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Education

- 2012 **Ph.D.** in Microbiology. University of California, Berkeley
Advisor: Steven E. Lindow
- 2005 **B.S.** in Microbiology, Magna Cum Laude. Oregon State University

Professional Experience

- 2014 **USDA NIFA Postdoctoral Fellow.** Baltrus Lab, University of Arizona
• Development and evaluation of bacteriocins as robust bacterial phytopathogen control compounds
- 2012-2014 **Postdoctoral research associate.** Baltrus Lab, University of Arizona
• Genomic and phenotypic characterization of bacteriocins and bacteriophages harbored by *Pseudomonas syringae*
- 2006-2012 **Graduate student researcher.** Lindow Lab, University of California, Berkeley
• Genetic, phenotypic, and transcriptomic characterization of thermoregulation in *Pseudomonas syringae*
- 2005-2006 **Biological sciences technician.** Loper Lab, US Dept. of Agriculture, Agriculture Research Service, Corvallis, Oregon.
- 2003-2005 **Undergraduate research technician.** Loper Lab, US Dept. of Agriculture, Agriculture Research Service, Corvallis, Oregon.
- 2003 **HHMI Summer Undergraduate Research Fellow.** Mentor: Virginia Stockwell, Oregon State University, Corvallis, Oregon.

Publications

In preparation

Hockett KL and Lindow SE. Population-level Heterogenous Motility in *Pseudomonas syringae* Mediated by Competing Temperature and Nutrient Regulation.

Hockett KL, Plewa D, and Baltrus DA. *De Novo* R-type Syringacin Resistance Confers Pleiotropic Reduction of Virulence in a Plant Pathogen.

*Published, peer-reviewed (*mentored undergraduate)*

- 2015 **Hockett KL**, Renner T, and Baltrus DA. Independent Co-Option of a Tailed Bacteriophage into a Killing Complex in *Pseudomonas*. *mBio*. 6(4): e00452-15. doi: 10.1128/mBio.00452-15
- 2014 **Hockett KL**, Nishimura MT, Karlsrud E*, Dougherty K, and Baltrus DA. *Pseudomonas syringae* CC1557: A Highly Virulent Strain With an Unusually Small Type III Effector Repertoire That Includes a Novel Effector. *Molecular Plant-Microbe Interactions*. 27(9): 923-932. doi: 10.1094/MPMI-11-13-0354-R
- 2014 **Hockett KL**, Ionescu M, and Lindow SE. Involvement of *rppH* in Thermoregulation in *Pseudomonas syringae*. *Journal of Bacteriology*. 196(12): 2313-2322. doi: 10.1128/JB.00057-14

- 2013 Stockwell VO, Davis EW, Carey A, Shaffer BT, Mavrodi DV, Hassan KA, **Hockett KL**, Thomashow LS, Paulsen IT, and Loper JE. pA506, a Conjugative Plasmid of the Plant Epiphyte *Pseudomonas fluorescens* A506. *Applied and Environmental Microbiology*. 79(17): 5272-5282. doi: 10.1128/AEM.01354-13
- 2013 **Hockett KL**, Burch AY, and Lindow SE. Thermo-Regulation of Genes Mediating Motility and Plant Interactions in *Pseudomonas syringae*. *PLoS ONE*. 8(3): e59850. doi: 10.1371/journal.pone.0059850
- 2009 Stockwell VO, **Hockett KL**, and Loper JE. Role of RpoS in Stress Tolerance and Environmental Fitness of the Phyllosphere Bacterium *Pseudomonas fluorescens* Strain 122. *Phytopathology*. 99(6): 689-695. doi: 10.1094/PHYTO-99-6-0689

Published, book chapter

- 2014 Baltrus DA, Hendry TA, and **Hockett KL**. Ecological Genomics of *Pseudomonas syringae*. In *Genomics of Plant-Associated Bacteria*, D.C. Gross, A. Lichens-Park, C. Kole (Eds.). Berlin: Springer. 59-77. doi: 10.1007/978-3-642-55378-3_3

Grants & Fellowships

- 2015 US Dept. of Agriculture National Institute of Food and Agriculture (NIFA) Foundational Program. *Manipulation of Phage-derived Bacteriocin Production as a Novel Antimicrobial Treatment for Bacterial Phytopathogens*. Pending
- 2014 US Dept. of Agriculture National Institute of Food and Agriculture (NIFA) Postdoctoral Fellowship Grant. *Development and evaluation of bacteriocins as robust bacterial phytopathogen control compounds*. Award # 2015-67012-22773

Invited Seminars

- 2015 **Hockett KL**. Pathogens that control themselves: selectively toxic proteins produced by *Pseudomonas syringae*. USDA Agricultural Research Service, Salinas, California.

Published Abstracts and Scientific Presentations (Presenting Author in Bold)

- 2015 **Hockett KL**, Renner T, and Baltrus DA. (Poster) Independent Co-Option of a Tailed Bacteriophage into a Killing Complex in *Pseudomonas*. Gordon Research Conference in Microbial Population Biology, Andover, New Hampshire.
- 2015 **Hockett KL**, Renner T, and Baltrus DA. Independent Co-Option of a Tailed Bacteriophage into a Killing Complex in *Pseudomonas*. Gordon Research Seminar in Microbial Population Biology, Andover, New Hampshire.
- 2015 **Hockett KL**, Renner T, and Baltrus DA. Independent Acquisition of a Phage Toxin in *Pseudomonas*. Phage Centennial Meeting, San Diego State University.
- 2013 **Hockett KL**, Renner T, and Baltrus DA. Independent Domestication of a Tailed Bacteriophage into a Killing Complex in *Pseudomonas*. Department of Biology Seminar, San Diego State University.
- 2013 **Hockett KL** and Baltrus DA. Bacteriocins in *Pseudomonas syringae*: Under Explored Mediators of Intraspecific Interactions. Evolution Society Meeting, Snowbird, Utah.
- 2013 **Hockett KL** and Baltrus DA. (Poster) Direct Sequencing of Reactivated Prophage from *Pseudomonas syringae*. Environmental Virology Workshop, Oracle, Arizona.
- 2012 **Hockett KL**. Phenotypic and Genetic Traits Contributing to Host-Pathogen Interactions in *Pseudomonas syringae*. Microlunch Seminar, University of Arizona, Tucson, Arizona.

- 2011 **Hockett KL** and Lindow SE. (Poster) Thermo-regulated Motility in *Pseudomonas syringae* pv. *syringae* B728a and Implications for Plant-Microbe Interactions. Symbiosis Workshop, Wawona, California.
- 2010 **Hockett KL** and Lindow SE. Thermo-regulated Motility in *Pseudomonas syringae* pv. *syringae* B728a and Implications for Plant-Microbe Interactions. 9th International Symposium on the Microbiology of Aerial Plant Surfaces, Corvallis, Oregon.
- 2010 **Hockett KL** and Lindow SE. (Poster) Thermo-regulated Motility in *Pseudomonas syringae* pv. *syringae* B728a and Implications for Plant-Microbe Interactions. 13th International Symposium on Microbial Ecology, Seattle, Washington
- 2007 **Stockwell V**, Hockett KL, Marie C, and Duffy B. (Poster) Pink *Erwinia amylovora*: Colony Discoloration in Diagnostic Isolations by Co-Cultured Bacteria. 11th International Workshop on Fire Blight, Portland, Oregon.

Teaching Experience

- 2013-2014 **Adjunct Professor.** Pima Community College
Introductory Microbiology, Fall and Spring semesters
- 2012 **Instructor.** University of Arizona
Graduate Plant Pathology Lab (Bacteria Module), Fall semester
- 2012 **Participant.** University of Arizona
Teaching in Plant Pathology and Microbiology, Fall semester
- 2012 **Guest Lecturer.** University of Arizona
• *A Molecular Understanding of Bacterial Plant Pathogens.* Introductory Plant Pathology, Fall semester
- 2011 **Guest Lecturer.** University of California, Berkeley
• *The Effect of Environmental Factors on the Behavior and Ecology of Pseudomonas syringae pv. syringae B728a and the Consequences for Host-Pathogen Interactions.* Microbial Ecology, Fall semester.
- 2008 **Guest Lecturer.** University of California, Berkeley
• *Microbial Source Tracking as a Means of Avoiding Disease.* Molecular Approaches to Environmental Problem Solving, Fall semester
- 2008 **Graduate Student Instructor.** University of California, Berkeley
Molecular Approaches to Environmental Problem Solving, Fall semester
- 2008 **Graduate Student Instructor.** University of California, Berkeley
Introductory Molecular Biology, Spring semester

Service to Academic and Scientific Community

Mentorship in doctoral research

- Current **Sarah Araldi.** Microscopic detection of fluorescently labeled endohyphal bacteria
- Current **Brian Smith.** Characterization of a diffusible, inhibitory compound produced by diverse species of *Pseudomonas*

Mentorship in undergraduate research

- Current **Isfrieda Ilango.** Estimation of mutation rates in *P. syringae*
- Current **Danny Plewa.** Selection and characterization of bacteriocin resistant *P. syringae*
- Current **Ethan Carlson.** Evaluation of virulence trade-off in *de novo* bacteriocin resistant *P. syringae*.
- 2015 **Julio Martinez.** Modification of tailocin targeting spectra
- 2012-2013 **Erick Karlsrud.** Quantification of loss of virulence in *hopBJ* mutants of *P. syringae* CC1557

- 2011-2012 **Sarah Rosenberg.** Estimation of *fliC* regulation using quantitative single cell microscopy
- 2010-2011 **Ali Irani.** Construction of mutants disrupted in thermo- regulation in *P. syringae*
- 2009-2010 **Y Mai.** Transposon mutagenesis screen for thermoregulatory mutants in *P. syringae*
- 2008-2009 **Tamara Fenwick.** Characterization of light effect on swarming in *P. syringae*

Community Outreach & Involvement

- 2015 Leader of Biotechnology Laboratory for Students and Teachers (BLAST), a summer course that engages high school students in microbiological and molecular research, Tucson Magnet High School, Tucson, Arizona.
- 2015 Participant in Science and Nature in Tandem for Youth (SANITY), a program combining field and laboratory research experience for high school students at the American Museum of Natural History's Southwest Field Station in the Chiricahua Mountains, Arizona.
- 2014 Judge for Southern Arizona Research, Science and Engineering Fair (SARSEF) middle and high school research poster competition, Tucson Convention Center.
- 2011 *Life on a Leaf: Listening in as Bacteria Interrogate the Leaf* (lecture), Society for Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference, San Jose, California.

Service to Profession

Peer-review activities

Reviewer for *Applied and Environmental Microbiology*

Panel services

- 2012 Judge for graduate student posters of original research in biological sciences at Student Showcase, University of Arizona

Departmental service

- 2008-2009 Chair of Microbial Biology Student Group, University of California, Berkeley

Honors & Awards

- 2008 National Science Foundation Graduate Research Fellowship, honorable mention

Society Memberships

International Society for Microbial Ecology
 American Society for Microbiology
 American Phytopathological Society
 Society for the Study of Evolution