

Laura Hanson, PhD

Texas Woman's University

Department of Biology

Education

B.S. Microbiology and Biology, University of Washington	1987
Ph.D. Immunology, Cornell University	1993

Academic Employment

2009- present	Assistant Professor, Texas Woman's University, Department of Biology
2003-2009	Research Assistant Professor, Eastern Virginia Medical School
1993-2003	Postdoctoral Fellow, Eastern Virginia Medical School, Department of Microbiology and Molecular Cell Biology

Teaching experience

2004-2008: Course director for MIB 842. Topics in Molecular and Integrated Biosciences.

2005-2008: Laboratory facilitator, Medical Microbiology and Immunology laboratory. Short lecture and supervision of medical students during the laboratory session.

2005-2008: co-Instructor Topics for Molecular Biology, graduate course.

2006-2008: Lecturer, Research Techniques, graduate course in molecular biology techniques.

2004-2007. Instructor in summer Tumor Biology program for medical students. Lecturing on oncogenic viruses.

Research/Scholarship

My interest is in how viruses interact with their host. Studies in my lab focus on murine cytomegalovirus (MCMV) as a model system to examine genes important for herpesvirus infection. We are studying a family of genes found not only in cytomegalovirus, but also human herpesvirus 6 and human herpesvirus 7, known as the US22 gene family. The functions of members of this gene family

are starting to be determined, and several are involved in overcoming host cell defense mechanisms. Using a combination of molecular biological approaches with traditional virological methods, we are examining both how expression of these proteins is regulated by both host cell and viral factors, and the functions they perform to optimize viral growth.

Recent Publications

Hanson, L.K., Slater, J.S., Karabekian, Z., Ciocco-Schmitt, G., and Campbell, A.E. (2001). Products of US22 genes M140 and M141 confer efficient replication of murine cytomegalovirus in macrophages and spleen. *J. Virol.* 75: 6292-6302.

Karabekian, Z. **Hanson, L. K.**, Slater, J. S., Krishna, N., Bolin, L. L., Kerry, J.A., and Campbell, A.E. (2005). Complex formation among murine cytomegalovirus US22 proteins encoded by M139, M140, and M141. *J. Virol.* 79: 3525-3535.

Hanson, L. K., Dalton, B. L., Cageao, L. F., Brock, R. E., Slater, J. S., Kerry, J.A., and Campbell, A.E., (2005). Characterization and regulation of essential murine cytomegalovirus genes m142 and m143. *Virology.* 334: 166-177.

Child, S. J., **Hanson, L.K.**, Brown, C.E., Janzen, D.M., and Geballe, A.P. (2006). Double-stranded RNA-binding by a heterodimeric complex of murine cytomegalovirus m142 and m143 proteins. *J. Virol.* 80: 10173-10180.

Hanson, L.K., Slater, J.S. Cavanaugh, V.J., Newcomb, W. W., Bolin, L. L. Nelson, C. N., Fetters, L. D., Tang, Q. Brown, J.C., Maul, G.G., and Campbell, A.E. (2009). Murine cytomegalovirus capsid assembly is dependent on US22 family gene M140 in infected macrophages. *J. Virol.* 83:7449-7456.

Book chapters

Hanson, L.K. and Campbell, A.E. "Determinants of Macrophage Tropism" In: Reddehase, M. J. (ed), *Cytomegaloviruses: Pathogenesis, Molecular Biology, and Infection Control*. Caister Academic Press, Wymondham, Norfolk, U.K. 2006. 419-443.