

## CURRICULUM VITAE

### NAME

Heuberger, Adam L

### ADDRESS

Horticulture and Landscape Architecture  
College of Agricultural Sciences

Shepardson

### PHONE

(970) 491-7068

### EDUCATION

2011 Ph D, Colorado State University

2008 MS, University of Wisconsin-Madison

2004 BS, University of Wisconsin-Madison

### ACADEMIC POSITIONS

October 2014 - Present Assistant Professor, Colorado State University.

2013 - Present Joint Assistant Professor, Colorado State University.

2013 - 2014 Research Scientist, Colorado State University.

2011 - 2013 Postdoctoral Scientist, Colorado State University.

2008 - 2011 Graduate Research Fellow, Colorado State University.

2005 - 2008 Graduate Research Assistant, University of Wisconsin-Madison.

### OTHER POSITIONS

October 1, 2014 - Present Faculty Consultant, Colorado State University.

2004 - 2005 Research Specialist, University of Wisconsin-Madison.

### PUBLISHED WORKS

#### **Refereed Journal Articles**

Heuberger, A., Broeckling, C., Sedin, D., Holbrook, C., Guerdrum, L., Kirkpatrick, K., Prenni, J. (in press). Evaluation of non-volatile metabolites in beer stored at high temperature as an accelerated method to predict flavor stability. *Food Chemistry*.

Krisher, R., Heuberger, A., Paczkowski, M., Stevens, J., Popsil, C., Prather, R., Sturmey, R., Herrick, J., Schoolcraft, W. (2015). Applying metabolomic analyses to the practice of embryology: Physiology, development and assisted reproductive technology. *Reproduction, Fertility and Development*, 27.4, 602-620.

- Forster, G., Heuberger, A., Broeckling, C., Bauer, J., Ryan, E. (2015). Cooked Navy Bean Phytochemicals modulate the Fecal and Urine canine Metabolome. *Current Metabolomics*, 3.2, 90-101.
- Weir, T., Sheflin, A. M., Borrensen, E. C., Wdowik, M., Rao, S., Brown, R. J., Heuberger, A., Broeckling, C. D., Ryan, E. P. (2015). Dietary intervention with heat-stabilized rice bran modulates gut microbiota and metabolites in healthy participants. *Nutrients*, 7(2), 1282-1300.
- Sessions-Bresnahan, D., Heuberger, A., Schauer, K., Carnevale, E. (2015). Effect of obesity on the preovulatory follicle and lipid fingerprint of equine oocytes. *Biology of Reproduction*.
- Robison, F., Heuberger, A., Ogg, B., Schwartz, H., Brick, M., Prenni, J. (2015). Proteome Characterization in Leaves of Common Bean. *Proteomes*, 3(3), 236-248.
- Turner, M., Kirkwood, J., Collins, C., Heuberger, A., Broeckling, C., Prenni, J., Jahn, C. E. Morphological, Physiological and Metabolic Diversity in Sorghum and Association to Biomass Composition and Yield. *Journal of Experimental Botany*.
- Sheflin, A. M., Borrensen, E. C., Wdowik, M., Rao, S., Brown, R. J., Heuberger, A., Broeckling, C. D., Weir, T. L., Ryan, E. P. (2015). Dietary intervention with heat-stabilized rice bran modulates gut microbiota and metabolites in healthy participants. *Nutrients*, 7(2), 1282-1300. <http://www.mdpi.com/2072-6643/7/2/1282>

### **Non-Refereed Journal Articles**

- Heuberger, A., Prenni, J., Broeckling, C. (2015). Non-targeted Metabolite Profiling in Next-Generation Plant Breeding: A Case Study in Malting Barley. *LC-GC North America magazine*, December.
- Brick, M. A., Heuberger, A. (2015). Proteome characterization of leaves in common bean. *Proteome Proteomes*(2015).
- Yang, W., Catalonotti, C., D'Adamo, S., Wittkopp, T., Ingram-Smith, C., Mackinder, L., Miller, T., Heuberger, A., Peers, G., Smith, K., Jonikas, M., Grossman, A., Posewitz, M. (2014). Alternative acetate production pathways in *Chlamydomonas reinhardtii* during dark anoxia and the dominant role of chloroplasts in fermentative acetate production. *Plant Cell*, 26(11), 4499-4518.
- Heuberger, A., Broeckling, C., Kirkpatrick, K., Prenni, J. (2014). Application of non-targeted metabolite profiling to discover novel markers of quality traits in an advanced population of malting barley. *Plant Biotechnology Journal*, 12(2), 147-160.
- Heuberger, A., Robison, F., Lyons, S., Broeckling, C., Prenni, J. (2014). Evaluating plant immunity using mass spectrometry-based metabolomics workflows. *Frontiers in Plant Science*, 5(291).
- Weyman, P., Beerli, K., Lefebvre, S., Rivera, J., Heuberger, A., Peers, G., Allen, A., Dupont, C. (2014). Inactivation of *Phaeodactylum tricornutum* urease gene using TALEN-based targeted mutagenesis. *Plant Biotechnology Journal*.
- Heuberger, A., Prenni, J. (2014). Utility of metabolite profiling by mass spectrometry to facilitate plant breeding for food quality: a case study in malting barley. *Information Systems for Biotechnology News Report*. [www.isb.vt.edu](http://www.isb.vt.edu)
- Ryan, E., Heuberger, A., Broeckling, C., Ollila, C., Borresen, E., Prenni, J. (2013). Advances in Nutritional Metabolomics. *Current Metabolomics*, 1, 109-120.
- Broeckling, C., Heuberger, A., Prince, J., Ingelsson, E., Prenni, J. (2013). Assigning precursor-product ion relationships in indiscriminant MS/MS data from non-targeted metabolite profiling studies. *Metabolomics*,

9(1), 33-43.

- Weir, T., Manter, D., Sheflin, B., Barnett, B., Heuberger, A., Ryan, E. (2013). Fecal Microbiome and Metabolome Differences Between Colorectal Cancer Patients and Healthy Adults. *PLoS ONE*, 8(8), e70803.
- Abdel-Ghany, S., Day, I., Heuberger, A., Broeckling, C., Reddy, A. (2013). Metabolic engineering of Arabidopsis for butanetriol production using bacterial genes. *Metabolic Engineering*, 20, 109-120.
- Weir, T. L., Manter, D. K., Sheflin, A. M., Barnett, B. A., Heuberger, A., Ryan, E. P. (2013). Stool microbiome and metabolome differences between colorectal cancer patients and healthy adults. *PLoS One*.
- Barnes, B., Wilson, M., Carr, P., Vitha, M., Broeckling, C., Heuberger, A., Prenni, J., Janis, G., Corcoran, H., Snow, N., Chopra, S., Tawfall, A., Sumner, L., Boswell, P. (2013). 'Retention Projection' Enables Reliable Use of Shared Gas Chromatographic Retention Data Across Labs, Instruments, and Methods. *Analytical Chemistry*, 85(23), 1284-1289.
- Broeckling, C., Heuberger, A., Prenni, J. (2012). Large scale non-targeted metabolomic profiling of serum by ultra performance liquid chromatograph-mass spectrometry (UPLC-MS). *Journal of Visualized Experiments*, 73, e50242.
- Heuberger, A., Broeckling, C., Lewis, M., Salazar, L., Bouckaert, P., Prenni, J. (2012). Metabolomic profiling of beer reveals effect of temperature on non-volatile small molecules during short-term storage. *Food Chemistry*, 135(3), 1284-1289.
- Vanamala, J., Kester, A., Heuberger, A., L, R. (2012). Mitigation of Obesity-Promoted Diseases by Black Cumin and Thymoquinone. *Plant Foods for Human Nutrition*, 67(2), 111-119.
- Ryan, E., Heuberger, A., Weir, T., Barnett, B., Broeckling, C., Prenni, J. (2011). Rice bran fermented with *Saccharomyces boulardii* generates a novel metabolite profile with bioactivity. *Journal of Agricultural and Food Chemistry*, 59(5), 1862-1870.
- Weir, T. L., Heuberger, A., Ryan, E. P., Barnett, B. A., Broeckling, C. D., Prenni, J. E. (2011). Rice bran fermented with *Saccharomyces boulardii* generates novel metabolite profiles with bioactivity. *J Food Agric Chem*.
- Melito, S., Heuberger, A., Cook, D., Diers, B., MacGuidwin, A., Bent, A. (2010). A nematode demographics assay in transgenic roots reveals no significant impacts of the Rhg1 locus LRR-Kinase on soybean cyst nematode resistance. *BMC Plant Biology*, 10(104).
- Heuberger, A., Lewis, M., Chen, M., Brick, M., Leach, J., Ryan, E. (2010). Metabolomic and functional genomic analyses reveal varietal differences in bioactive compounds of cooked rice. *PLoS ONE*, 5(9), e12915.

### **Non-Refereed Chapters in Books**

- Leach, J., Davidson, R., Mauleon, R., Carillo, G., Jahn, C., Snelling, J., Bruce, M., Heuberger, A., Ishihara, H., Tanger, P., Stephens, J., Vera Cruz, C., Leung, H. (2010). Genome analyses to understand durable disease resistance in rice. *Genome-Enabled Integration of Research in Plant Pathogen Systems*. Minneapolis: APS Press.

### **Non-Refereed Proceedings or Transactions**

- Sessions-Bresnahan, D., Schauer, K., Heuberger, A., Prenni, J., Carnevale, E. (2014). *Alterations in the equine oocyte and follicle associated with obesity and metabolic syndrome* (1st ed., vol. 34). Journal of Equine Veterinary Science.

Heuberger, A., Robison, F., Prenni, J., Schwartz, H., Brick, M. (2014). *Changes in primary and secondary metabolism associated with tolerance to Sclerotinia sclerotiorum in dry bean* (vol. 57, pp. 59-60). Annual Report of the Bean Improvement Cooperative.

Krisher, R., Greene, A., Stevens, J., Heuberger, A., Schoolcraft, W. (2014). *Elevated maternal BMI results in severely disrupted blastocyst metabolism* (3rd ed., vol. 102, pp. E257). Fertility and Sterility.

Krisher, R., Greene, A., Stevens, J., Heuberger, A., Schoolcraft, W. (2014). *Metabolomic profile of embryo culture medium on day 3 is associated with subsequent blastocyst development* (3rd ed., vol. 102, pp. E209). Fertility and Sterility.

Weir, T., Marschke, R., Brown, R., O'Malia, J., Dickson, E., Bazan, M., Sheflin, A., Heuberger, A., Borresen, E., Pettine, S., Ryan, E. (2013). *Fecal metabolome and microflora differences between colorectal cancer patients and healthy adults* (15th ed., vol. 31). J. of Clinical Oncology.

Krisher, R., Heuberger, A., Paczkowski, M., Stevens, J., Rawlins, M., Schoolcraft, W. (2013). *Metabolomic profiling of human embryos during in vitro culture: which metabolites matter when?* (vol. 100 (3 Supplement), pp. S243-244). Fertility and Sterility.

### **Article in Popular or Trade Magazine**

Prenni, J., Heuberger, A., Sedin, D. (2013). *Non-targeted Metabolite Profiling by UPLC-MS: A Case Study in Beer Reveals Effect of Temperature on Non-Volatile Small Molecules During Storage*. LC-GC North America.

### **Technical Report**

Jahn, Heuberger, A., Cockrell, Manmathan, Randolph, Haley, Peairs, Broeckling (2015). *Bringing the lab to the field – How Plant Biotechnology Can Improve Wheat. 2014 Colorado Winter Wheat Variety Performance Trials (Field Days Technical Report)*. Colorado State University Agricultural Experiment Station.

### **PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS**

October 2015, "Application of non-targeted UPLC-MS metabolomics to understand the contribution of barley to flavor and flavor stability", Colorado Biological Mass Spectrometry Society meeting, CBMSS, (Presenter) Akers, H.

October 2015, "Integrating metabolic profiling and sensory analysis to breed for flavor quality in bread wheat", Colorado Biological Mass Spectrometry Society meeting, CBMSS, (Presenter) Vinson, E.

October 2015, "Secondary metabolites that contribute to genetic resistance of wheat to wheat stem sawfly", Colorado Biological Mass Spectrometry Society meeting, CBMSS, (Presenter) Lavergne.

October 2015, "Improving beer flavor with barley breeding: a metabolomics approach", CSU Graduate School Showcase, CSU, (Presenter) Akers, H., peer-reviewed/refereed.

October 2015, "Applied Metabolomics to Improve Food Crops and Foods: Case Studies in Malting Barley, Beer and Beans", University of Minnesota Department of Horticulture seminar series, UMN.

September 2015, "Identification of physiological, morphological and metabolic traits to enhance biomass accumulation and drought response in sorghum", Sorghum Improvement Conference, SINCA, (Presenter) Jahn, peer-reviewed/refereed.

July 2015, "Application of non-targeted metabolomics to cooked and raw potato tuber: implications to breeding for health traits", Potato Association of America Meeting, PAA, (Presenter) Heuberger, A.,

peer-reviewed/refereed.

- June 2015, "Non-volatile metabolites associated with flavor stability in beer", American Society of Brewing Chemists National meeting, ASBC, (Presenter) Heuberger, A., peer-reviewed/refereed.
- June 2015, "Non-targeted metabolomics reveals phytochemical diversity in onion: implications for human health and disease prevention", American Society of Mass Spectrometry (ASMS), American Society of Mass Spectrometry, (Presenter) Chaparro, J. M., peer-reviewed/refereed.
- June 2015, "Non-targeted metabolomics reveals phytochemical diversity in onion: implications for human health and disease prevention", American Society of Mass Spectrometry meeting, ASMS, (Presenter) Chaparro, peer-reviewed/refereed.
- June 2015, "Non-targeted metabolomics reveals phytochemical diversity in onion: implications for human health and disease prevention", American Society of Mass Spectrometry meeting, ASMS, (Presenter) Chaparro, J., St Louis, MO, peer-reviewed/refereed.
- June 2015, "Non-targeted metabolomics of potato reveals potential to breed for improved content of nutrients and bioactive compounds", Metabolomics Society annual symposium, Metabolomics Society, (Presenter) Chaparro, peer-reviewed/refereed.
- March 2015, "Rapid measurement of beer flavor stability: Application of UPLC-MS metabolomics to develop non-volatile markers of beer stability", American Chemical Society annual meeting, ACS, (Presenter) Sedin, D., peer-reviewed/refereed.
- February 2015, "Metabolomic differences in a susceptible and resistant Beta vulgaris germplasm during early responses to Rhizoctonia solani AG 2-2 IIIB", American Society of Sugar Beet Technologist Biennial Meeting, ASSBT, (Presenter) Webb, K., Fort Collins, CO, peer-reviewed/refereed.
- January 2015, "Application of Metabolomic Technologies to Evaluate Malting Quality", Barley Improvement Conference, American Malting Barley Association, San Diego, CA.
- January 2015, "Metabolomic profiles associated with resistance to Sclerotinia sclerotiorum in dry edible bean", National Sclerotinia Initiative annual meeting, USDA-ARS, Minneapolis.
- 2014, "Pilot dietary intervention with heat stabilized rice bran reveals modulation of microbial metabolism for intestinal health", Lillian Fountain Smith Conference, Fort Collins, CO.
- November 2014, "Mass Spectrometry-Based Metabolic Profiling Reveals Small Molecules Associated with Physiological Resistance to Sclerotinia sclerotiorum in Dry Edible Bean", ASA-CSSA-SSSA Annual Meeting, ASA-CSSA-SSSA, Long Beach, CA, peer-reviewed/refereed.
- November 5, 2014, "The Relationship of Physiological, Morphological and Metabolic Traits to Biomass Accumulation and Drought Response in Sorghum", ASA, CSSA & SSSA International Annual Meeting, (Presenter) Jahn, C. E., Long Beach, CA.
- October 2014, "Elevated maternal BMI results in severely disrupted blastocyst metabolism", American Society of Reproductive Medicine annual conference, ASRM, (Presenter) Krisher, R., Honolulu, HA, peer-reviewed/refereed.
- October 2014, "Metabolomic analysis of medium following individual blastocyst culture predicts pregnancy success", American Society of Reproductive Medicine annual conference, ASRM, (Presenter) Krisher, R., Honolulu, HA, peer-reviewed/refereed.
- October 2014, "Brewing a better beer: application of UPLC-MS metabolomics to develop non-volatile markers of

- beer stability during storage", Colorado Biological Mass Spectrometry Society meeting, CBMSS, (Presenter) Heuberger, A., Denver, CO, peer-reviewed/refereed.
- October 2014, "Dry edible bean exhibits variation in metabolic and hormone profiles associated with partial resistance to white mold (*Sclerotinia sclerotiorum*)", Colorado Biological Mass Spectrometry Society meeting, CBMSS, (Presenter) Robison, F., Denver, CO, peer-reviewed/refereed.
- October 2014, "Improved Nutrition of Colorado Potatoes", CSU San Luis Valley Research Center-Industry Workshop, Colorado State University, Alamosa, Colorado.
- August 2014, "Dry edible bean exhibits variation in metabolic and hormone profiles associated with partial resistance to white mold (*Sclerotinia sclerotiorum*)", American Phytopathological Society annual meeting, APS, (Presenter) Robison, F., Minneapolis, MN, peer-reviewed/refereed.
- July 2014, "Application of UPLC-MS metabolomics to develop non-volatile markers of beer stability during storage", Local Area Brewing Science meeting, American Society of Brewing Chemists, Fort Collins, CO.
- July 2014, "Metabolomic profile of porcine blastocysts: Role of intracellular lipids and glutamine metabolism", Society for the Study of Reproduction meeting, SSR, (Presenter) Krisher, R., Grand Rapid, MI, peer-reviewed/refereed.
- July 9, 2014, "Dietary fiber content in dry edible bean cultivars", Western Society of Crop Science, Bozeman MT, peer-reviewed/refereed.
- June 2014, "A New GC 'Retention Projection' Database Enables Calculation of Appropriate Retention Time Tolerance Windows without Having Standards Physically on Hand", American Society for Mass Spectrometry, ASMS, Baltimore, MD, peer-reviewed/refereed.
- June 2014, "Brewing a better beer: application of UPLC-MS metabolomics to develop non-volatile markers of beer stability during storage", American Society for Mass Spectrometry annual meeting, ASMS, (Presenter) Prenni, J., Baltimore, MD, peer-reviewed/refereed.
- June 2014, "Dietary Rice Bran Phytochemicals and Metabolites for Colorectal Cancer Chemoprevention", Fort Collins, CO, peer-reviewed/refereed.
- April 25, 2014, "The relationship of Physiological, Morphological, and Metabolic Traits to Biomass Accumulation and Drought Response in Sorghum", CSU Ventures Innovation symposium, CSU Ventures, (Presenter) Jahn, C. E., Fort Collins, CO.
- April 17, 2014, "Evaluation of morphology, physiology, and biochemistry for improved bioenergy traits in sorghum", Powerhouse Grand Opening Poster Session, (Presenter) Turner, M., Fort Collins, CO.
- March 2014, "Comprehensive proteomics in dry edible bean lines to characterize phenotypes of pathogen resistance", Cell and Molecular Biology program poster symposium, CSU, Fort Collins, CO, peer-reviewed/refereed.
- March 2014, "Role of primary and secondary metabolism in biomass yield and resistance to drought stress in the bioenergy crop sorghum", Cell and Molecular Biology program poster symposium, CSU, Fort Collins, CO, peer-reviewed/refereed.
- February 28, 2014, "Role of primary and secondary metabolism in biomass yield and resistance to drought stress in the bioenergy crop sorghum", Cell and Molecular Biology Poster Symposium, (Presenter) Jahn, C. E., Fort Collins, CO.
- February 2014, "Metabolomics in crop science: potential for improved varietal selection, food processing, and

- understanding of complex phenotypes", CSU Dept. of Soil and Crop Sciences seminar series, Fort Collins, CO.
- January 2014, "Application of non-targeted metabolomics to identify metabolic factors associated with resistance to *Sclerotinia sclerotiorum* in common bean", CSU Plant Supergroup seminar series, Colorado State University Plant Supergroup seminar series, Fort Collins, CO.
- January 2014, "Metabolomic profiles associated with resistance to *Sclerotinia sclerotiorum* in dry edible bean", National *Sclerotinia* Initiative annual meeting, Minneapolis, MN.
- January 2014, "Metabolomic Profiles Associated with Resistance to *Sclerotinia Sclerotiorum* in Dry Edible Bean", National *Sclerotinia* Initiative annual meeting, USDA-ARS, (Presenter) Heuberger, A., Minneapolis, MN, peer-reviewed/refereed.
- October 2013, "Changes in primary and secondary metabolism associated with tolerance to *Sclerotinia sclerotiorum* in common bean", Portland, OR.
- June 2013, "Integrating the malting barley metabolome, phenome and genome using a novel non-targeted UPLC-MS metabolomics workflow", American Society for Mass Spectrometry annual symposium, Minneapolis, MN, peer-reviewed/refereed.
- June 2013, "Identification of metabolites associated with quality traits in barley (*Hordeum vulgare* L.) using a non-targeted indiscriminate MS/MS metabolomics approach", Metabolomics Society annual symposium, Washington DC, peer-reviewed/refereed.
- May 2013, "Stool Microbiome and Metabolome Differences Between Colorectal Cancer Patients and Healthy Adults", Chicago, IL, peer-reviewed/refereed.
- November 2012, "Breeding Barley to Brew a Better Beer", CSU Dept. of Biochemistry and Molecular Biology Thursday after Class seminar series, Ft Collins, CO.
- October 2012, "Identification of metabolites associated with quality traits in barley using a non-targeted idMS metabolomics approach", CSU Dept. of Animal Sciences graduate seminar course, Fort Collins, CO.
- April 2012, "Metabolomic profiling of beer reveals effect of temperature on non-volatile small molecules during short-term storage", Colorado Biological Mass Spectrometry Society meeting, Ft Collins, CO.
- October 2011, "Identification of metabolite markers that correlate with grain quality in barley (*Hordeum vulgare* L.)", ASA-CSSA-SSSA Annual Annual Symposium, San Antonio, TX, peer-reviewed/refereed.
- October 2011, "Influence of environment on the metabolite profile of cooked rice (*Oryza sativa* L.)", ASA-CSSA-SSSA Annual International Symposium, San Antonio, TX, peer-reviewed/refereed.
- August 2011, "Metabolomic Profiles of *Oryza sativa* and influence of genetic diversity", Ph.D. dissertation defense, Colorado State University, Fort Collins, CO.
- November 2010, "Genomic and metabolomic profiling of a rice core collection that exhibit variable effects on lymphoma", ASA-CSSA-SSSA Annual International Symposium, Long Beach, CA, peer-reviewed/refereed.
- October 2010, "Characterization of *Saccharomyces boulardii*-fermented rice bran", CSU Research In Progress Immunology Group seminar series, Fort Collins, CO.
- March 2010, "Investigation of the effect of rice bran metabolites on components of the immune system: A Crops for Health approach", CSU Research In Progress Immunology Group seminar series, Fort Collins, CO.

November 2009, "Phytochemical Variation in Rice: Implications for Human Nutrition & Health", ASA-CSSA-SSSA, Annual International Symposium, Pittsburgh, PA, peer-reviewed/refereed.

June 2009, "Metabolomic Profiling of Genetically Diverse Cultivars to Assess Disease Prevention Traits", Western Society of Crop Science, Annual Conference, Fort Collins, CO, peer-reviewed/refereed.

December 2008, "QTL Mapping & Database Development", CSU Crops for Health working group, Fort Collins, CO.

May 2008, "Using nematode demographics assays in functional testing of candidate Glycine max genes for resistance to Heterodera glycines", Master's degree thesis defense, University of Wisconsin-Madison, Madison, WI.

### **OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD**

Jahn, C., Heuberger, A., Kirkwood, J., Broeckling, C., Prenni, J., Turner, M., Collins, C. "Relationships among Physiological, Morphological and Metabolomic Traits Related to Biomass in Sorghum." (Application: April 24, 2014).

### **TEACHING:**

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2016	Spring	FTEC578 - Bioactives and Probiotics for Health	3	10
2016	Spring	FTEC578 - Bioactives and Probiotics for Health - Recitation	0	10
2016	Spring	HORT495 - Independent Study	18	5
2016	Spring	HORT581A3 - Metabolomics: Detection and Data Analysis	2	17
2016	Spring	HORT581A3 - Metabolomics: Detection and Data Analysis - Lab	0	17
2016	Spring	HORT698 - Research	18	15
2016	Spring	HORT784 - Supervised College Teaching	18	5
2015	Fall	HORT698 - Research	18	18
2015	Summer	HORT698 - Research	18	7

### **Guest Lectures:**

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2015	Fall	FSHN500 - Food Systems, Nutrition, Food Security	1	Face to Face
2015	Spring	FTEC572 - Food Biotechnology	1	Face to Face
2014	Fall	SOCR730 - Topics in Plant Breeding	1	Face to Face
2011	Spring	SOCR430 - Plant Biotechnology	1	Face to Face
2010	Fall	AGRI692 - International Agricultural Systems	1	Face to Face
2010	Spring	SOCR330 - Principles in Genetics	2	Face to Face

### **EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS**

#### **Presentation**

Plant and Food Systems. Youth, Arvada, CO. Number of times program was made: 1. Total number of participants: 50. Percent Responsible: 100%. 2015.

### **COMMITTEES**

Faculty Advisory Board for Interdisciplinary Studies Program in Food Science/Safety, (2015 - Present).



Faculty Advisory Committee for the Proteomics and Metabolomics Facility, (January 2015 - Present).

One Health Strategic Advisory Committee, (2015 - Present).

Search for Assistant Professor in Food Science and Nutrition, (2014 - 2015).

CSU Graduate Student Showcase, (November 2015).

CSU Graduate Student Showcase, (February 2015).

CVMBS (CSU) Research Day poster competition, (January 2015).

Aspen Science Street Fair, Aspen CO, (August 2013).

CSU San Luis Valley Research Center-Industry Workshop, (October 2014).

Student Technology Board, College of Agricultural Sciences, (2009 - 2010).

Colloquium in the Life Sciences, (2008 - 2010).

Student Technology Board, College of Agricultural Sciences, (2008 - 2009).

Search for Department Head for Dept. of Horticulture and Landscape Architecture, (2015 - Present).

Graduate Admissions Committee, (2014 - Present).

Organizational Development and Learning Committee, Office of the Vice President for Research, (2012 - 2013).

### **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

American Society of Brewing Chemists. (2015 - Present).

Potato Association of America. (2015 - Present).

Bean Improvement Cooperative. (2013 - Present).

Colorado Biological Mass Spectrometry Society. (2011 - Present).

Crop Science Society of America. (2008 - Present).

Outcomes Magazine. (2015).

KUNC. (2012).

Editor, Associate Editor, Crop Science Society of America. (January 2016 - Present).

Reviewer, Journal Article. (2011 - Present).

### **OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH**

Academic, Proteomics and Metabolomics Facility/Colorado State University, Fort Collins, CO, United States. (October 1, 2014 - Present).

For Profit Organization, Agrisor Laboratories, Denver, CO, United States. (2015).

For Profit Organization, Busch Agricultural Resources LLC, Fort Collins, CO, United States. (2015).

For Profit Organization, Heartland Plant Innovations, Manhattan, KS, United States. (2015).

Guest Speaker, Aspen Science Center (Street Fair), Aspen, CO. (2013).

Guest Speaker, Aspen Science Center (Street Fair), Aspen, CO. (2012).

Discussant, NPR (KUNC). (2012).

Poudre Valley Hospital, Sharing the Cancer Journey support group, Fort Collins, CO. (2010).

Putnam Elementary School, Fort Collins, CO. (2010).

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