

Emerson Crabill, Ph.D.

Contact Information

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Education

Ph.D. Biology, University of Nebraska-Lincoln, 2012
B.A. Biology, University of Kansas, 2004

Employment

2019-Present	Assistant Professor Department of Biology Angelo State University San Angelo, TX
2012-2019	Associate Research Scientist Mentor: Craig R. Roy, Ph.D. Department of Microbial Pathogenesis Yale School of Medicine New Haven, CT
2006-2012	Graduate Research Assistant Adviser: James R. Alfano, Ph.D. School of Biological Sciences University of Nebraska Lincoln, NE

Teaching experience

Summer 2020	Genetics, Angelo State University, On-line course
Spring 2020	Pathogenic Microbiology, Angelo State University Lecture course and two lab sections
	Genetics, Angelo State University Lecture course
	Principles of Biology I, Angelo State University Lab course

Fall 2019 General Microbiology, Angelo State University
Lecture course and two lab sections

Principles of Biology II Laboratory, Angelo State
University, two lab sections

2008-2009 Botany Lab, University of Nebraska-Lincoln
Taught multiple lab sections including background
lectures and laboratory experiments

Fellowships

2014-2016 National Research Service Award, National Institute
of General Medical Sciences, Award Number
1F32GM108411-01A1
Yale School of Medicine

2006-2007 Life Sciences Interdisciplinary Graduate Recruitment
Program Research Assistantship Award,
University of Nebraska-Lincoln

Mentoring experience

Summer 2019 Mentor to undergraduate researcher
Directed research on bacterial cloning and protein
purification

Dec. 2018-March 2019 Mentor to graduate student during lab rotation
Directed research on mutagenesis and protein
purification

Summer 2018 Mentor to visiting graduate student
Directed research on mutagenesis and bacterial
cloning

Feb.-March 2018 Mentor to graduate student during lab rotation
Directed research on bacterial infections and
mutagenesis

Dec. 2015-March 2016 Mentor to graduate student during lab rotation
Directed research on a screen of bacterial mutant
library for immune suppression

June 2011-August 2012	Mentor to undergraduate student Directed research on plant transformation with bacterial genes
Jan. – June 2011	Mentor to graduate student Directed research on targeted bacterial mutagenesis
Aug. – Dec. 2010	Mentor to undergraduate student Directed research on bacterial infections of plants
Jan. – June 2010	Mentor to undergraduate student Directed research on bacterial in vitro secretion experiments
Summer 2009	Mentor to a high school teacher Introduced molecular biology techniques and suggested experiments to local high school microbiology teacher to be used in his classes

Community Service

April 2010 and 2011	Served as chair of the Biological and Medical Sciences session for the Nebraska Academy of Sciences Annual Meeting
March 2011	Instructed high school students on how to carry out basic laboratory experiments

Professional Societies

2013-Present	Member of the American Society for Rickettsiology
2012-Present	Member of the American Society for Microbiology
2011-2012	Member of the Missouri Valley Branch of American Society for Microbiology
2008-2009	Member of the American Phytopathological Society
2007-2012	Member of the International Society for Molecular Plant-Microbe Interactions

Editorial Review

2011 Served as a peer reviewer for Molecular Plant-Microbe Interactions

Meetings Attended

Feb 28 and 29, 2020 Texas Academy of Science Meeting, Stephen F. Austin State University in Nacogdoches, TX

July 7-13, 2018 Microbial Toxins and Pathogenicity Gordon Research Conference and Seminar, Waterville Valley in Waterville Valley, NH

June 20-23, 2015 27th Meeting of the American Society for Rickettsiology, Olympic Valley, CA

June 15-18, 2013 26th Meeting of the American Society of Rickettsiology, Portland, ME

March 24-25, 2012 2012 Midwestern Section Annual Meeting of the American Society of Plant Biologists, Lincoln, NE

September 13-17, 2011 Microbial Pathogenesis & Host Response Meeting at Cold Spring Harbor Laboratory, Cold Spring Harbor, NY

March 19-20, 2011 2011 Midwestern Section Annual Meeting of the American Society of Plant Biologists, West-Lafayette, IN

July 19-23, 2009 XIV International Congress on Molecular Plant-Microbe Interaction, Quebec City, Canada

July 26-30, 2008 2008 American Phytopathological Society Centennial Meeting, Minneapolis, MN

July 21-27, 2007 XIII International Congress on Molecular Plant-Microbe Interaction, Sorrento, Italy

Research Articles

Crabill E, Schofield WB, Newton HJ, Goodman AL, Roy CR. 2018. Dot/Icm-translocated proteins important for biogenesis of the *Coxiella burnetii*-containing vacuole identified by screening of an effector mutant sub-library. Infect Immun doi:10.1128/IAI.00758-17.

Newton, H. J., L. J. Kohler, J. A. McDonough, M. Temoche-Diaz, E. Crabill, E. L. Hartland & C. R. Roy. 2014. A Screen of *Coxiella burnetii* Mutants Reveals Important Roles for Dot/Icm Effectors and Host Autophagy in Vacuole Biogenesis. PLoS Pathog 10: e1004286.

Misas-Villamil, J.C., I. Kolodziejek, E. Crabill, F. Kaschani, S. Niessen, T. Shindo, M. Kaiser, J. R. Alfano, R. A. L. van der Hoorn. 2013. *Pseudomonas syringae* pv. *syringae* Uses Proteasome Inhibitor Syringolin A to Colonize from Wound Infection Sites. PLoS Pathog. 9: e1003281.

Crabill, E., A. Karpisek, and J.R. Alfano. 2012. The *Pseudomonas syringae* HrpJ protein controls the secretion of type III translocator proteins and has a virulence role inside plant cells. Mol. Microbiol. 85: 225-238.

Crabill, E., A. Joe, A. Block, J.M. van Rooyen and J.R. Alfano. 2010. Plant immunity directly or indirectly restricts the injection of type III effectors by the *Pseudomonas syringae* type III secretion system. Plant Physiol. 154: 233-244.

Wei, C.-F., B.H. Kvitko, R. Shimizu, E. Crabill, J.R. Alfano, N.-C. Lin, G.B. Martin, H.-C. Huang, A. Collmer. 2007. A *Pseudomonas syringae* pv. *tomato* DC3000 mutant lacking the type III effector HopQ1-1 is able to cause disease in the model plant *Nicotiana benthamiana*. Plant J. 51: 32-46.