OMB No. 0925-0001 and 0925-0002 (Rev. 11/16 Approved Through 10/31/2018)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Eric Wilson

eRA COMMONS USER NAME (credential, e.g., agency login): ERICWILSON

POSITION TITLE: Associate Professor of Microbiology and Molecular Biology

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| Utah State University, Logan UT | BS | 05/1990 | Medical Technology |
| Utah State University, Logan UT | MS | 05/1994 | Parasitology |
| Montana State University, Bozeman MT  | Ph.D | 05/2000 | Immunology |
| Stanford University, Stanford CA | Post doc | 05/2004 | Immunology |
|  |  |  |  |

**A. Personal Statement**

I have broad training in immunology and parasitology. My research experience ranges from the study of protozoan parasites (*Toxoplasma* and *Eimeria)* to studying the immune response in mouse models of disease using a variety of *in vivo* infection models. These models include gastrointestinal disease models using both viral and bacterial pathogens, murine mastitis models using *E. coli* and *S. aureus,* and *S. aureus* skin infection models. I have active research projects with several on campus, as well as, off campus collaborators. These projects include the influence of neurotropic parasites on animal and human health and cognition. Additional laboratory projects include the study of human and animal mastitis, with a focus on bacterial virulence factors required for disease initiation.

**B. Positions and Honors**

Positions

1994-1999 Graduate Research Assistant, Montana State University (Mark Jutila Laboratory)

1999-2000 Postdoctoral Scholar, Montana State University

2000-2004 Postdoctoral Fellow, Stanford University (Eugene Butcher Laboratory)

2004-2010 Assistant Professor, Brigham Young University

2010-present Associate Professor, Brigham Young University

Honors

2012-2014 \*Alcuin Fellowship, Brigham Young University

2016-2019 \*\*General Education Professorship, Brigham Young University

**C. Contributions to Science**

The focus of our laboratory is on understanding the immune response in mouse models. My major research accomplishments include publishing the first demonstration of the role of the chemokine CCL28 in mediating lymphocyte migration *in vivo*. In this paper we demonstrated the indispensable nature of this chemokine in mediating lymphocyte homing to the lactating mammary gland and mediating immune transfer to the nursing neonate. This paper has been highly cited and was highlighted in *Faculty of 1000*. In other related work, my lab identified the vascular adhesion molecules necessary for efficient homing of IgA ASC to the lactating mammary gland.

* **Wilson**, **E**. Butcher E.C. **2004**. CCL28 controls immunoglobulin (Ig)A plasma cell accumulation in the lactating mammary gland and IgA antibody transfer to the neonate, *J Exp. Med.* 200:805-809.
* Low, E. Martino, B. Zagieboylo, L. and **Wilson, E**. **2010**. IgA ASC Accumulation to The Lactating Mammary Gland is Dependent on VCAM-1 and alpha4 Integrins. *Molecular Immunol*. 47:1608-12
* Lazarus, N.H. Kunkel, E.J. Johnston, B. **Wilson, E**. Youngman, K.R, Butcher, E.C. **2003**. A common mucosal chemokine (MEC/CCL28) selectively attracts IgA plasmablasts. *J. Immunol*. 170:3799-3805

Link to complete list of publications <http://www.ncbi.nlm.nih.gov/sites/myncbi/1n1nvszlz-uAC/bibliography/48935510/public/?sort=date&direction=ascending>

**D. Extramural Research Support**

2018-2019 Role Co-Principal Investigator (with Dr. Jovanka Voyich)

NIH R56 award

Title: Sensing and Adapting to the Neutrophil: SaeR/S Dependent Evasion Strategies Used by *Staphylococcus aureus*.

The goal of this study is to understand how Methicillin resistant *S. aureus* (MRSA) evades and manipulates the immune system.

2012-2016 Role: Co-Principal Investigator (with Dr. David Erickson)

NIH# 1R15AI1958-01

Title: Identification of Bacterial Resistance Mechanisms to Antimicrobial Chemokines

The goal of his study is to understand the role of the rfaD operon of *Yersinia pseudotuberculosis* and define the role of the gene products resulting from this operon in mediating bacterial evasion of host antimicrobial peptides.

2011-2015 Role: Principal Investigator

NIH # 2R15AI072769-02A1

Title: IgA ASC Homing to Mucosal Tissues

The goal of his project was to elucidate differences in the homing and accumulation mechanisms utilized by mucosal tissues with the goal of upregulating appropriate adhesion molecules to enhance IgA ASC accumulation to select tissues.

2008-2011 Role: *Co-Principal* *Investigator* (with Dr. Jovanka Voyich)

USDA # 35204-04623

Title: Expression and Function of Bovine CCL28”

The goal of this project was to characterize the expression and function of bovine CCR10 and CCL28 in mediating homing to mucosal sites.

2007-2010 Role: *Principal Investigator*

NIH# 1R15AI072769-01

Title: IgA ASC Homing to Mucosal Tissues

The goal of this project was to investigate the role of the CCR10 chemokine receptor and its ligands in mediating homing to mucosal sites.