**LAURA SPRINGGAY**
Oregon Health & Science University, School of Medicine, Molecular Microbiology & Immunology

**Degree:**
B.S. Molecular Biology, Portland State University

**Advisor:**
Scott Wong, Ph.D.

**Scholar Award Donor:**
ARCS Foundation Portland Chapter

**About the Scholar:**
Laura is investigating how herpes viruses evade the immune system in order to establish life-long infections in humans and monkeys. She works on the human herpes virus named Kaposi's sarcoma associated herpes virus, and the monkey version of this virus, rhesus rhadinovirus. Laura is investigating specific proteins made by these viruses, which mimic human proteins that are involved in the immune system. By understanding how these viruses are able to modify the host immune system, she hopes to discover novel targets for treating persistent herpes infections. Laura spends her time outside of the lab hiking or playing disc golf with her husband, Shawn, and their Australian shepherd, Stella.

**Benefits to Society:**
Herpes viruses are renowned for their ability to produce life-long infections. Kaposi's Sarcoma associated herpes virus (also known as KSHV) does not produce any symptoms in healthy individuals, however that changes if the immune system is compromised. KSHV infection causes several types of cancer in immune compromised individuals such as organ transplant patients and AIDS patients. Treatments for KSHV and all herpes viruses are very limited, and there are no cures. By researching how these viruses infect humans and evade the immune system we hope to identify new ways to treat or cure the infection.

**Awards and Honors:**
Biology Honors in Research, Portland State University
Graduated cum laude, Portland State University
Virology Training Grant (T32 AI074494)

**Publications and Posters:**
DeFilippis, V.R., T. Sali, D. Alvarado, **L. White**, W. Bresnahan, and K. Früh. 2010. Activation of the Interferon Response by Human Cytomegalovirus Occurs Via Cytoplasmic dsDNA but not Glycoprotein B. *J. Virol.* 84(17): 8913-8925.

**White L.K.**, T. Sali, D. Alvarado, E. Gatti, P. Pierre, D. Streblow, and V.R. DeFilippis. 2011. Chikungunya Virus Induces IPS-1-Dependent Innate Immune Activation and PKR-Independent Translational Shutoff. *J. Virol.* 85(1):606-620.

Botto, S., D.N. Streblow, V.R. DeFilippis, **L. White**, C.N. Kreklywich, P.P. Smith, and P. Caposio. 2011. IL-6 in Human Cytomegalovirus Secretome Promotes Angiogenesis and Survival of Endothelial Cells Through the Stimulation of Survivin. Blood. 117(1): 352-361.

Messaoudi, I., J. Vomaske, T. Totonchy, C.N. Kreklywich, K. Haberthur, **L. Springgay**, J.D. Brien, M.S. Diamond, V.R. DeFilippis, D.N. Streblow. 2013. Chikungunya Virus Infections results in higher and persistent viral replication in aged rhesus macaques due to defects in anti-viral immunity. PLoS Negl. Trop. Dis. 7(7): e2343. doi:10.1371/journal.pntd.0002343

Rhesus rhadinovirus viral interferon regulatory factors. Poster presented at the "Innate Immunity to Viral Infections" Keystone conference, Keystone, CO, January 2014