

Molecular Genetics & Microbiology Graduate Program Newsletter

Spring, 2009 Vol. 2, No. 1



Publications

Karen, K.A., Hoey, P.J., Young, C.S.H., and Hearing, P. Temporal regulation of the MRN complex during adenovirus infection. *Journal of Virology*, in press.

Diamond, A.E., Park, J.S., Tachikawa, H., and Neiman, A.M. (2009) The anaphase promoting complex targeting Ama1 links meiotic exit to cytokinesis during sporulation in *Saccharomyces cerevisiae*. *Molecular Biology of the Cell* (20): 134-145.

Viladevall, L., St. Amour, C.V., Rosebrock, A., Schneider, S., Zhang, C., Allen, J.J., Shokat, K.M., Schwer, B., Leatherwood, J.K., and Fisher, R.P. TFIIH and P-TEFb coordinate transcription with capping enzyme recruitment at specific genes in fission yeast. *Molecular Cell* (33): 738-751.

First-Year Student Rotations

Jameson Crowley (C. Carter, D. Thanassi, A. van der Velden)

Kathleen Delgiorno (H. Crawford, P. Hearing, J. Bliska)

Christopher Doyle (E. Boon, A. van der Velden, D. Thanassi)

Elitza Ivanova (E. Wimmer, C. Carter, P. Hearing)

Alexis Santana (N. Carpino, D. Thanassi, C. Carter)

Jason Tam (N. Carpino, N. Reich, A. van der Velden)

Upcoming Dissertation Defenses

Kimberly Feres (M. Hayman lab) - 10 AM on June 1st in LSB room 038

Recent Graduates

Alexandra Lucs defended her dissertation entitled "A Structure-Function Study of ErbB2" on March 23, 2009 and will graduate in May. Alexandra has accepted a postdoctoral position at the Feinstein Institute for Medical Research in Dr. Bettie Steinberg's lab. Congratulations!

Upcoming Workshops ~ All MGM students are encouraged to participate!

Tuesday, April 21 LSB second floor conference room

"On the Market: The Ups and Downs of an Academic Job Search"

Presented by: Laurie Krug

Tuesday, April 28 LSB second floor conference room

"Finding a Postdoc"

Presented by: Jamie Konopka

✦ New Training Faculty



Laurie Krug, PhD. Virus-Host Interactions
During Chronic Gammaherpesvirus Infection

Herpesviruses establish a life-long infection in their hosts. This chronic infection at the host level is comprised of both lytic (productive) and latent (quiescent) phases. Lytic replication leads to infectious particle production and is essential for dissemination and transmission. Latency is characterized by the maintenance of the viral genome with a restricted gene expression program in long-lived host cells. The latent program of gammaherpesviruses Epstein-Barr Virus (EBV) and Kaposi's sarcoma associated-herpesvirus (KSHV) in cellular reservoirs is associated with lymphomas and neoplasms. My research interests lie in understanding the molecular determinants of virus-host interactions during chronic gammaherpesvirus infections.

Murine gammaherpesvirus 68 (MHV68) is a natural pathogen of mice. MHV68 has genetic colinearity and biological parallels with its human counterparts. The ease of generating recombinant MHV68 viruses coupled with the availability of genetically altered mice provides a tractable model system to identify and characterize virus and host determinants of chronic infection. In addition, we can further define the molecular mechanisms of these determinants in lytic and latent cell culture systems.

The current focus of my lab is to understand the role of Nuclear Factor-kappa B (NF- κ B) signaling during MHV68 infection. NF- κ B transcription factors are activated by EBV and KSHV oncoproteins. NF- κ B activation is critical for the efficient establishment and maintenance of a latent MHV68 infection in B lymphocytes. We are mapping the pathways that drive NF- κ B activation during infection and evaluating the consequence of that activation for the cell and the virus. Another project is focused on identifying novel viral regulators of the NF- κ B signaling pathway during lytic and latent infection. In addition, we aim to further define the role of NF- κ B activation in particular cell-types and tissues in vivo.

✦ Reminder

Please let Janet Hearing know of papers that have been accepted for publication, awards, and conferences attended for inclusion in future newsletters.