

## MSTP STUDENT DESCRIPTION

NAME: Benjamin Briggs  
e-Mail address:bjbriggs@buffalo.edu  
Undergraduate College/University attended: Cornell University  
Major: Biological Sciences

Years in MSTP (1-8): 5

DEPARTMENT: Microbiology/Immunology

THESIS ADVISOR: Dr. John Hay

### RESEARCH DESCRIPTION:

PhD Thesis title: Viral Pathogenesis in Central Asia

Date of Completion (or expected) of PhD: 2010

Research Description: The objective of the project will be to investigate the distribution, biology and molecular genetics of vectored RNA viruses of major medical importance in central Asia; we will initially concentrate our efforts in Kazakhstan and Kyrgystan. Our hypothesis is that vectored RNA viruses, which are poorly characterized, are circulating in central Asia, contributing to demands on the health and economic welfare of the area. It is especially important to fully understand the interaction between the epidemiology and epizootiology of these vectored RNA viruses, since they pose unique problems for treatment, control, and eradication. In addition, we are investigating the role hantavirus nucleocapsid protein (N) plays in modulation of the type I interferon response. We are using hantaan virus N as a model but will incorporate N of those viruses found in our epidemiological assays in Central Asia.

### PUBLICATIONS / ABSTRACTS PRESENTED:

Buvelot Frei S, Rahl PB, Nussbaum M, **Briggs BJ**, Calero M, Janeczko S, Regan AD, Chen CZ, Barral Y, Whittaker GR, Collins RN. Bioinformatic and comparative localization of Rab proteins reveals functional insights into the uncharacterized GTPases Ypt10p and Ypt11p. *Mol Cell Biol.* 2006 Oct;26(19):7299-317.

Zand MS, Vo T, Huggins J, Felgar R, Liesveld J, Pellegrin T, Bozorgzadeh A, Sanz I, **Briggs BJ**. Polyclonal rabbit antithymocyte globulin triggers B-cell and plasma cell apoptosis by multiple pathways. *Transplantation.* 2005 Jun 15;79(11):1507-15.

Sun X, Yau VK, **Briggs BJ**, Whittaker GR. Role of clathrin-mediated endocytosis during vesicular stomatitis virus entry into host cells. *Virology.* 2005 Jul 20;338(1):53-60.

Rzomp KA, Scholtes LD, **Briggs BJ**, Whittaker GR, Scidmore MA. Rab GTPases are recruited to *Chlamydia* inclusions in both a species-dependent and species-independent manner. *Infect Immun.* 2003 71(10):5855-70.

Zand MS, **Briggs BJ**, Bose A, Vo T. Discrete Event Modeling of CD4<sup>+</sup> Memory T Cell Generation. *J Immunol.* 2004 Sep 15; 173(6):3763-72.

PROFESSIONAL/EDUCATIONAL MEETINGS ATTENDED (name of meeting, dates of attendance,

location):

American Physician Scientist Association Meeting April 24-26 2009, Chicago, IL

International Scientific Working Group on Tick-Borne Encephalitis January 28-30 2009, Vienna, Austria

American Society of Tropical Medicine and Hygiene Meeting, December 7-11 2008, New Orleans, LA

American Society of Tropical Medicine and Hygiene Meeting, December 3-7 2003, Philadelphia, PA

American Society of Transplantation Meeting, April 26-May 1 2002, Washington DC,

#### AWARDS / HONORS:

Training Grant in Microbial Pathogenesis - August, 2008, University at Buffalo

Marek B. Zaleski Award – September 2007, University at Buffalo

Vincent du Vigneaud Award For Excellence in Undergraduate Research - November 2003, presented by University of Rochester

Howard Hughes Research Scholar - April 2003, Cornell University

Dean's List - Fall 2001, Fall 2002, Spring 2002, Fall 2003, Cornell University

National Kidney Foundation's Young Science Scholar Research Award - January 1999, presented by the National Kidney Foundation

MEDICAL SCHOOL ACTIVITIES: Orientation Committee 2006, Lighthouse Free Clinic Volunteer, APSA Institutional Representative, Volunteer-Buffalo Science Center

EXTRACURRICULAR INTERESTS: Sailing, Photography, Skiing, Home brewing, Watercolor