

# Molecular Genetics & Microbiology Graduate Program Newsletter

Winter, 2012 Vol. 5, No. 4



## ☒ Publications

Ardito, C.M., Grüner, B.M., Takeuchi, K.K., Lubeseder-Martellato, C., Teichmann, N., Mazur, P.K., **DelGiorno, K.E.**, Carpenter, E.S., Halbrook, C.J., Hall, J.C., Pal, D., Briel, T., Herner, A., Trajkovic-Arsic, M., Sipos, B., Liou, G.Y., Storz, P., Murray, N.R., Threadgill, D.W., Sibia, M., Washington, M.K., Wilson, C.L., Schmid, R.M., Raines, E.W., Crawford, H.C., and Siveke, J.T. 2012. EGF receptor is required for KRAS-induced pancreatic tumorigenesis. *Cancer Cell* 22: 304-317.

Carrion, J., Scisci, E., **Miles, B.**, Sabino, G.J., Zeituni, A.E., Gu, Y., Bear, A., Genco, C.A., Brown, D.L., and Cutler, C.W. 2012. Microbial carriage state of peripheral blood dendritic cells (DCs) in chronic periodontitis influences DC differentiation, atherogenic potential. *Journal of Immunology* 189: 3178-3187.

Carrion, J., Scisci, E., Miles, B., Sabino, G.J., **Zeituni, A.E.**, Gu, Y., Bear, A., Genco, C.A., Brown, D.L., and Cutler, C.W. 2012. Microbial carriage state of peripheral blood dendritic cells (DCs) in chronic periodontitis influences DC differentiation, atherogenic potential. *Journal of Immunology* 189: 3178-3187.

Chen, H.M., **Rosebrock, A.P.**, Khan, S.R., Fitcher, B., and Leatherwood, J.K. 2012. Repression of meiotic genes by antisense transcription and by Fkh2 transcription factor in *Schizosaccharomyces pombe*. *PLoS One* 7(1): e29917.

Cheng, J.Z., **Santana, A.**, Khan, S., Salinas, E., Forrest, J.C., Zheng, Y., Jaggi, S., Leatherwood, J., and Krug, L.T. 2012. Tiled Microarray Identification of Novel Viral Transcript Structures and Distinct Transcriptional Profiles During Two Modes of Productive Murine Gammaherpesvirus 68 Infection. *Journal of Virology* 86: 4340-4357.

Cheng, J.Z., Santana, A., Khan, S., Salinas, E., Forrest, J.C., **Zheng, Y.**, Jaggi, S., Leatherwood, J., and Krug, L.T. 2012. Tiled Microarray Identification of Novel Viral Transcript Structures and Distinct Transcriptional Profiles During Two Modes of Productive Murine Gammaherpesvirus 68 Infection. *Journal of Virology* 86: 4340-4357.

**Crowley, J.T.**, Toledo, A.M., LaRocca, T.J., Coleman, J.L., London, E., and Benach, J.L. Lipid exchange between *Borrelia burgdorferi* and host cells. *PLoS Pathogens* (in press).

**Hatkoff, M.**, Runco, L.M., Pujol, C., Jayatilakaa, I., Furie, M.B., Bliska, J., and Thanassi, D.G. 2012. Roles of the chaperone/usher pathways of *Yersinia pestis* in the murine model of plague and adhesion to host cells. *Infection and Immunity* 80(10): 3490-3500.

Hatkoff, M., **Runco, L.M.**, Pujol, C., Jayatilakaa, I., Furie, M.B., Bliska, J., and Thanassi, D.G. 2012. Roles of the chaperone/usher pathways of *Yersinia pestis* in the murine model of plague and adhesion to host cells. *Infection and Immunity* 80(10): 3490-3500.

Klein, K.A., Fukuto, H.S., Pelletier, M., Romanov, G., **Grabenstein, J.P.**, Palmer, L.E., Ernst, R., and Bliska, J.B. 2012. A transposon site hybridization screen identifies galU and wecBC as important for survival of *Yersinia pestis* in murine macrophages. *Journal of Bacteriology* 194(3): 653-662.

**Kullas, A.L.**, McClelland, M., Yang, H.-J., Tam, J.W., Torres, A., Porwollik, S., Mena, P., McPhee, J.B., Bogomolnaya, L., Andrews-Polymenis, H., and van der Velden, A.W.M. L-Asparaginase II Produced by *Salmonella* Typhimurium Inhibits T Cell Responses and Mediates Virulence. *Cell Host and Microbe* (in press).

Kullas, A.L., McClelland, M., Yang, H.-J., **Tam, J.W.**, Torres, A., Porwollik, S., Mena, P., McPhee, J.B., Bogomolnaya, L., Andrews-Polymenis, H., and van der Velden, A.W.M. L-Asparaginase II Produced by *Salmonella* Typhimurium Inhibits T Cell Responses and Mediates Virulence. *Cell Host and Microbe* (in press).

Rasmussen, J.W., **Tam, J.W.**, Okan, N.A., Mena, P., Furie, M.B., Thanassi, D.G., Benach, J.L., and van der Velden, A.W. (2012) Phenotypic, morphological, and functional heterogeneity of splenic immature myeloid cells in the host response to tularemia. *Infection and Immunity* 80(7): 2371-2381.

Toledo, A., Coleman, J.L., Kuhlow, C.J., **Crowley, J.T.**, and Benach, J.L. 2012. The enolase of *Borrelia burgdorferi* is a plasminogen receptor released in outer membrane vesicles. *Infection and Immunity* 80(1): 359-368.

Vink, E.I., Yondola, M.A., **Wu, K.**, and Hearing, P. (2012) Adenovirus E4-ORF3-dependent rOelocalization of TIF1 $\alpha$  and TIF1 $\gamma$  relies on access to the coiled-coil motif. *Virology* 422(2): 317-325.

**Wang, C.**, Jiang, P., Sand, C., Paul, A.V., and Wimmer, E. (2012) Alanine scanning of poliovirus 2CATPase reveals new genetic evidence that capsid proteins/2CATPase interactions are essential for morphogenesis. *Journal of Virology* 86(18): 9964-9975.

**Wu, K.**, Orozco, D., and Hearing, P. (2012) The adenovirus L4-22K protein is multifunctional and an integral component of crucial aspects of infection. *Journal of Virology* 86 (19): 10474-10483. Chosen by the Editors as a Spotlight article of significant interest.

Zheng, Y., **Lilo, S.**, Mena, P., and Bliska, J.B. (2012) YopJ-induced caspase-1 activation in *Yersinia*-infected macrophages: independent of apoptosis, linked to necrosis, dispensable for innate host defense. *PLoS One* 7(4): e36019.

**Zheng, Y.**, Lilo, S., Mena, P., and Bliska, J.B. (2012) YopJ-induced caspase-1 activation in *Yersinia*-infected macrophages: independent of apoptosis, linked to necrosis, dispensable for innate host defense. *PLoS One* 7(4): e36019.

## Meeting Presentations

**DelGiorno, K.**, and Crawford, H. (2012) Tumor-associated pancreatic metaplasia assumes a biliary duct gland phenotype. American Pancreatic Association, Miami, FL, October 31 - November 3.

**Kullas, A.**, McClelland, M., Yang, H.J., Tam, J.W., Torres, A., Porwollik, S., Mena, P., McPhee, J.B., Bogomolnaya, L., Andrews-Polymenis, H., and van der Velden, A.W.M. (2012) *Salmonella* utilize L-asparaginase II to inhibit the response of mammalian T cells. Gordon Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH July 7 - 13.

Kullas, A., McClelland, M., Yang, H.J., **Tam, J.W.**, Torres, A., Porwollik, S., Mena, P., McPhee, J.B., Bogomolnaya, L., Andrews-Polymeris, H., and van der Velden, A.W.M. (2012) Salmonella utilize L-asparaginase II to inhibit the response of mammalian T cells. Gordon Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH July 7 - 13.

**Minkah, N.**, Stockton, R., Law, J., and Krug, L.T. (2012) Distinct Roles for ORF75A and ORF75B Tegument Proteins in Murine Gammaherpesvirus Pathogenesis. International Congress on Oncogenic Viruses and Associated Diseases. Philadelphia, PA August 1 - 4.

**Wu, K.**, Orozco, D., and Hearing, P. (2012) L4-22K is Required for Adenovirus Genome Packaging. 2012 International DNA Tumor Virus Meeting, Montreal Canada July 16 - 21.

**Yang, C.**, Ward, C.B., Skiena, S., Fitcher, B., and Wimmer, E. (2012) Development and Characterization of a Novel Codon Pair Deoptimized Influenza Virus Vaccine Candidate. 31<sup>st</sup> Meeting of the American Society for Virology, Madison, WI July 21 - 25.

## Awards

Congratulations to Peter Chahales for winning the 2012 Molecular Genetics & Microbiology Distinguished Service Award. Peter's contributions to the Program include service as GSO Senator since 2011, service on the GSO Budget and Rules & Constitution Committees, organization of two graduate student-invited seminar speakers, assistance during graduate student recruitment and orientation, spear-heading a biomedical graduate student career development symposium to be held in the spring of 2013, and organization of the annual departmental holiday party. Peter received a plaque and check in the amount of \$350.

The 2012 Abrahams Award for Outstanding Achievement by a Graduate Student was given to Kai Wu. Kai's research achievements include a first-author paper in the Journal of Virology that was chosen by the editors as an article of significant interest (Wu, K., Orozco, D., and Hearing, P. 2012. The adenovirus L4-22K protein is multifunctional and an integral component of crucial aspects of infection. Journal of Virology 86: 10474-10483), co-authorship of a paper published in the journal Virology (Vink, E., Yondola, M., Wu, K., and Hearing, P. 2012. Adenovirus E4-ORF3-dependent relocalization of TIF1 $\alpha$  and TIF1 $\gamma$  relies on access to the Coiled-Coil motif. Virology 422(2):317-25), and a second first-author paper submitted for publication. Kai received a plaque and check in the amount of \$500. Congratulations Kai!

Christopher Doyle's poster was selected for a Best Poster Award at the 2012 Molecular Genetics & Microbiology Retreat held on October 5<sup>th</sup> at the Port Jefferson Village Center. Chris received a check in the amount of \$75 - congratulations!

## Recent Graduates

Congratulations to Kathleen DelGiorno who defended her dissertation, "Causes and Effects of Epithelial Morphogenesis in Pancreatitis and Pancreatic Cancer" on November 8, 2012. Kathy will continue working in Howard Crawford's lab as a postdoctoral fellow until summer 2013 when she will continue her postdoctoral training (lab choice in progress).

Kai Wu defended his dissertation, "The Role of L4-22K and L4-33K during Adenovirus Infection", on November 29, 2012. Kai will be joining Thomas Shenk's research group at Princeton University as a postdoctoral fellow. Congratulations!

Congratulations to Amy Kullas for a successful dissertation defense on December 11, 2012. The title of her dissertation is "Inhibition of Mammalian T Cells by *Salmonella enterica* serovar Typhimurium". Amy has accepted a postdoctoral fellowship with Anthony Maurelli at the Uniformed Services University of the Health Sciences.

## Save the Dates

On Monday February 4, 2013 Peter Chahales and Jason Tam will host the first of two spring 2013 graduate student-invited speakers, Dr. Vincent Fischetti of the Rockefeller University. They will also host the second student-invited speaker, Dr. Grant McFadden from the University of Florida on March 4, 2013.

Organizers Peter Chahales, Krithika Venkataraman, and Nadine Dalrymple ask you to save the date for a career development symposium to be held on Tuesday March 19, 2013 at the Wang Center. This symposium, funded in part by a grant from the American Society of Biochemistry and Molecular Biology, will feature a keynote address by Dr. P. Roy Bagelos, former Chairman and CEO of Merck & Co., panel discussions on careers in academia, patent law/technology transfer, finance, and industry/government. There will also be a poster session and networking event. Please see the attached flyer for more information.