

Molecular Genetics & Microbiology Graduate Program Newsletter

Winter, 2010 Vol. 3, No. 4



Publications

Bublitz, D.C., Noah, C.E., Benach, J.L., and Furie, M.B. (2010) *Francisella tularensis* suppresses the proinflammatory response of endothelial cells via the endothelial protein C receptor. *Journal of Immunology* (185): 1124-1131.

Bombardelli, L., Carpenter, E.S., Wu, A.P., Alston, N., **Delgiorno, K.E.**, and Crawford, H.C. (2010) Pancreas-specific ablation of beta1 integrin induces tissue degeneration by disrupting acinar cell polarity. *Gastroenterology* (138): 2531-2540.

Czura, C.J., Schultz, A., Kaipel, M., Khadem, A., Huston, J.M., Pavlov, V.A., Redl, H., and Tracey, K.J. (2010) Vagus nerve stimulation regulates hemostasis in swine. *Shock* (33): 608-613.

Feres, K.J., and Hayman, M.J. (2010) RON-expressing MCF-10A breast epithelial cells exhibit alterations of hyaluronan expression, promoting RON-mediated early adhesion events. *Biochemical and Biophysical Research Communications* (391): 1604-1609.

Gunasekera, A., Alvarez, F.J., Douglas, L.M., Wang, H.X., **Rosebrock, A.P.**, and Konopka, J.B. (2010) Identification of *GIG1*, a GlcNAc-induced gene in *C. albicans* needed for normal sensitivity to the chitin synthase inhibitor nikkomycin z. *Eucaryotic Cell* (9): 1476-1483.

LaRocca, T.J., **Crowley, J.T.**, Cusack, B.J., Pathak, P., Benach, J., London, E., Garcia-Monco, J.C., and Benach, J.L. (2010) Cholesterol lipids of *Borrelia burgdorferi* form lipid rafts and are required for the bactericidal activity of a complement-independent antibody. *Cell Host and Microbe* (8): 331-342.

Li, Q., Ng, T.W., Dodson, K.W., Shu Kin So, S., Bayle, K.M., Pinkner, J.S., Scarlata, S., Hultgren, S.J., and Thanassi, D.G. (2010) The differential ability of the usher for chaperone-subunit complexes is required for assembly of complete pili. *Molecular Microbiology* (76): 159-172.

Liu, Y., **Wang, C.**, Mueller, S., Paul, A.V., Wimmer, E., and Jiang, P. (2010) Direct interaction between two viral proteins, the nonstructural protein 2CATPase and the capsid protein VP3, is required for enterovirus morphogenesis. *PLoS Pathogens* (6): e1001066.

Mulligan, E.A., Hatchwell, E., McCorkle, S.R., and Dunn, J.J. (2010) Differential binding of *Escherichia coli* McrA protein to DNA sequences that contain the dinucleotide m5CpG. *Nucleic Acids Research* (38): 1997-2005.

Navin, N., and Hicks, J. (2010) Tracing the tumor lineage. *Molecular Oncology* (4): 267-283.

Navin, N., Krasnitz, A., Rodgers, L., Cook, K., Meth, J., Kendall, J., Riggs, M., Eberling, Y., Troge, J., Grubor, V., Levy, D., Lundin, P., Månér, S., Zetterberg, Z., Hicks, J., and Wigler, M. (2010) Inferring tumor progression from genomic heterogeneity. *Genome Research* (20): 68-80.

Noah, C.E., Malik, M., **Bublitz, D.C.**, Camenares, D., Sellati, T.J., Benach, J.L., and Furie, M.B. (2010) GroEL and lipopolysaccharide from *Francisella tularensis* live vaccine strain synergistically activate human macrophages. *Infection and Immunity* (78): 1797-1806.

Platz, G.J., **Bublitz, D.C.**, Mena, P., Benach, J.L., Furie, M.B., and Thanassi, D.G. (2010) A tolC mutant of *Francisella tularensis* is hypercytotoxic and elicits increased proinflammatory responses from host cells. *Infection and Immunity* (78): 1022-1031.

Quigley, B.R., **Hatkoff, M.**, Thanassi, D.G., Ouattara, M., Eichenbaum, Z. and Scott, J.R. (2010) A foreign protein incorporated on the tip of T3 pili in *Lactococcus lactis* elicits systemic and mucosal immunity. *Infection and Immunity* (78): 1294-1303.

Ucisik-Akkaya, E., and Dorak, M.T. (2010) Environment, Genetic Immunology and Childhood Cancer. In Deodutta Roy and Dorak M. Tevfik (Eds.), *Environmental Factors, Genes, and the Development of Human Cancers*. New York: Springer.

Yount, J.S., Tsou, L.K., Dossa, P.D., **Kullas, A.L.**, van der Velden, A.W., and Hang, H.C. (2010) Visible fluorescence detection of type III protein secretion from bacterial pathogens. *Journal of the American Chemical Society* (132): 8244-8245.

Zeituni, A.E., Carrion, J., and Cutler, C.W. (2010) *Porphyromonas gingivalis*-dendritic cell interactions: consequences for coronary heart disease. *Journal of Oral Microbiology* (2): 5782-5789.

Zeituni, A.E., McCaig, W., Scisci, E., Thanassi, D.G., and Cutler, C.W. (2010) Native 67 kDa minor fimbriae of *Porphyromonas gingivalis*: a novel glycoprotein with DC-SIGN-targeting motifs. *Journal of Bacteriology* (192): 4103-4110.

Conference Presentations

Navin, N., Kendall, J., Cook, K., Troge, J., Stepansky, A., Esposito, D., Hicks, J., and Wigler, M. 2010. Tumor Progression Revealed by Sequencing 100 Single Cells in a Heterogeneous Breast Carcinoma. James Watson Cancer Symposium, Suzhuo, China.

Shin, H.Y., Iyer, J., and Reich, N. 2009. STAT5a Nuclear Trafficking. Tri-Society Annual Conference (Society for Leukocyte Biology, International Cytokine Society, and International Society for Interferon and Cytokine Research).

Wang, C., Jiang, P., Sand, C., Paul, A., and Wimmer, E. 2010. Functional Analysis of Poliovirus Protein 2C^{ATPase} Using Alanine Scanning Mutagenesis. American Society for Virology 29th Annual Meeting, Bozeman, MT.

Zeituni, A.E., McCaig, W., Scisci, E., Carrion, J.A., Thanassi, D.G., and Cutler, C.W. 2010. Native 67 kDa Minor Fimbriae of *Porphyromonas gingivalis* is a Novel Glycoprotein with DS-SIGN-Targeting Motifs. National Institute of Dental and Craniofacial Research Trainee Day, Bethesda, MD.

Zeituni, A.E., McCaig, W., Scisci, E., Carrion, J.A., Thanassi, D.G., and Cutler, C.W. 2010. DC-SIGN Targeting Carbohydrate Moieties Identified on 67 kDa Mfa-1 Fimbriae of Mucosal Pathogen *Porphyromonas gingivalis*. Annual Meeting of the American Association of Immunologists 2010, Baltimore, MD.

Zheng, Y., Lilo, S., and Bliska, J.B. 2010. The Effector YopJ^{K1M} Activates Caspase-1 and Induces Caspase-1 Independent Necrotic Death in *Yersinia*-infected Macrophages. Gordon Research Conference on Cell Death, Newport, RI.

Honors



Distinguished Professor Eckard Wimmer of the Department of Molecular Genetics and Microbiology and member of the training faculty of the Graduate Program in Molecular Genetics and Microbiology has been awarded the M. W. Beijerinck Virology Prize by the Netherlands Academy of Arts and Sciences. This prestigious international award is given every three years to recognize outstanding achievement by a virologist; previous recipients include Nobel Prize winner Harald zur Hausen, Robin Weiss, David Baulcombe, Charles M. Rice, and Ab Osterhaus (Netherlands). The award is in recognition of Professor Wimmer's contributions to the RNA virology field and his lifelong work on poliovirus. Congratulations!

Congratulations to Professor Bruce Stillman, President of Cold Spring Harbor Laboratory, Director of the CSHL Cancer Center, and MGM training faculty member, who has been awarded the 2010 Louisa Gross Horwitz Prize for outstanding basic research in biochemistry and biology. This prestigious award, given by Columbia University, is in recognition of Dr. Stillman's pioneering work on the mechanism of eukaryotic DNA replication and the processes that regulate the initiation of DNA replication. The Horwitz Prize is shared this year with Dr. Thomas J. Kelly, Director of the Sloan-Kettering Institute at Memorial Sloan-Kettering Cancer Center who has also made seminal contributions in the field of DNA replication.



Awards

Alexis Santana: \$1,200 travel award from the Alliance for Inclusive Graduate Education and the Professoriate to attend the 13th International Workshop on Kaposi's Sarcoma Associated-Herpesvirus and Related Agents.

Chunling Wang: travel awards from the American Society for Virology (\$500) and Sigma Xi (\$100) to attend the 29th annual meeting of the American Society for Virology at Montana State University in Bozeman, MT.

2010 Graduates

Nicholas Navin (Postdoctoral Fellow, Michael Wigler/CSHL)

Amir Zeituni (Postdoctoral Fellow, Carole Long/NIH)

Rotations for 2010-2011

Fall	August 30 - November 26
Winter	November 29 - February 11
Spring	February 14 - May 13

Peter Chahales: David Thanassi, Wali Karzai, James Bliska

Dane Buenten: Jamie Konopka, Ellen Li, Jessica Seeliger

Shuqi Yan: Nick Carpino, Bruce Stillman, Jessica Seeliger

Jing Yang: Wali Karzai, James Bliska, David Thanassi

Siwei Zhang: Eckard Wimmer, Nicholas Tonks, Erich Mackow