

**Aubrey Leigh Frantz**  
*Curriculum Vitae*

University of North Texas at Dallas  
7400 University Hills Blvd.  
Dallas, TX 75241

Office Number and Building: 251, DAL2  
Work Phone Number: 972-338-1523  
Email: Aubrey.Frantz@untdallas.edu

**EDUCATION**

- 2012 - Ph.D., Microbiology, Immunology and Molecular Genetics, University of Kentucky College of Medicine , Lexington KY
  - Dissertation: “The Role of Intestinal Epithelial Cells and the Regulation of the Polymeric Immunoglobulin Receptor in Homeostasis and Inflammation”
- 2007 - B.A., Chemistry and Biology, University of Kentucky , Lexington KY

**PROFESSIONAL POSITIONS**

- Program Coordinator for the Department of Life and Health Sciences in the School of Liberal Arts and Sciences at UNT Dallas, August 2014 - present
- **Lecturer of Biology**, University of North Texas at Dallas, School of Liberal Arts and Sciences, August 2013- present
- Full-time Adjunct Professor, University of North Texas at Dallas, Department of Arts and Life Sciences, August 2012- August 2013
- Graduate Research Assistant, University of Kentucky, Department of Microbiology, Immunology and Molecular Genetics, August 2007 – June 2012
- Teaching Assistant for Medical Microbiology, University of Kentucky College of Medicine August 2009 - December 2009
- Laboratory Technician , University of Kentucky, Department of Microbiology, Immunology and Molecular Genetics, August 2006 – August 2007
- Undergraduate Researcher, University of Kentucky, Department of Biology, May 2005-June 2006

**PUBLICATIONS**

Aubrey L. Frantz, , Eric W. Rogier, Gavin Ellis, Cathryn Kurkijan, William deVilliers, Donald A. Cohen, Arnold Stromberg, Rasvan Arsenescu, C. Darrell Jennings, Charlotte S. Kaetzel and Maria E.C. Bruno. Down-regulation of the Polymeric Immunoglobulin Receptor in Human Ulcerative Colitis and Murine Colitis-Associated Cancer. *In preparation*.

Eric W. Rogier, Aubrey L. Frantz, Maria E.C. Bruno, Leia Wedlund, Donald A. Cohen, Arnold J. Stromberg, Charlotte S. Kaetzel. Lessons from Mother: Long-term Impact of Antibodies in Breast Milk

on the Gut Microbiota and Intestinal Immune System of Breastfed Offspring. *Gut Microbes* **2014**. October; 5:5, 663-668

Eric W. Rogier, Aubrey L. Frantz, Maria E.C. Bruno and Charlotte S. Kaetzel. Secretory IgA is Concentrated in the Outer Layer of Colonic Mucus along with Gut Bacteria. *Pathogens* **2014**. April; 3, 390-403

Eric W. Rogier, Aubrey L. Frantz, Maria E.C. Bruno, Leia Wedlund, Donald A. Cohen, Arnold J. Stromberg, Charlotte S. Kaetzel. Secretory IgA in Breast Milk Promotes Long-Term Intestinal Homeostasis by Regulating the Gut Microbiota and Host Gene Expression. *PNAS*. **2014** Feb; 111(8): 3074-3079.

Aubrey L. Frantz, Eric W. Rogier, Christopher Weber, Le Shen, Donald A. Cohen, Maria E.C. Bruno, and Charlotte S. Kaetzel. Targeted deletion of MyD88 in intestinal epithelial cells results in compromised antibacterial immunity associated with the down-regulation of polymeric immunoglobulin receptor, mucin-2 and antibacterial peptides. *Mucosal Immunology*, **2012** Sep;5(5):501-12.

Aubrey L. Frantz, Maria E.C. Bruno, Eric W. Rogier, Halide Tuna, Donald A. Cohen, Subbarao Bondada, Ralph L. Chelvarajan, J. Anthony Brandon, C. Darrell Jennings, and Charlotte S. Kaetzel. Multifactorial Patterns of Gene Expression in Colonic Epithelial Cells Predict Disease Phenotypes in Experimental Colitis. *Inflammatory Bowel Disease*, February **2012** DOI: 10.1002/ibd.22923

Weikang Cai, Jennifer L. Rudolph, Ling Jin, Susan M.W. Harrison, Aubrey L. Frantz, Douglas A. Harrison, and Douglas A. Andres. An evolutionarily conserved Rit GTPase-p38 MAPK signaling pathway mediates oxidative stress resistance. *Mol Biol Cell*. **2011** Jul 7. E11-05-0400

Bruno, M.E.C., Frantz, A. L., Rogier, E.W., Johansen, F.E. and Kaetzel, C.S. Differential roles of the RelA and RelB subunits of NF- $\kappa$ B in regulation of the polymeric immunoglobulin receptor and pro-inflammatory genes by TNF and TLR signaling in intestinal epithelial cells. *Mucosal Immunol*. **2011**; 4(4):468-78.

Bruno, M.E.C., Rogier, E.W., Frantz, A.L., Stefka, A. Thompson, S. & Kaetzel, C.S. Regulation of the polymeric immunoglobulin receptor in intestinal epithelial cells by *Enterobacteriaceae*: Implications for mucosal homeostasis. *Immunological Investigations* **2010**; 39:356.

## **SEMINARS and PRESENTATIONS**

November, 2015, Conference for the Advancement of Science Teaching, Fort Worth, TX. “Creating Engaging, Hands-on STEM Activities for Middle School” Workshop Presentation.

August, 2012, Host-Microbial Interaction Symposium, Vanderbilt University, Nashville, TN. “The role of intestinal epithelial cells and the regulation of the polymeric immunoglobulin receptor in homeostasis and inflammation” Guest Seminar Speaker.

July, 2012, Immunology Musings, University of Texas Southwestern, Dallas, TX. “The role of intestinal epithelial cells and the regulation of the polymeric immunoglobulin receptor in homeostasis and inflammation” Guest Seminar Speaker.

July, 2011, International Congress of Mucosal Immunology, Paris, France. Aubrey Frantz, Eric Rogier, Maria E. C. Bruno and Charlotte S. Kaetzel. Intestinal Epithelial Cell-Specific MyD88 Signaling Promotes Homeostasis by Regulating Expression of the Polymeric Immunoglobulin Receptor. Oral presentation.

March, 2011, University of Kentucky Cancer Research Day. Aubrey Frantz, Eric Rogier, Gavin Ellis, Cathryn Kurkijun, Razvan Arsenescu and Charlotte Kaetzel. Down-regulation of the polymeric immunoglobulin receptor in ulcerative colitis and in experimental murine colitis-associated cancer. Poster presentation.

November, 2010, Autumn Immunology Conference, Chicago, IL. Aubrey Frantz, Maria Bruno, Subbarao Bondada, Donald Cohen & Charlotte Kaetzel. Signature biomarkers in Crohn’s disease predict phenotypes in mouse models of colitis. Poster presentation and short talk.

August, 2010, University of Kentucky Cancer Research Day. Aubrey Frantz, Maria Bruno, Subbarao Bondada, Donald Cohen & Charlotte Kaetzel. Signature biomarkers in Crohn’s disease predict phenotypes in mouse models of colitis. Poster presentation.

November, 2009, Autumn Immunology Conference, Chicago, IL. Aubrey Frantz, Eric Rogier, Maria E. C. Bruno and Charlotte S. Kaetzel. Induction of the Polymeric Immunoglobulin Receptor by Colonic Bacteria through TLR-Dependent Activation of NF- $\kappa$ B. Poster presentation and short talk.

October, 2009, Department of Microbiology, Immunology and Molecular Genetics Retreat. Aubrey Frantz, Eric Rogier, Maria E. C. Bruno and Charlotte S. Kaetzel. Induction of the Polymeric Immunoglobulin Receptor by Colonic Bacteria through TLR-Dependent Activation of NF- $\kappa$ B. Poster presentation.

July, 2009, International Congress of Mucosal Immunology, Boston, MA. Aubrey Frantz, Eric Rogier, Maria E. C. Bruno and Charlotte S. Kaetzel. Induction of the Polymeric Immunoglobulin Receptor by Colonic Bacteria through TLR-Dependent Activation of NF- $\kappa$ B. Poster presentation.

November, 2008, Autumn Immunology Conference, Chicago, IL. Aubrey Frantz, Eric Rogier, Maria E. C. Bruno and Charlotte S. Kaetzel. Differential responses of intestinal epithelial cells and monocytes to commensal bacteria. Poster presentation and short talk.

October, 2008, University of Kentucky Cancer Research Day. Aubrey Frantz, Eric Rogier, Maria E.C. Bruno and Charlotte S. Kaetzel. The Role of MyD88-Dependent Toll-like Receptor Signaling in Intestinal Inflammation. Poster presentation.

#### **Seminars at the University of Kentucky:**

April 20, 2012 “The role of intestinal epithelial cells and the regulation of the polymeric immunoglobulin receptor in homeostasis and inflammation”

January 28, 2011 “The role of intestinal epithelial cells in homeostasis, inflammation and cancer”

April 30, 2010, “Regulation of the polymeric immunoglobulin receptor in intestinal homeostasis and inflammation”

September 12, 2008, “Allele-specific regulation of the imprinted Igf2/H19 locus”

**Classes Taught (\* denotes course taught at the graduate level)**

Anatomy and Physiology I

Anatomy and Physiology I Laboratory

Anatomy and Physiology II

Anatomy and Physiology II Laboratory

Biology I for Majors

Biology I Laboratory

Cell Biology

Environmental Science

Environmental Science Laboratory

Microbiology

Microbiology Laboratory

Molecular Biology \*

Biology of Disease \*

**HONORS and AWARDS**

- University of Kentucky Dissertation Year Fellowship, January 2012- May 2012
- University of Kentucky Graduate Student Travel Award, July 2011
- University of Kentucky Opportunity Fellowship, August 2010 – August 2011
- University of Kentucky Opportunity Fellowship, August 2009 – August 2010
- International Congress of Mucosal Immunology Travel Award , July 2009
- University of Kentucky Graduate Student Travel Award, June 2009
- University of Kentucky Opportunity Fellowship, August 2008 – August 2009
- University of Kentucky Graduate School Academic Fellowship, August 2007 – August 2008

**PROFESSIONAL MEMBERSHIPS**

- Science Teachers Association of Texas 2015 – Present
- Society of Mucosal Immunology 2009 – Present