motley, B.S. in Biological Sciences, Cornell University (MSTP student; Michael has joined Bettina Fries' laboratory)

Pedro Perez, B.S. in biology, Florida International University (MSTP student; Pedro has joined Brian Sheridan's laboratory)

✦ 2016 - 2017 Rotation Dates

Fall August 29 - November 18
Winter November 21 - February 10
Spring February 13 - May 5

✦ 2017 MGM Graduate Student-Hosted Seminar Speakers

MGM graduate students have invited two leading scientists to speak in the MGM seminar series in 2017. Dr. Harmit Malik, Principal Investigator at the Fred Hutchinson Cancer Research Center, will speak on March 13, 2017 and Dr. Martin Blaser, the Muriel and George Singer Professor of Medicine and Director of the Human Microbiome Project at NYU, will speak on April 17, 2017. Please contact hosts Nick Van Skike (Nick.VanSkike@stonybrook.edu) or Arielle Bryan (Arielle.Scardino@stonybrook.edu) if you would like to speak with either Dr. Malik or Dr. Blaser during their visits.

✦ New MGM Graduate Program Coordinator

Please help welcome Jennifer ("Jen") Jokinen, the new Graduate Program Coordinator for MGM and the Genetics Program. Jen comes to us from the SBU Graduate School where she was the Senior Staff Assistant for Finance. We are delighted that she has joined MGM - please stop by her office (LSB 130) and say hello!



✦ New MGM Journal Clubs

A virology journal club, organized by Dr. Laurie Krug, will meet on the third Wednesday of every month in the Life Sciences Bldg second-floor conference room (3-4pm). The goal of this journal club is to have robust discussions of recent publications that relate to viral pathogens. The first meeting of the journal club was on September 21st and subsequent meetings are scheduled for October 19, November 16 and December 21. Researchers from any field who are interested in learning more about viral pathogens are welcome to participate. Please contact Laurie Krug (Laurie.Krug@stonybrook.edu) to be placed on the mailing list and for more information.

✦ New MGM Journal Clubs (continued)

The Sheridan Lab hosts a monthly journal club on the fourth Friday of every month focused on current topics in immunology (<http://www.stonybrook.edu/commcms/cid/research/seminars/Immuno%20Club.html>). All members of the Stony Brook University community interested in immunology may participate by presenting recent publications from top-tier immunology journals for discussion. The focus of the papers may be on any aspect of immune responses to pathogens or commensals, cancer, or in autoimmunity and inflammatory diseases. Please contact Dr. Brian Sheridan for inclusion on an email list for notifications and more details.