

# Molecular Genetics & Microbiology Graduate Program Newsletter

Summer, 2010 Vol. 3, No. 2



## 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* (published online June 11, 2010; doi:10.4049/jimmunol.0902429).

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*, in press.

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.

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.

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* (in press).

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. Tefvik (Eds.), *Environmental Factors, Genes, and the Development of Human Cancers*. New York: Springer.

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*, in press.

## 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).

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.

## First-Year Students Join Labs

Patrick McLaughlin: Ando van der Velden

Brodie Miles: TBA

Nana Minkah: Laurie Krug

Esma Ucisik-Akkaya: Aaron Neiman

Yueting Zheng: Patrick Hearing

## Please help us welcome the following new students to the Program

Dane Buenten; B.S., SUNY Fredonia

Peter Chahales; B.S., Clark University

Shuqi Yan; B.S., Wuhan University

Jing Yang; B.S., Fudan University

Siwei Zhang; B.S., M.S. Fudan University

## Promotions and Awards

Dr. David Thanassi has been promoted to Professor of Molecular Genetics and Microbiology. Congratulations!

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

## Dissertation Defenses

Nicholas Navin will defend his dissertation, "Inferring Tumor Progression from Genomic Heterogeneity" on July 9, 2010. The seminar is scheduled for 10am and will be held in the Hawkins Conference Room, Wendt Building, at Cold Spring Harbor Laboratory.

Amir Zeituni will defend his dissertation on August 24, 2010 at 3pm in Life Sciences room 038 (title TBA).

## Save the Dates

The 32<sup>nd</sup> Annual Retreat of the Department of Molecular Genetics and Microbiology will be held on Friday, September 24<sup>th</sup>. In addition to oral presentations, there will be a poster session and the presentation of graduate student awards. Graduate students should all plan to present a poster.

Students will be hosting Dr. David Raulet from UC Berkeley on Monday, October 11<sup>th</sup>. Please make a note of this special seminar (title TBA). If you would like to speak with Dr. Raulet during his visit, please contact hosts DeAnna Bublitz (deannabublitz@gmail.com) or Alexis Santana (Alexis.Santana.77@gmail.com).

## Rotations for 2010-2011

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

## New Course Approved

The Program has received approval from the State Education Department for a new course, HBM 693 Research Proposal Preparation in Molecular Genetics and Microbiology. This required course will be offered in the spring semester and taken by students who are preparing for the qualifying exam. Jorge Benach and David Thanassi will be the course co-directors for the spring 2011 class.

Course Description:

A course, based upon the literature in molecular genetics and microbiology, to instruct students in scientific writing and the preparation of research proposals. The course will be organized in three parts. In the first section of the course, students will become familiar with the components of the research proposal and will read and evaluate proposals written by the training faculty. Lectures given by the course co-directors will cover the basics of scientific writing, research proposal

preparation and the problems and concerns commonly voiced by reviewers of research proposals. In the second section, students will develop two short proposals in the area of molecular genetics and microbiology that are unrelated to their graduate research. One of these short proposals will be selected for development into a full proposal. In the third section, students will develop and write the full proposal. The students' skills in proposal preparation will be enhanced by critiquing the short and full proposals presented by other students in the second and third sections of the course.