

## Laura S. Austin

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### EDUCATION

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- June 2016 **Ph.D. in Pathobiology**, University of Washington, Seattle, WA  
Thesis title: "Hepatocyte molecular factors promote infection and development of intrahepatocytic Plasmodium parasites in the mammalian host"  
Advisor: Dr. Stefan Kappe
- Aug. 2011 **B.S. with distinction in Microbiology**, University of Washington, Seattle, WA
- 2008-2009 **Preparatory Coursework**, North Seattle Community College, Seattle, WA
- Aug. 2000 **B.A. in Asian Studies**, Whitman College, Walla Walla, WA

### TEACHING EXPERIENCE

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#### **Teaching**

Fall 2016-  
Present

- Adjunct Faculty in Biology**; Clover Park Technical College, Lakewood, WA
- Teach *Anatomy and Physiology 1&2* and *Human Biology* (non-major) for three or four sections of combined lecture and laboratory courses each quarter.
  - Design course materials, labs, and assessments; adapt them quarterly to increase pedagogical effectiveness.
  - Co-designing remedial development course for students with limited previous biology experience in order to increase retention and student success, including placement test to identify at-risk students.
  - Instruct a diverse population of adult students, including international students, ESL students, and veterans; develop strategies for responding effectively to a wide range of previous educational experiences.
  - Use online learning management systems (primarily Canvas) to organize content, conduct student assessments, and communicate efficiently with students outside of class.
  - Consistently receive high ratings on student class evaluations.

Summer 2015

- Summer Instructor**, Robinson Center for Young Scholars, U. of Washington
- Collaborated with co-teacher to design and teach *Introduction to Microbiology: The Good, the Bad, and the Deadly*, a college-level course in microbiology for highly gifted middle school children.
  - Taught class of 25 students in classroom and lab setting using direct and active learning approaches.
  - Managed and mentored two undergraduate teaching assistants.

#### **Teaching Assistantships**

Fall 2013

- Teaching Assistant**, University of Washington  
*Newly Emerging Diseases in Public Health*; Teacher of Record: Dr. Rhea Coler
- Led weekly in-depth review sessions for 20-30 students.
  - Communicated with students; reviewed, graded, and proctored exams.
  - Delivered lecture "Hepatic Diseases" to full class of over 400 students

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TEACHING EXPERIENCE (CONT.)

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Fall 2010     **Peer Teacher**, University of Washington  
*General Microbiology Laboratory*; Teacher of Record: Dr. Kendall Gray

- Lectured and supervised lab section of 24 non-major students.
- Team-wrote weekly quizzes.
- Reviewed, graded, and proctored exams.
- Monitored student safety and lab techniques.

**Mentoring**

2013-2015     **Center for Infectious Disease Research**, Kappe Lab  
Supervised two undergraduates and a lab technician in molecular biology techniques and experimental design.

**Guest Lectures**

Mar 9, 2015     "Humanized mice." **Special Topics in Human Biology**, Bastyr University

Aug 1, 2014     "Life Inside: Intracellular Pathogens." **BioQuest Summer Academy**, Center for Infectious Disease Research and Institute for Systems Biology

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RESEARCH EXPERIENCE

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2012-2015     **Graduate Researcher**, Pathobiology Program, University of Washington  
Advisor: Dr. Stefan Kappe

- Investigated the obligate liver stage of *Plasmodium*, a eukaryotic parasite that is the causative agent of malaria.
- Designed and conducted novel experiments using cellular and molecular biology techniques, including cell culture and animal models.
- Presented research data in academic journals and conferences.

2010-2011     **Undergraduate Researcher**, University of Washington, Dept. of Microbiology  
Advisor: Dr. Joseph Mougous

- Conducted high-throughput genetic screening of resistance factors to a bactericidal effector protein
- Investigated regulation of a Type VI Secretion System in *Pseudomonas*

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SELECTED PUBLICATIONS AND PRESENTATIONS

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**Publications**

Zuck M, **Austin LS**, Danziger SA, Aitchison JD, Kaushansky A. (2017). The Promise of Systems Biology Approaches for Revealing Host Pathogen Interactions in Malaria. *Front Microbiol.* **8**, 2183.

Kaushansky A, Douglass AN, Arang N, Vigdorovich V, Dambrauskas N, Kain HS, **Austin LS**, Sather DN, Kappe SH. (2015) Malaria parasites target the hepatocyte receptor EphA2 for successful host infection. *Science* **350**(6264), 1089-92.

Kaushansky A, **Austin LS**, Mikolajczak SA, Lo FY, Miller JL, Douglass AN, Arang N, Vaughan AM, Gardner MJ, Kappe SH. (2015). Susceptibility to *Plasmodium yoelii* preerythrocytic infection in BALB/c substrains is determined at the point of hepatocyte invasion. *Infect Immun.* **83**(1), 39-47.

**Austin, LS**, Kaushansky, A, and Kappe, SHI. (2013). Hepatocyte polyploidy is an important marker for malaria parasite pre-erythrocytic host cell preference. *Cellular Microbiol.* **16**(5), 784-95.

Kaushansky, A, Ye, AS, **Austin, LS**, Mikolajczak, SA, Vaughan, AM, Camargo, N, Metzger, PG, MacBeath, G, and Kappe, SHI. (2013). Suppression of host p53 is critical for *Plasmodium* liver-stage infection. *Cell Reports* **3**, 630-637.

Silverman, JM, **Austin, LS**, Hsu, F, Hicks, KG, Hood, RD & Mougous, JD (2011). Separate inputs modulate phosphorylation-dependent and -independent type VI secretion activation. *Mol. Microbiol.* **82**:1277-90.

### **Presentations**

**Austin, LS**, Douglass AN, Miller JL, Arang N, Kaushansky, A, and Kappe, SHI. (2014). Hepatocyte-intrinsic factors drive the fate of *Plasmodium* parasites in liver infection and development. Poster Presentation, Molecular Parasitology Meeting, Woods Hole, MA.

**Austin, LS.** (2014) "Hepatocyte polyploidy as a marker for *Plasmodium* liver infection." Invited presentation, Amnis/EMD Millipore Seminar "Unique Single Cell Assays & Discoveries Leveraging Imaging Flow Cytometry." University of Washington SLU campus, Seattle, WA.

**Austin, LS**, Kaushansky, A, and Kappe, SHI. (2013). *Plasmodium* liver infection increases with hepatocyte polyploidy. Poster Presentation, Gordon Research Conference on Malaria, Tuscany, Italy.

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### SERVICE EXPERIENCE

2012-2016      **UAW Local 4121**, UW Graduate Worker Union  
Board of Directors Trustee (2013-2014)  
Steward, Region Five (2012-2013, 2014-2016)

2012-2013      **Graduate and Professional Student Senate**, University of Washington  
Senator/Program Representative

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### GRANTS AND AWARDS

2013      **National Defense Science and Engineering Graduate Fellowship**  
Department of Defense, Office of Army Research

2013      **Graduate Research Fellowship Program, Honorable Mention**  
National Science Foundation

2012      **Pathobiology Training Grant**  
National Institutes of Health T32 AI007509-13

2011      **Top Scholar Award**  
University of Washington Graduate School

2010      **Jacques M. Chiller Award**  
University of Washington, Microbiology Department

2009      **Undergraduate Summer Research Grant Supplement**  
National Institutes of Health, National Institute of Allergy and Infectious Diseases