Argelia Lorence, Ph.D.

Professor of Metabolic Engineering
James and Wanda Lee Vaughn Endowed Professorship
Department of Chemistry and Physics
Arkansas State University (A-State)

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Education

PhD, Biotechnology (1997) *Instituto de Biotecnología (IBT), Universidad Nacional Autónoma de México (UNAM),* Cuernavaca, Mexico. Advisor: Prof. Alejandra Bravo de la Parra.
Dissertation: "Analysis of the Pore-forming Activity of *Bacillus thuringiensis* Cry Proteins in the Presence of their Native Receptor"

MS, Biotechnology (1995), *Instituto de Biotecnología (IBT), Universidad Nacional Autónoma de México (UNAM),* Cuernavaca, Mexico. Advisor: Prof. Rodolfo Quintero-Ramírez.
Dissertation: "Design of a Novel Screening Method for New *Bacillus thuringiensis* δ-Endotoxins"

BS, Biochemical Engineering (1991), *Universidad Autónoma Metropolitana-Iztapalapa UAM-I),* Mexico.

Appointments

2017 – date	*James and Wanda Lee Vaughn Endowed Professor*
2017 - date	Coordinator, Ad Hoc Board, North America Plant Phenotyping Network (NAPPN) – member of the committee since 2016
2017 - date	Co-Lead, Wheat and Rice Center for Heat Resilience (WRCHR), an NSF funded research consortium
2015 – date	*Professor of Metabolic Engineering*, Department of Chemistry and Physics, A-State, Jonesboro, AR, USA Lead, Plant High Throughput Phenotyping Facility, A-State, Jonesboro, AR, USA
2014 - 2017	Co-Lead*,* Plant Imaging Consortium (http://plantimaging.cast.uark.edu/)*,* an NSF funded research consortium
2009 - 2015	*Associate Professor of Metabolic Engineering* (*tenured May 2010*), ABI and Department of Chemistry and Physics, A-State, Jonesboro, AR, USA
2005 - 2009	*Tenure-Track Assistant Professor of Metabolic Engineering*, Arkansas Biosciences Institute (ABI), and Department of Chemistry and Physics, A-State, Jonesboro, AR, USA
2002 - 2005	*Post-doctoral Research Associate*, Department of Plant Pathology, Physiology and Weed Science (PPWS), Virginia Tech, Blacksburg, VA
2000 - 2001	*Visiting Scientist*, Department of Plant Pathology, Physiology and Weed Science (PPWS), Virginia Tech (VT), Blacksburg, VA, USA
2000	*Visiting Scientist*, Department of Biology, Texas A&M University (TAMU), College Station, TX, USA
1998 - 2002	*Assistant Professor*, *Centro de Investigación en Biotecnología (CEIB), Universidad Autónoma del Estado de Morelos (UAEM),* Cuernavaca, México

Continuous education

- "Communications Workshop: Becoming EPSCoR Champions" organized by the National Science Foundation (NSF), Little Rock, AR March 12-13, 2015.
- "Summer Leadership Institute" organized by Society for the Advancement of Hispanic/Chicanos and Native Americans in Science (SACNAS) and the American Association for the Advancement of Sciences (AAAS), Washington, DC July 19-23, 2010.
- "Coaching Strong Women in the Art of Strategic Persuasion" organized by the Committee On the Advancement of Women Chemists (COACh) Annual Spring Meeting of the American Chemical Society. Atlanta, GA, March 25, 2006.
- "Communicating Science to the Public" organized by Drs. Aldemaro Romero and Amy Pierce, Arkansas State University, Jonesboro, March 4, 2006.
- Training course for scientists to facilitate their abilities to communicate science to the media imparted by Fleishman-Hillard of Mexico. Organized by *AgroBio* México and the Mexican Society of Biotechnology and Bioengineering *(SMBB).* September 9, 2001, Veracruz, Mexico.

Honors and Awards

2017	Recipient, *James and Wanda Lee Vaughn Endowed Professorship*
2017	Recipient, *ABI Established Investigator of the Year*
2014 -	Arkansas Research Alliance Fellow, Arkansas Research Alliance (Dec 2014)
2014-	Elected *Secretary*, Phytochemical Society of North America (summer 2014)
2014 -	Member, Committee for Research Development Program, Arkansas INBRE Program
2014-16	Member, Scientific Committee, Phenodays, a conference specialized in plant high throughput phenotyping organized by LemnaTec
2012 -	Member, Advisory Board, Phytochemical Society of North America
2011	Recipient *Outstanding Hispanic Achiever of the Year*, award from the Hispanic Community Services of Jonesboro, AR, May 14, 2011
2011	Interim Chair, *Student Affairs Awards Committee* of the Society for In Vitro Biology
2010 -	*Faculty of 1000* –Plant Biology - Agriculture and Biotechnology Section
2010	*Distinguished Woman in Science*, Congress of the State of Morelos, Cuernavaca, Morelos, Mexico (one of nine awards given to distinguished women as part of the Day of Women's Celebration, March 8, 2010)
2010	*Recognition for Contributions to Science and Technology of the State of Morelos*, Government of the City of Cuernavaca, Cuernavaca, Morelos, Mexico (special recognition given as part of the Day of Women's Celebration, March 8, 2010)
2009-	Member of the *Student Affairs Awards Committee* of the Society for In Vitro Biology
2008	Recipient *Dean's Horizons Award 2008*, College Sciences & Mathematics, ASU
2007-	Elected Secretary of the *Faculty Research Committee*, Arkansas State University, September 2007. Re-elected for the period 2008-2009
2007	*Ad-honorem* external reviewer, National Council of Science, Technology and Innovation (*Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT*), Panama City, Panama, May 2007 to date
2006	Featured mentor in the book *The Paths We Tread II*, Minority Environmental Leadership Development Initiative (MELDI), University of Michigan
2006	Member Sigma Xi, June 2006 to present
2006	Travel Award, Committee on the Advancement of Women Chemists (COACh).
2002	Arthur Neish Young Investigator Award, Phytochemical Society of North America (PSNA)

2002 Post-doctoral Travel Award, Virginia Tech
2000 Post-doctoral Fellowship, *UAEM,* México
1999-2001 Young Investigator Award (equivalent of the CAREER-NSF award) *Consejo Nacional de Ciencia y Tecnología, (CONACYT),* México
1999 Teaching Award, *Facultad de Biología, Universidad Autónoma del Estado de Morelos*
1998 "*Alfonso Caso* Medal" 1st place PhD, class of 1997, *UNAM*, Mexico
1997 "*Gabino Barreda* Medal" 1st place MS, class of 1995, *UNAM*, Mexico
1995-2001 Scholar, *Sistema Nacional de Investigadores* (*SNI*), Mexico
1992-1997 Scholar, *CONACYT*, México. Funding for MS and PhD studies
1993 1st place "*Maestro Jesus Silva Herzog* Economy Award" Participant in the winner project: "The Technological Change in the Mexican Agriculture and Agro-industry"

Research Sponsors (PI and Co-PI of grants that have secured over $17 M in funding since joining A-State)

Current ($5.934M current; $1.326M coming to my lab directly)

Period	Amount	Source	Project title (PI)
08/01/17-07/31/21	$5,780,000 [A-State $1.192M]	NSF EPSCoR Track 2 Award #1736192	Comparative Genomics and Phenomics Approach to Discover Genes Underlying Heat Stress Resilience in Cereals H Walia (PI, U Nebraska), K Jagadish (Co-PI, Kansas State U), A Lorence (Co-PI, A-State)
01/01/15-06/30/18	$75,000	Arkansas Research Alliance	Fellowship, A Lorence (PI)
08/01/16-07/31/17	$5,555	Research Agreement USDA ARS DBNRRC	Support of Agricultural Research of Mutual Interest
04/01/17-03/31/18	$20,437	Arkansas Corn Grain and Sorghum Board	Genomes to Fields (G2F) in Arkansas - E Hood (A-State, PI), F Goggin (UAF, Co-PI) and A Lorence (A-State, Co-PI)
05/15/17-06/30/18	$53,446	ABI	Enhancing Tolerance to Abiotic Stresses Via Manipulation of Ascorbate in Soybeans – A Lorence (PI)

Pending

Title: "Harnessing Genome-to-Phenome Knowledge to Optimize Plant Bioenergy Production"
PIs: Robert J Doerksen (University of Missouri), Fabricio Medina-Bolivar (A-State), Mark Hamann (Medical University of South Carolina), Sudesha Roy (University of Missouri)
My role: Collaborator
Agency: NSF EPSCoR Track 2
Budget: $6M (08/01/18-07/31/22)
Submitted: 01/26/18.

Past ($8.035 M since joining A-State)

Period	Amount	Source	Project Title
10/01/14-10/31/17	$6,000,000 [AR $3.15M, A-State $1.36M]	NSF EPSCoR Track 2 Award IIA-1430427	Collaborative Research on Plant Stress Responses Through Innovations in Phenomics and Molecular Imaging Technologies G McClure (PI AR), J Walker (PI MO), **A Lorence**, F Goggin (Co-PIs AR), S. Jurisson, D Braun, YC Tai (Co-PIs MO)
03/01/13-02/28/18	$2,035,509 [A-State $176K]	NSF-IOS-Plant Genome Research Project Award # 1238125	Physiological and Genetic Mechanisms Underlying Salt Tolerance in Rice Across Developmental Stages – H Walia (U Nebraska, PI), AJ Lorenz, A Samal, D Wang (U Nebraska, Co-PIs), **A Lorence** (Co-PI)
04/01/16-03/31/17	$25,000	Arkansas Corn Grain and Sorghum Board	Bringing Genomes to Fields (G2F) to Arkansas - E Hood (A-State, PI), F Goggin (UAF, Co-PI) and **A Lorence** (A-State, Co-PI)
01/23/15-10/31/16	$35,279	AEDC	Workshop on Plant High Throughput Phenotyping **A Lorence** (PI)
08/01/13-08/31/16	$58,955	Research Agreement USDA ARS DBNRRC Project # 6225-21220-005-26J	Acquisition of Goods and Services – **A Lorence** (PI)
08/01/13-12/31/15	$30,000	Service Contract	Screening a Rice Diversity Panel for High Vitamin C Content – **A Lorence** (PI). This is a service contract to NSF-Plant genome grant by (S McCouch, Cornell U, PI)
08/01/14-09/31/15	$84,676	Arkansas Center for Plant Powered Production (P3)	Developing Novel Tools to Assess the Impacts of Plant Fatty Acid Desaturation on Redox Responses to Stress F Goggin (PI), **A Lorence** (Co-PI)
05/01/10-04/30/15	$579,198	NIH- Arkansas INBRE subaward from P20-GM103429	Mechanisms Leading to Enhanced Tolerance to Oxidative Stress and Increased Lifespan in Arabidopsis: Role of Mitochondrial, ER, and Chloroplastic Enzymes Involved in Ascorbate Biosynthesis **A Lorence** (PI)
06/04/14-08/04/14	$6,400	ASTA (14-EPS2-0023)	ASU-ASSET Initiative SREIP – Zana Robinson
01/01/14-06/30/14	$11,798	AState-College of Sciences and Mathematics	Bio-Guided Screening of Arkansas Native Plants to Identify Lead Compounds for the Treatment of High Risk Pediatric Hematological Cancers – F Rivas (St Judes, PI), T Marsico and **A Lorence** (Co-PIs)

08/01/12-12/31/13	$22,400 plus $8K AState match	Research Support Agreement USDA ARS DBNRRC	Vitamin C Screening and Phenotyping of Selected Rice Materials – **A Lorence** (PI)
07/01/11-12/31/12	$120,000 [AState $25K]	Statewide ABI	Developing an Immunotoxicology Center in Arkansas - K Gilbert (PI) and **A Lorence** (Co-PI)
01/01/12-12/31/12	$4,000	EPSCoR Fellowship Award (#EPS-1003970), ASTA	The Interplay Between Ascorbic Acid and Abscisic Acid (ABA) in ABA Insensitive Arabidopsis Mutants - **A Lorence** (PI)
09/01/11-08/20/12	$40,000 [AState $14K]	Arkansas Space Grant Consortium (ASGC)	Genetic Engineering of the Phosphoinositol Pathway as an Effective Strategy for Enhancing Production of Plant Antioxidants for Advanced Life Support - M Khodakovskaya (PI), **A Lorence** (Co-PI)
01/01/12-12/31/12	$4,000	NSF EPSCoR P3 Center Next-Gen Sequencing Pilot Award	Transcriptome sequencing approach to understanding the role of the cytosolic and ER pools of ascorbate in Arabidopsis – **A Lorence** (PI)
08/01/08 -12/31/11	$190,000	Arkansas Children's Hospital Research Institute (ACHRI)	TCE Toxicity and Remediation –K Gilbert (PI), C Cramer, **A Lorence** and F Medina-Bolivar (Co-PIs)
01/25/11- 04/30/11	$20,000	NIH-Arkansas INBRE	Acquisition of Equipment to Enhance Teaching and Research at Arkansas State University- **A Lorence** (PI), S Yu, E Benjamin and R Buchanan (Co-PIs)
05/15/08 – 10/31/10	$249,860	NSF EPSCoR P3 Center Collaborative Seed Grant Program	Role of Ascorbate in Mitigating ER and Cellular Stress Associated with Transient and Stable Plant-Based Protein Production - **A Lorence** (PI), M Dolan and V Srivastava (Co-PIs)
05/15/08 -10/31/10	$249,978	NSF EPSCoR P3 Center Collaborative Seed Grant Program	Intersection of Ascorbate Regulation, Jasmonate-Signaling, and Defense Against Hervibores in Plants – F Goggin and **A Lorence** (Co-PIs)
12/15/09 -10/31/10	$40,000 [AState $14K]	Arkansas Space Grant Consortium	Enhancing Production of Pharmacologically Active Phytochemicals in Plants for Advanced Life Support n Space Exploration
01/01/06- 04/30/10	$603,574	NIH-Arkansas INBRE	Role of Ascorbate in Coordinating Growth and Senescence in *Arabidopsis thaliana* – **A Lorence** (PI)

10/11/09-03/31/11	$150,000 [AState $3,8K]	NIH-AREA	Artemisinin Biosynthesis: Role of Reactive Oxygen - P Weathers (PI), K Wobbe (Co-PI), **A Lorence** (consultant)
07/01/06- 06/30/09	$57,336	ABI	Collaborative Seed Grant: Mechanisms of Toxicity and Remediation of Superfund Environmental Toxicants - **A Lorence**, F Medina-Bolivar and K Redeker (Co-PIs)
01/01/09-04/30/09	$50,000	NIH-Arkansas INBRE	Acquisition of qRT-PCR and Electrophysiology Equipment - M Srivatsan, **A Lorence**, R Buchanan (Co-PIs)
10/01/07-06/30/09	$25,000	Nanotechnology Center, UALR	Arabidopsis as a Tool to Assess Toxicity and Fate Nanomaterials **A Lorence** (PI)
07/01/06-12/31/08	$6,500	Faculty Research Fund, ASU	Unraveling Sedative Triterpene Synthesis in *Galphimia glauca*: Phytochemistry and Functional Genomics Join Forces – **A Lorence** (PI)
01/01/08-04/30/08	$24,518	NIH-Arkansas INBRE	Acquisition of New Equipment and Shared Facilities – R Buchanan, M Srivatsan, **A Lorence** (Co-PIs)
07/01/07-06/30/08	$200,000	ACHRI	Developing an Immunotoxicology Center in Arkansas - K Gilbert (PI), S Blossom, B Przybyla, N Pumford, J Fuscoe, F Medina-Bolivar, K Redeker, and **A Lorence** (Co-PIs)
08/01/05-06/30/08	$230,000	ABI	Study and Manipulation of the Vitamin C – Cell Wall Metabolic Network for the Development of Plants with Enhanced Nutritional and Agronomical Properties – **A Lorence** (PI)
07/01/06-10/31/06	$2,000	ASU Research Foundation	Funding to attend "Workshop on HPTLC-MS", October 9-11, 2006, Berlin, Germany – **A Lorence** (PI)
11/01/04-07/30/15	$29,000	Tobacco Initiative Fund, Virginia Tech	Metabolic Engineering for the Discovery of Human Therapeutics in Tobacco – F Medina-Bolivar (PI), **A Lorence** (Co-PI)
01/01/99-12/31/01	$100,000	*Consejo Nacional de Ciencia y Tecnología (CONACYT),* Mexico	Transformation of *Camptotheca acuminata* Cell Lines for the Production of Camptothecin, A Terpene with Anticancer and Antiretroviral Activities – **A Lorence** (PI)
01/01/95-12/31/97	$4,000	*Dirección General de Estudios de Posgrado, UNAM,* Mexico	Characterization of Regions in the Domain I of *Bacillus thuringiensis* Cry Proteins Involved in Their Pore- Forming Activity – **A Lorence** (PI)

Consulting

November 01 – March 02

Bioskinco, SA de CV, Mexican biotechnological company producer of "*Epifast*" skin substitute for the treatment of diabetic foot, burns and other skin conditions. Main activity: preparation of grant proposals to the Mexican government.

1995-1998

CAMBIOTEC, initiative of the International Development Research Center (IDRC, Canada). International network with the mission to facilitate biotechnology-based applications in the agri-food and environmental management fields in Latin America. Advisor: Dr. José Luis Solleiro-Rebolledo. Main activity: development of "state of the art" reports published in Spanish and distributed in México, Colombia, Chile, Argentina and Canada. Topics: biopesticides (1996), potato (1997) and agrobiologicals (1998).

October 91 – January 92

Advisor: Prof. Rodolfo Quintero-Ramírez, Director of the Biotechnology Regional Program for Latin America and the Caribbean of the United Nations (UNIDO). Main activities: design of an industrial plant to produce *Bacillus thuringiensis*-based biopesticides to satisfy the demand of the countries of "Pacto Andino" (Bolivia, Colombia, Ecuador, Peru, and Venezuela). Make a directory of Mexican biotechnological companies.

Scientific Publications - English (*student authors)

Peer-Reviewed Articles (32)

- Gehan MA, Fahlgren N, Abbasi A, Berry JC, Callen ST, Chavez L, Doust A, Feldman M, Gilbert K, Hodge J, Hoyer JS, Lin A, Liu S*, Lizarraga C, **Lorence A**, Miller M, Platon E, Tessman M, Sax T (2017) PlantCV v2.0: Image Analysis Software for High-Throughput Plant Phenotyping. *PeerJ* 5:e4088; doi 10.7717/peerj.4088.
- Liu S* Acosta-Gamboa L*, Huang X, **Lorence A** (2017) Novel low cost 3D surface model reconstruction system for plant phenotyping. *Journal of Imaging* 3, 39, doi:10.3390/ jimaging3030039.
- Aboobucker SI*, Suza WP*, **Lorence A** (2017) Characterization of two *Arabidopsis* L-gulono-1,4-lactone oxidases, AtGulLO3 and AtGulLO5, involved in ascorbate biosynthesis. *Reactive Oxygen Species* 4(12): 1-29.
- Hawkesford ML, **Lorence A** (2017). Plant phenotyping: increasing throughput and precision at multiple scales. *Functional Plant Biology* 44: v-vii,doi.org/10.1071/FPv44n1_FO.
- Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cózatl D, **Lorence A** (2017). Moderate to severe water limitation differentially affects the phenome and ionome of Arabidopsis. *Functional Plant Biology* 44: 94-106, doi.org/10.1071/FP16172.
- Cruz-Morales S, Castañeda-Gómez J, Rosas-Ramírez D, Fragoso-Serrano M, Figueroa-González G, **Lorence A**, Pereda-Miranda RG (2016) Resin glycosides from *Ipomoea alba* seeds as potential chemosensitizers in breast carcinoma cells. *Journal of Natural Products* 79(12): 3093-3104.
- Yactayo-Chang JP*, Yoon S, Teoh KT, Hood NC, **Lorence A**, Hood E (2016) Failure to over-express expansin in multiple heterologous systems. *New Negatives in Plant Science*. 3: 10-18.
- Aboobucker SI*, **Lorence A** (2016) Recent progress on the characterization of aldonolactone oxidoreductases. *Plant Physiology and Biochemistry* 98: 171-185.
- Goggin FL, **Lorence A,** Topp C (2015) Applying high-throughput phenotyping to plant–insect interactions: picturing more resistant crops *Current Opinion Insect Science* 9: 69-76.
- Lisko KA*, Torres R*, Harris RS*, Belisle M*, Jullian B*, Vaughan MM*, Chevone BI, Mendes P, Nessler CL, **Lorence A** (2013) Elevating vitamin C content via overexpression of

myo-inositol oxygenase and L-gulono-1,4-lactone oxidase in Arabidopsis leads to enhanced biomass and tolerance to abiotic stresses. *In Vitro Cellular and Developmental Biology Plant*. 49:643-655.

- Avila CA, Arévalo-Solíz ML, **Lorence A**, Goggin FL (2013) Expression of *α-DIOXYGENASE 1* in tomato and Arabidopsis contributes to plant defenses against aphids. *Molecular Plant-Microbe Interactions* 26(8):977-986.
- Lisko KA*, Hubstenberger J, Phillips G, Belefant-Miller H, McClung A, **Lorence A** (2013). Ontogenetic changes in vitamin C in selected rice varieties. *Plant Physiology and Biochemistry* 66: 41-46.
- Sharma A*, Folch-Mallol JL, Cardoso-Taketa AT, **Lorence A**, Villarreal ML (2012) DNA barcoding of the Mexican sedative and anxiolytic plant *Galphimia glauca*. *Journal of Ethnopharmacology* 144:371-378.
- Cruz-Morales S, Castañeda-Gómez J, Figueroa-González G, Mendoza-García AD, **Lorence A**, Pereda-Miranda R (2012). Mammalian multidrug resistance lipopentasaccharide inhibitors from *Ipomoea alba* seeds. *Journal of Natural Products* 75: 1603-1611.
- Haroldsen V, Chi-Ham CL, Kulkarni S*, **Lorence A**, Bennet AB (2011) Constitutively expressed DHAR and MDHAR influence fruit, but not foliar ascorbate levels in tomato. *Plant Physiology and Biochemistry* 49: 1244-1249.
- Goggin FL, Avila CA, **Lorence A** (2010) Vitamin C content in plants is modified by insects and influence susceptibility to herbivory. *BioEssay*s 32: 777-790.
- Suza WP*, Avila CA, Carruthers K, S Kulkarni*, Goggin FL, **Lorence A** (2010) Exploring the Impact of Wounding and Jasmonates on Ascorbate Metabolism. *Plant Physiology and Biochemistry* 48: 337-350.
- Mannan A, Liu C, Arsenault P, Towler MJ, Vail D, **Lorence A**, Weathers PJ (2010) DMSO triggers the generation of ROS leading to an increase in artemisinin and dehydroartemisinic acid in *Artemisia annua* shoot cultures. *Plant Cell Reports*, 29(2):143-152.
- Zhang W, **Lorence A**, Gruszewski HA, Chevone BI, Nessler CL (2009*) AMR1*, an Arabidopsis gene that coordinately and negatively regulates the mannose/L-galactose ascorbic acid biosynthetic pathway. *Plant Physiology* 150: 942-950.
- Dabul ANG*, Belefant-Miller HB, RoyChowdhury M, Hubstenberger JF, **Lorence A**, Phillips GC (2009) Screening of a broad range of rice *(Oryza sativa* L.) germplasm for *in vitro* rapid regeneration and development of an early prediction system. *In Vitro Cellular and Developmental Biology Plant* 44: 414-420.
- Pereda-Miranda R, Villatoro-Vera R*, Bah M, **Lorence A** (2009) Pore-forming activity of morning glory resin glycosides in model membranes. *Revista Latinoamericana de Química* 37(2): 144-154.
- Suza WP*, Harris RS*, **Lorence A** (2008) Hairy roots: From high-value metabolite production to phytoremediation. *Electronic Journal of Integrative Biosciences.* Published online November 21, 2008. http://clt.astate.edu/electronicjournal/Articles.htm.
- Schroeter C, House LA, **Lorence A** (2007) Fruits and Vegetable Consumption Among College Students in Arkansas and Florida: Food Culture vs. Health Knowledge. *International Food and Agribusiness Management Review* 10: 63-89.
- **Lorence A**, Mendes P, Chevone BI, Nessler CL (2004) *myo*- Inositol Oxygenase Offers a Possible Entry Point into Plant Ascorbate Biosynthesis. *Plant Physiology* 134: 1200-1205.
- **Lorence A**, Medina-Bolivar F, Nessler CL (2004) Camptothecin and 10-Hydroxycamptothecin from *Camptotheca acuminata* Hairy Roots. *Plant Cell Reports* 22: 437-441.
- **Lorence A** and Nessler CL (2004) Camptothecin, Over Four Decades of Surprising Findings. *Phytochemistry* 65: 2735-2749. Review paper by invitation to section Molecules of Interest.

- **Lorence A**, and Verpoorte R (2004) Gene Transfer and Expression in Plants. *Methods in Molecular Biology* 267: 329-350.
- Radzio J, **Lorence A**, Chevone BI, Nessler CL (2003) L-Gulono-1,4-lactone Oxidase Expression Rescues Vitamin C Deficient Arabidopsis (*vtc*) Mutants. *Plant Molecular Biology* 53: 837-844.
- Soberón M, Pérez RV, Núñez-Valdéz ME**, Lorence A**, Gómez I, Sánchez J, Bravo A (2000) Evidence for Intermolecular Interaction as a Necessary step for Pore-Formation Activity and Toxicity of *Bacillus thuringiensis* Cry1Ab Toxin. *FEMS Microbiology Letters* 191: 221-225.
- **Lorence A**, Darszon A, Bravo A (1997) Aminopeptidase Dependent Pore Formation of *Bacillus thuringiensis* Cry1Ac Toxin on *Trichoplusia ni* Membranes. *FEBS Letters* 414: 303-307.
- **Lorence A**, Darszon A, Díaz C, Liévano A, Quintero R, Bravo A (1995) δ-Endotoxins Induce Cation Channels in *Spodoptera frugiperda* Brush Border Membrane in Suspension and in Planar Lipid Bilayers". *FEBS Letters* 360: 217-222.
- Bravo A, **Lorence A**, Quintero R (1995) Biopesticides Compatible with the Environment: *Bacillus thuringiensis* a Unique Model. *Biocontrol* 1: 41-55.

Conference Proceedings (1)

- Torres R*, Yactayo-Chang J*, García-López PM, Gurrola-Díaz CM, **Lorence A** (2011). Domesticated and wild lupins accumulate elevated foliar ascorbate levels. In "Lupin crops – an opportunity for today, a promise for the future". Naganowska B, P Kachlicki, B Wolko (eds). Proceedings of the 13th International Lupin Conference Poznan, Poland p. 190-194. ISBN 978-83-61607-73-1.

Submitted Manuscripts (2)

- Dolan MC, Medrano G, Rubio N*, Yactayo-Chang J*, **Lorence A**. Overcoming recombinant protein expression set points: Increased antioxidant levels improve foreign protein accumulation and recovery in plants. *BMC Biotechnology*.
- Reynolds D, Baret F, Welcker C, Bostrom A, Ball J, Cellini F, **Lorence A**, Chawade A, Khafif M, Noshita K, Mueller-Linow M, Zhou J, Tardieu F. Review. What is cost-efficient phenotyping? Optimizing costs for different scenarios. *Plant Science.*

Manuscripts in Preparation (11)

- Liu S*, Acosta-Gamboa LM*, Huang X, **Lorence A**. A novel approach to leaf counting for Arabidopsis. *Journal of Imaging.*
- Campbell ZA*, Acosta-Gamboa LM*, Nepal N*, **Lorence A**. Engineering plants for tomorrow: how high-throughput phenotyping is contributing to the development of better crops. *Phytochemistry Reviews*.
- Acosta-Gamboa LM*, Liu S*, Campbell Z*, Torres R*, Creameans J*, Suza W*, Yactayo-Chang JP*, Gaxiola R, **Lorence A**. High throughput phenotyping of high ascorbate Arabidopsis lines under abiotic stress conditions. *Plant Physiology and Biochemistry*.
- Campbell Z*, Acosta-Gamboa LM*, Nepal N*, **Lorence A**. Engineering Plants for Tomorrow: How High-throughput Phenotyping is Shaping the Future of Modern Crops. *Phytochemistry Reviews.*
- Lellis AD, Patrick RM, Tseng CY, Mayberry LK, Bricker TM, Roose JL, Hellmann HA, **Lorence A**, Campbell Z*, Mayberry R, Moheeth M, Masood A, Browning KS. The plant specific translation initiation factor eIFiso4G is necessary for the synthesis of photosystem II components and proper chloroplast development. In preparation to *Plant Physiology*.

- Gao F, Acosta-Gamboa LM*, **Lorence A**, Schueller MJ, Ferrieri RA, Babst BA. Identification of leaf nitrogen export mutants in Arabidopsis using nitrogen-13 radiotracer assays and high-throughput phenotyping. In preparation to *Plant Physiology.*
- Yactayo-Chang JP*, Nepal N*, Aboobucker SI*, Trujillo G*, Wilkie A*, Wilson G*, Teoh K*, Medina K, **Lorence A**. Characterization of an Arabidopsis gulonolactonase, the first enzyme involved in ascorbate biosynthesis localized in the chloroplast. In preparation to *Plant Physiology*.
- Lisko KA*, Castillo SE*, Thomas JL, Srivastava V, Nopo C, Medrano-Condori G, Hubstenberger J, Phillips G, **Lorence A**. Enhanced ascorbate content in rice confers tolerance to cold, water, and salinity stresses. In preparation to *Plant Physiology and Biochemistry.*
- Yactayo-Chang J*,Trujillo-Luján G*, Reidy M, Cramer CL, Nessler CL, **A Lorence.** Identification and characterization of a uronic acid reductase in *Arabidopsis thaliana.* In preparation to *Plant Molecular Biology.*
- Aboobucker SI*, Suza WP, Radin JA*, Yactayo-Chang JP*, Trujillo-Lujan G*, **Lorence A** Leveraging transcriptomic data to probe regulation of the plant vitamin C network. In preparation to *Plant Physiology and Biochemistry*.
- Harris RS*, Torres R*, Wilson G*, Lisko K*, Yactayo-Chang JP*, Suza WP*, Cooper R, Warby R, Gilbert K, **Lorence A**. Ascorbic acid protects plants from trichloroethylene toxicity and improves their phytoremediation potential. In preparation to *Journal of Bioremediation and Biodegradation*.

Editorial Work

Books (3)

- Co-editor of the book: "Ascorbic Acid in Plant Growth, Development and Stress Tolerance" MA Hossain, S Munné-Bosch, DJ Burritt, P Diaz-Vivancos, M Fujita, **A Lorence** (eds). Springer. To be published in 2018.
- Editor of the book "Recombinant Gene Expression, Reviews and Protocols, Third Edition" (2012) **A Lorence** (ed.) Molecular Biology Series, Humana/Springer, New York. ISBN # 978-1-61779-432-2, e-ISBN 978-1-61779-433-9, DOI 10.1007/978-1-61779-433-9. *183 hardcopies sold in 2012; 11,371 individual chapters downloaded in 2012; ranked #14 in the list of top 20 best sellers.*
- Co-editor of the book "Recombinant Gene Expression. Reviews and Protocols" (2004) P Balbás and **A Lorence** (eds). Molecular Biology Series. Humana Press, Totowa, 535 pp. ISBN 1-58829-262-2. *Included in the list of the 2004-2005 best sellers of Humana Press.*

Special Issue of Scientific Journals (2)

- Co-editor of a special issue on plant phenotyping for the journal *Functional Plant Biology*. **Argelia Lorence** and Malcom Hawkesford (co-editors). Published January 2017.
- Co-editor of a special issue "Hairy Roots: Recent Applications in Plant Biotechnology" of the *Electronic Journal of Integrative Biosciences* (http://clt.astate.edu/electronicjournal/). **Argelia Lorence** and Fabricio Medina-Bolivar (co-editors), vol. 3, special issue 1. October 2008

Book Chapters (9)

- Yactayo-Chang JP, Acosta-Gamboa L, Nepal N, **Lorence A**. The Role of Plant High-Throughput Phenotyping in the Characterization of the Response of High Ascorbate Plants to Abiotic Stresses "Ascorbic Acid in Plant Growth, Development and Stress Tolerance" MA Hossain, S Munné-Bosch, DJ Burritt, P Diaz-Vivancos, M Fujita, **A Lorence** (eds). Springer. In press. 2018.

- Creameans J, Medina-Jiménez K, Oltehua-López O, Aguilar-Cruz A, Gómez-Díaz T, Dorantes-Acosta A, Bowman J, **Lorence A**, Arteaga-Vazquez MA. Evolution of the metabolic network leading to ascorbate synthesis and degradation using *Marchantia polymorpha*, as a model system. In "Ascorbic Acid in Plant Growth, Development and Stress Tolerance" MA Hossain, S Munné-Bosch, DJ Burritt, P Diaz-Vivancos, M Fujita, **A Lorence** (eds). Springer. In press. 2018.
- Lisko KA*, Aboobucker SI*, Torres R*, **Lorence A** (2014) Engineering elevated vitamin C in plants to improve their nutritional content, growth, and tolerance to abiotic stress. In "Phytochemicals – Biosynthesis, Function and Application" R Jetter (ed). *Recent Advances in Phytochemistry* 44, pp 109-128.
- **A Lorence** and CL Nessler (2007) Pathway engineering of the plant vitamin C metabolic network. In "Applications of Plant Metabolic Engineering" R Verpoorte, AW Alfermann and TS Johnson (eds). Springer, Dordrecht, chapter 8, pp 197-217.
- E Aranda, **A Lorence**, and MR Trejo (2000) Rural Production of *Bacillus thuringiensis* by Solid State Fermentation. In "Entomopathogenic Bacteria: From Laboratory to Field Application". JF Charles, A Delecluse, and C Neilsen-Le Roux (eds). Kluwer Academic Publishers, Dordrecht, p. 317-332. ISBN 0-7923-6523-2
- **A Lorence** and R Quintero (2000) In Search of Novel and Better Bioinsecticides. In "Environmental Biotechnology and Cleaner Bioprocesses". EJ Olguín, G Sánchez, and E Hernández (eds). Taylor & Francis, London, p. 275-284. ISBN 0-7484-0729-4.
- R Quintero, **A Lorence**, and C Wacher (1999) Cereal Fermentation in Latin American Countries. In "Fermented Cereals- A Global Perspective". Food and Agriculture Organization of the United Nations (FAO). Agricultural Services Bulletin 138, Rome, p. 99-114. ISBN 92-5-104296-9.
- **A Lorence** and R Quintero (1997) Development of New Bioinsecticides. In "International Course: Biochemical Engineering Applications in Environmental Biotechnology and Cleaner Production". COBIOTECH Scientific Committee for Biotechnology of the International Council of Scientific Unions ICSU. Electronic course, available at: http://www.icaiti.org.gt
- Bravo A, J Cerón, E Aranda, **A Lorence**, and R Quintero (1995) Screening of *Bacillus thuringiensis* Strains With Novel Insecticidal Activities. In "*Bacillus thuringiensis* Biotechnology and Environmental Benefits". T-Y Feng *et al*. (eds). Hiang Yuan Publishing, Taipei, p. 87-103.

Intellectual Property (3)

- Yactayo-Chang JP, **Lorence A** (2016) Method of improving chloroplast function. US Patent pending.
- Dolan MC, **Lorence A**, Medrano G (2009). Methods and Compositions for Enhancing Polypeptide Production. International Patent Application PCT/US2010/053795.
- Nessler CL, **Lorence A**, Mendes P, Chevone BI. Increase in Plant Growth Rate, Biomass Accumulation and Stress Tolerance in Plants Over Expressing Genes of Ascorbic Acid-Cell Wall Biosynthetic Network. U.S. Patent No. 9,000,267 (issued 04/07/15).

Opinion Articles (1)

- Moseman-Valtierra S, Del Valle S, Greenberg H, Jacobs D, **Lorence A**, Dyer D, Valtierra RD, Ojeda L, Ompendoguelet J, Rodriguez J (2016). Finding the (right) time - parenting and the five-year professional plan. *SACNAS News* Winter/Fall 2016 18 (2): 20-28. http://sacnas.org/about/stories/sacnas-news/winter-2016-five-year-plan.

Scientific publications (Spanish)

Peer-Reviewed Articles (2)

- **A Lorence**, RL González and JL Solleiro (1993) Basic Elements for the Development and Spreading of Biotechnology, A Comparative Analysis (*Los Elementos Básicos para el Desarrollo y Difusión de la Biotecnología: Un Análisis Comparativo*). *Biotecnología* 3: 1-7.
- A Bravo, **A Lorence** and R Quintero (1992) Perspectives for the Use of *Bacillus thuringiensis* as Bioinsecticide (*Perspectivas en la Utilización de Bacillus thuringiensis como Bioinsecticida). Biotecnología* 2: 139-154.

Technical Reports (2)

- **A Lorence** (1999) Agrobiologicals (*Agrobiológicos*). *Cuadernos de Vigilancia Tecnológica*. JL Solleiro and R Castañón (eds). *Iniciativa Canadá-América Latina de Biotecnología para el Desarrollo Sustentable (CAMBIOTEC).* International Development Research Center (IDRC) and *Núcleo de Innovación Tecnológica del Instituto de Ingeniería/UNAM*, Mexico City, 58 p.
- **A Lorence** (1996) Biopesticides in the Context of Sustainable Agriculture (*Los Biopesticidas en el Marco de la Agricultura Sustentable*). *Cuadernos de Vigilancia Tecnológica*. JL Solleiro and R Castañón (eds). *Iniciativa Canadá-América Latina de Biotecnología para el Desarrollo Sustentable* (CAMBIOTEC), International Development Research Center (IDRC) and *Centro Para la Innovación Tecnológica/UNAM*, Mexico City, 72 p.

Book Chapters (8)

- P Balbás and **A Lorence** (2002) Corn Genetically Improved: Implications for the Agriculture in the State of Morelos (*Maíz Genéticamente Mejorado: Implicaciones para la Agricultura en el Estado de Morelos*). In "Land, Water and Corn II, Reality and Utopy" ("*Tierra, Agua y Maíz II. Realidad y Utopia*"). *UNICEDES/UAEM*, Cuernavaca, p. 167-182. ISBN 968-878-136-3.
- P Balbás, C Abarca, AD Caro* and **A Lorence** (2000) Applications of Molecular Genetics in Medicine (*Aplicaciones de la Genética Molecular en la Medicina*). In "Biological Sciences: From Life Origin to Genetic Therapy" *("Ciencias Biológicas. Del Origen de la Vida a la Terapia Génica"*). E Sánchez-Salinas and ML Ortiz-Hernández (eds). *Universidad Autónoma del Estado de Morelos*, Cuernavaca, p. 223-255. ISBN 968-878-055-3.
- P Balbás and **A Lorence** (2000) Protein Biosynthesis by Recombinant DNA (*La Biosíntesis de Proteínas por DNA Recombinante*). In "Biological Sciences: From Life Origin to Genetic Therapy" *("Ciencias Biológicas, Del Origen de la Vida a la Terapia Génica*") E Sánchez-Salinas and ML Ortiz-Hernández (eds). *Universidad Autónoma del Estado de Morelos*, Cuernavaca, p. 182-222. ISBN 968-878-055-3.
- **A Lorence** and P Balbás (1998) Molecular Biology, A General Overview (*La Biología Molecular: Una Visión General*). In "Biology. Molecular Bases at the Threshold of the XXI Century" *("Biología. Sus Bases Moleculares en el Umbral del Siglo XXI"*) E Sánchez-Salinas and ML Ortiz-Hernández (eds). *Universidad Autónoma del Estado de Morelos*, Cuernavaca, p. 40-125. ISBN 968-878-038-3.
- **A Lorence** (1997) Relevance and Potential of Biotechnology for Potato Crop (*Importancia y Potencial de la Biotecnología para el Cultivo de Papa*). In "*Potato and Chilli Pepper*" *("Papa y Chile"). Cuadernos de Vigilancia Tecnológica*. JL Solleiro and R Castañón (eds). *Iniciativa Canadá-América Latina de Biotecnología para el Desarrollo Sustentable (CAMBIOTEC)*, International Development Research Center (IDRC) and *Centro para la Innovación Tecnológica/ UNAM*. Mexico City, p. 11-78
- A Bravo, M Ortíz, A Ortíz, J Cerón, E Aranda, J Sánchez, R Meza, ME Nuñez and **A Lorence** (1996) Search and Construction of New Insecticidal Proteins from *Bacillus thuringiensis* (*Búsqueda y Construcción de Nuevas Proteínas Insecticidas de Bacillus*

thuringiensis). In “Frontiers in Biotechnology and Bioengineering” *(“Fronteras en Biotecnología y Bioingeniería”)*. E Galindo (ed). *Sociedad Mexicana de Biotecnología y Bioingeniería*, Mexico City, p. 375-379. ISBN 968-7735-00-7.

- **A Lorence** and R Quintero (1996) Molecular Mechanism of Action of *Bacillus thuringiensis* δ-Endotoxins (Mecanismo Molecular de Acción de las δ-Endotoxinas de *Bacillus thuringiensis)*. In “Recent Progress in Biotechnology of *Bacillus thuringiensis*” *("Avances Recientes en la Biotecnología de Bacillus thuringiensis")*. Luis J Galán-Wong, C Rodríguez-Padilla and HA Luna-Olvera (eds). *Universidad Autónoma de Nuevo León (UANL)*, Monterrey, p. 63-113. ISBN 968-6337-98-9.
- **A Lorence** (1992) Potential of Biotechnology for Tomato Production (*Potencialidades de la Biotecnología Para la Producción de Tomate*). In “Biotechnology and Its Socioeconomical and Political Consequences” *(“La Biotecnología y sus Repercusiones Socioeconómicas y Políticas”*). R Casas, M Chauvet and D Rodríguez (coords). *Departamento de Sociología/UAM-A, Instituto de Investigaciones Económicas/UNAM, Instituto de Investigaciones Sociales/UNAM*. Mexico City, p. 301-317. ISBN 968-36-2703-X.

Presentations at professional meetings and invited lectures (*student co-authors; presenter underlined)

Oral presentations (124)

2018	**Lorence A**. Developing the Pipeline of Plant Phenomics Experts at the Wheat and Rice Center for Heat Resilience. PHENOME 2018, Tucson, AZ, February 14-18, 2018.
2018	**Lorence A**, Carroll AA, Clarke J, Fahlgren N, Gehan M, Lawrence-Dill C, Tuinstra M. NAPPN: Where Are We Now and Where Are We Going Next? Plant and Animal Genome Conference, San Diego, CA, January 13-17, 2018.
2017	**Lorence A**. Harnessing the power of omic approaches for understanding the role of the inositol pathway to ascorbate in plant growth and stress tolerance. 2017 Arkansas INBRE Conference, Fayetteville, AR, October 27-28, 2017.
2017	**Lorence A.** High throughout plant phenotyping: PICturing more stress tolerant crops. Plant Phenomics Phridays, University of Nebraska, Lincoln, NE, September 11, 2017.
2017	**Lorence A**, Campbell Z*, Acosta-Gamboa LM*, Nepal N*, Liu S*. Harnessing the power of high throughput plant phenotyping and other omics at the Plant Imaging Consortium. 56th Meeting of the Phytochemical Society of North America, Columbia, MO August 5-9, 2017.
2017	Yactayo-Chang JP*, Acosta-Gamboa LM*, Nepal N*, **Lorence A**. Leveraging genomics, transcriptomics, and phenomics approaches to understand the role of the inositol pathway to ascorbate in plant growth and stress tolerance. International Symposium on Functional Genomics and Systems Biology 2017, Centro de Investigación en Dinámica Celular, Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico, May 25-26, 2017.
2017	**Lorence A.** Novel phenomic approaches for model and crop plants. Next Generation Plant Phenotyping Technologies Symposium, Cornell University, Ithaca, NY, May 15-17, 2017.
2017	**Lorence A**. Novel phenomics approaches to identify salt tolerance in a rice diversity panel. Phenomatics Workshop, Zealquest Scientific Technology, Shanghai, China, April 28, 2017 (remote delivery).

2017 Acosta-Gamboa LM*, Liu S*, Campbell Z*, Torres R*, **Lorence A**. Phenomic approaches to elucidate the role of the *myo*-inositol pathway to abiotic stress tolerance in Arabidopsis. Create@State, Jonesboro, AR, April 20-21, 2017.
L Acosta won 1st place for best graduate student talk

2017 Nepal N*, Yactayo-Chang JP*, Acosta-Gamboa LM*, Arteaga MA, **Lorence A**. Global transcriptome analysis of a high ascorbate *Arabidopsis* line. Create@State, Arkansas State University, Jonesboro, AR, April 20-21, 2017.

2017 Creameans J*, Smith A*, Yactayo-Chang JP*, **Lorence A**. Engineering elevated ascorbate content in wood tobacco (*Nicotiana benthamiana*). 31st Annual National Conference on Undergraduate Research, Memphis, TN, April 6-8, 2017.

2017 Liu S*, **Lorence A**. Novel low cost 3D surface model reconstruction system for plant phenotyping. 14th Annual Conference of MCBIOS, Little Rock, AR, March 23-24, 2017.
S Liu won 2nd place as Young Scientist Excellence Award – PostDoc Fellow

2017 **Lorence A**. Plant phenomics, accelerating discoveries to develop more resilient crops. Leadership Arkansas, Arkansas State University, Jonesboro, AR, February 23, 2017.

2017 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A.** Analysis of water limitation effects on the *phenome* and *ionome* of Arabidopsis at the Plant Imaging Consortium. Phenome 2017, Tucson, AZ, February 10-14, 2017.

2016 **Lorence A.** The importance of phenomics in the development of improved crop varieties (La importancia de la fenómica en el desarrollo de variedades mejoradas de cultivos). Inauguration new building, CEIB, UAEM, Cuernavaca, Morelos, October 30-November 2, 2016.

2016 **Lorence A.** Proposed Research Thrusts: Abiotic and Biotic Stress. North American Plant Phenotyping Network Inaugural Convening Event. Purdue University, West Lafayette, IN, August 29-31, 2016.

2016 **Lorence A,** Lever S. Infrastructure improvement and consortium-wide achievements. Plant Imaging Consortium Annual Meeting, Fayetteville, AR, July 7-8, 2016.

2016 **Lorence A,** Lever S. Model 3: HTP and radioisotopic analysis of ascorbic acid metabolic pathways under stress. Plant Imaging Consortium Annual Meeting, Fayetteville, AR, July 7-8, 2016.

2016 **Lorence A**. Lightning Talk: An update on the progress of the Plant Imaging Consortium. Digital Agriculture Spoke All-Hands Meeting, Ames, IA, May 16-17, 2016.

2016 **Lorence A**. A scientist perspective on genetic modification. Spring 2016 Meeting of the Arkansas Executive Forum, Jonesboro, AR, April 28-29, 2016.

2015 **Lorence A**. High throughput phenotyping at the Plant Imaging Consortium. Southeastern/Southwest regional meeting of the American Chemical Society, Exploring All Directions, Memphis, TN, November 6, 2015.

2015 Campbell Z* Acosta-Gamboa LM*, Liu S*, **Lorence A**. High throughput plant phenotyping at the Plant Imaging Consortium. PhenoDays 2015, Munich, Germany, October 28-30, 2015.

2015 **Lorence A**. Careers at a traditional undergraduate university. Career Day Seminars, UAMS, Little Rock, AR, October 22, 2015.

2015 **Lorence A.** Arabidopsis and rice high throughput phenotyping at the Plant Imaging Consortium. 3rd Plant Genomics Congress USA, St. Louis, MO, September 14-15, 2015.

2015 **Lorence A.** Image-based Arabidopsis phenotyping at the Plant Imaging Consortium. Plant Imaging Workshop, International Symposium for Radiopharmaceutical Sciences (www.ISRS2015.org), Columbia, MO, May 26, 2015.

2015 Tripod N*, Campbell Z*, Morris E*, Blair W*, Castillo-Gonzalez SE*, Parker K*, Lima J*, Robinson Z*, Dietz P*, Campbell M, Walia H, **Lorence A**. High throughout phenotyping of rice lines to determine salinity tolerance. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 7, 2015.

2015 Phelps G*, Aboobucker SI*, Yactayo-Chang JP*, Rivas F, Marsico T, **Lorence A**. DNA barcoding to identify Arkansas native plants with potential anti-leukemia activity. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 7, 2015.

2014 **Lorence A**, Campbell Z*, Morris E*, Blair W*, Castillo-Gonzalez SE*, Tripod N*, Dietz P*, Parker K*, Lima J*, Robinson Z*, Campbell M, Walia H. Image-based phenotyping of a rice diversity panel to identify novel sources of salt tolerance. PhenoDays Europe, Beaune, France, October 29-31, 2014.

2014 **Lorence A**, F Goggin. The Arkansas and Missouri Bioimaging Consortium for Plant Stress Biology. ASSET Meeting, Little Rock, AR, September 4-5, 2014.

2014 **Lorence A**, F Goggin. The Arkansas and Missouri Bioimaging Consortium for Plant Stress Biology. Arkansas P3 Center Symposium, Winthrop Rockefeller Institute, Morrilton, AR, July 28-30, 2014.

2014 **Lorence A**. Engineering elevated vitamin C to produce better crops. International Symposium "The Role of Biochemistry and Molecular Biology in Knowledge Generation to Achieve Better Standards of Living", Centro de Investigación Científica de Yucatán (CICY), Mérida, Yucatán, México, June 25-27, 2014.

2014 Aboobucker SI*, Suza WP, **Lorence A**. Characterization of an *Arabidopsis* L-gulono-1,4-lactone oxidase (GulLO) in *Nicotiana benthamiana*. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University Jonesboro AR, April 10 2014.

2014 **Lorence A.** The Scanalyzer HTS, a powerful phenomics tool to identify salt tolerance lines within a rice diversity panel. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, February 21, 2014.

2013 **Lorence A**. Novel functions of vitamin C in plants. 3rd International Congress on Biotechnology QUORUM^3, ITESM Campus Querétaro, Mexico, October 24-26, 2013.

2013 **Lorence A.** High throughput Arabidopsis phenotyping at the Arkansas Center for Plant Powered Production. PhenoDays Europe, Vaals, Netherlands, October 16-18, 2013.

2013 Lisko KA*, Phillips GC, McClung A, Underwood J, Srivastava V, **Lorence A**. Engineering elevated vitamin C content in rice to improve abiotic stress tolerance. 52nd Meeting Phytochemical Society of North America, Corvallis, OR, August 3-7, 2013. ***K Lisko won Best Oral Presentation Award.***

2013 **Lorence A**. Biotechnology is a global endeavor: The most important lesson I learned from Dr. Rodolfo Quintero. International Biotechnology Symposium Dr. Rodolfo Quintero Ramírez, Cuernavaca, Morelos, Mexico, June 7, 2013.

2013 Martin J*, Yactayo-Chang J*, Torres R, Gaxiola R, **Lorence A**. Pyramiding H^+-pyrophosphatase and *myo*-inositol oxygenase to enhance plant growth and stress tolerance in *Arabidopsis*. ARK LSAMP Spring Research Conference, Little Rock, AR, April 12-13, 2013.

2013 Lisko KA*, **Lorence A**. Enhancing vitamin C content in rice to improve stress tolerance. 3M Thesis Competition, Create@State, Arkansas State University, Jonesboro, AR, April 11, 2013.

2013 Lisko KA*, **Lorence A**. Vitamin C metabolism in rice. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, March 15, 2013.

2013 Torres R*, **Lorence A**. An update of the phenomics efforts at ABI/ASU. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, March 15, 2013.

2013 Lisko KA*, **Lorence A.** The Key Roles of Vitamin C in Regulating Plant Growth and Stress Tolerance in Plant. Seminar, RiziCulture Seminar Series, Jonesboro, AR, January 24 2013.

2013 Torres R*, Yactayo-Chang JP*, Martin J*, Gaxiola R, **Lorence A.** High throughput Plant Phenotyping at the Arkansas Plant Powered Production Center. Phenomics Workshop, Plant and Animal Genome Conference, San Diego, CA, January 12-16, 2013. (*Invited talk*)

2012 Aboobucker SI*, Suza WP, **Lorence A**. Characterization of an *Arabidopsis* L-gulono-1,4-lactone oxidase (GulLO). Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, October 19, 2012.

2012 Torres R*, **Lorence A**. Keys to successful phenotyping experiments using the Scanalyzer HTS. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, October 19, 2012.

2012 **Lorence A**. Scanalyzer HTS, a powerful high throughput plant phenotyping platform. ASSET Management Team Meeting Report, Little Rock, AR (participated via WebEx conference), October 15, 2012. (*Invited talk*).

2012 **Lorence A**. Engineering elevated vitamin C in plants to improve their nutritional content, growth, and tolerance to stress. 51th Annual Meeting of the Phytochemical Society of North America, London, Ontario, Canada, August 11-15, 2012. (*Invited Plenary Talk*)

2012 Lisko KA*, Wilson GA*, Underwood J, Srivastava V, Hubstenberger J, Phillips GC, **Lorence A**. Engineering rice for elevated vitamin C content. 3rd Annual Conference of the American Council for Medicinally Active Plants, Jonesboro, AR, May 22-25, 2012. (*Invited talk*)

2012 Aboobucker SI*, Suza WP, **Lorence A**. Characterization of a functional *Arabidopsis* L-gulono-1,4-lactone oxidase (GLOase) in *Nicotiana benthamiana*. 3rd Annual Conference of the American Council for Medicinally Active Plants, Jonesboro, AR, May 22-25, 2012. (*Invited talk*)

2012 Kulkarni S*, **Lorence A**. Elevating ascorbate content in tomato and studying the role of jasmonates in modulating ascorbate in *Arabidopsis.* Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, March 30, 2012.

2011 **Lorence A**. I like the student/mentoring interactions better than the benchwork: A career in an undergraduate university. Career Day for Biomedical Sciences, UAMS, Little Rock, AR, October 13, 2011. (*Invited talk*)

2011 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Stable co-expression of vitamin C enhancing genes for improved expression of a recombinant therapeutic protein, hIL12, in *Arabidopsis thaliana.* Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, September 23, 2011.

2011 **Lorence A**. Vitamin C in plants: Metabolism and functions of a multifacetic molecule. *Instituto de Biotecnología* (IBT), *Universidad Nacional Autónoma de México*, Cuernavaca, Mexico, June 27, 2011. (*Invited talk*)

2011 **Lorence A**. Metabolic engineering of vitamin C in plants: Implications for agriculture, nutrition, plant-based protein production and phytoremediation. Visit to ASU of Dr. Catherine Woteki, Under Secretary for Research, Education, and Economics at the U.S. Department of Agriculture, Jonesboro, AR, February 17, 2011. (*Invited talk*)

2011 Kulkarni S*, Suza WP*, Goggin FL, **Lorence A**. Engineering elevated vitamin C levels in tomato by over-expression of AtMIOX4 and AtGlcUR. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, February 4, 2011.

2011 Aboobucker SI*, Suza WP*, **Lorence A**. Characterization of two GLOases in Arabidopsis. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, February 4, 2011.

2010 **Lorence A**. Engineering elevated levels of vitamin C in plants: Implications for agriculture, plant-based protein production and phytoremediation. VII *Encuentro Latinoamericano y del Caribe Sobre Biotecnología Agropecuaria*, RedBIO Mexico 2010, Guadalajara, Mexico, November 1-5, 2010. (*Invited talk*)

2010 **Lorence A**. Manipulating vitamin C content in plants: Implications for plant senescence, agriculture and phytoremediation. Invited talk, Seminar Series of the Department of Microbiology and Immunology, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR, October 7, 2010. (*Invited talk*)

2010 Gilbert K, Blossom S, Gomez-Acevedo H, Cooney C, Plumford N, **Lorence A**, Medina-Bolivar F. Environmental pollutants as triggers of autoimmune disease: Collaborative research into mechanism of action and remediation. ABI Fall Research Symposium, Little Rock, AR, September 29, 2010.

2010 **Lorence A**. Plant DNA barcodes. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, September 3rd, 2010.

2010 **Lorence A**, Dolan MC. Update on "Role of ascorbate in mitigating ER and cellular stress associated with transient and stable plant-based protein production. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, April 30, 2010.

2010 Lisko KA*, Hubstenberger JF, Belefant-Miller H, Phillips GC, **Lorence A**. Ontogenetic changes in vitamin C in selected rice varieties. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, April 2, 2010.

2010 Suza WP*, Trujillo-Luján G*, Aboobucker SI*, **Lorence A**. Leveraging Genevestigator data to better understand how the vitamin C metabolic network is regulated. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, April 2, 2010.

2009 Kulkarni S*, Suza WP*, Goggin FL, **Lorence A**. Intersection of Ascorbate Regulation, Jasmonate-Signaling, and Defense Against Herbivores in Plants: An update. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, November 6, 2009.

2009 **Lorence A**. Vitamin C in plants: Metabolism and functions of a multifaceted molecule.
Dale Bumpers USDA National Rice Research Center, Stuttgart, AR, October 8, 2009. (*Invited talk*)

2009 **Lorence A**. Vitamin C metabolism in rice varieties of importance to Arkansas. Symposium Rice Research in Arkansas, Little Rock, AR, August 5, 2009. (*Invited talk*)

2009 **Lorence A**, Dolan M, Srivastava V. Progress Report: Role of Ascorbate in Mitigating ER and Cellular Stress Associated with Transient and Stable Plant-Based Protein Production. NSF EPSCoR P3 Center and the P3 Technical Advisory Committee (TAC) Meeting, Little Rock, AR, April 2, 2009.

2009 **Lorence A**, Goggin FL. Progress Report on: Intersection of Ascorbate Regulation, Jasmonate-Signaling, and Defense Against Herbivores in Plants. NSF EPSCoR P3 Center and the P3 Technical Advisory Committee (TAC) Meeting, Little Rock, AR, April 2, 2009.

2009 Avila CA, Suza WP*, **Lorence A**, Goggin FL. Vitamin C: A cure for the common caterpillar. 80th Annual Meeting of the Entomological Society of America Eastern Branch, Harrisburg, PA, March 20-23, 2009. (*Invited talk*)

2009 Trujillo G, Harris RS, Wilson GA, **Lorence A**. Progress in the study of the inositol pathway to vitamin C in plants. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, January 23, 2009.

2008 **Lorence A**. The many reasons why plants also need their vitamin C. Symposium "Biofuels and Plant Produced Products", Worcester Polytechnic Institute, Worcester, MA, October 27, 2008. (*Invited talk*)

2008 Lorence A. Leveraging vitamin C metabolism to develop plants that are better for us and the environment. Arkansas Biosciences Institute Fall Research Symposium, Science and Industry Advisory Committee Meeting, Little Rock, AR, October 7, 2008. (*Invited talk*)

2008 **Lorence A**. Phytoremediation and Ecological Engineering in Arkansas: Challenges and Opportunities. Arkansas NSF EPSCoR Annual Meeting, Little Rock, AR, October 7, 2008. (Invited talk)

2008 Goggin FL, **Lorence A**. Intersection of ascorbate regulation, jasmonate-signaling, and defense against herbivores in plants. Arkansas NSF EPSCoR Annual Meeting, Little Rock, AR, October 6, 2008. (*Invited talk*)

2008 Dolan MC, Srivastava V, **Lorence A**. Role of ascorbate in mitigating ER and cellular stress associated with transient and stable plant-based protein production. Arkansas NSF EPSCoR Annual Meeting, Little Rock, AR, October 6, 2008. (*Invited talk*)

2008 Trujillo G*, Aboobucker SI*, Lisko KA*, Suza WP, **Lorence A**. Progress in the study of the inositol pathway to vitamin C in plants. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, September 19, 2008.

2008 **Lorence A**. Progress in the study and manipulation of vitamin C biosynthesis in plants. Pan American Symposium Mexico 2008 "Pharmaceutical environment for students in pharmacy: current and future perspectives", event organized by the Pan American Regional Office of the International Pharmaceutical Student's Federation, Cuernavaca, Morelos, Mexico, September 8-11, 2008. (*Invited talk*)

2008 **Lorence A**. The 101 in how to mine the Arabidopsis TAIR database. State wide Arkansas EPSCoR P3 Training Conference, Petit Jean, AR, August 20-22, 2008. (*Invited talk*)

2008 **Lorence A**. The importance of networking. Seminar series for the scholars of the NSF-funded Research Internships in Science of the Environment (RISE), Arkansas State University, Jonesboro, AR, July 22, 2008. (*Invited talk*)

2008 **Lorence A**, Benjamin E, Schroer J, panelist who participated in the discussion "The Minority Under-represented Experience as a Faculty Member" for students participating in the 2008 NSF-funded Research Internships in Science of the Environment (RISE), Arkansas State University, Jonesboro, AR, July 25, 2008.

2008 Lisko KA*, Harris RS*, Yactayo-Chang JP*, **Lorence A**. Engineering ascorbate for enhanced growth, nutritional content, and stress tolerance in crops. World Congress on In Vitro Biology, Society for In Vitro Biology, Tucson, AZ, June 14-18, 2008. (*Invited talk*)

2008 Wilson GA*, Trujillo G*, Belisle M*, **Lorence A**. Identification and cloning of glucuronolactonases of *Arabidopsis thaliana*. Undergraduate Scholar's Day Conference, ASU, Jonesboro, AR, April 10, 2008. (Invited talk)

2008 Trujillo G*, **Lorence A**. Spatial and temporal expression patterns of genes in the *myo*-inositol pathway to ascorbate in *Arabidopsis thaliana.* Graduate Scholar's Day Conference, ASU, Jonesboro, AR, April 9, 2008.

2008 Aboobucker SI*, Lorence A. Identification and characterization of a functional L-gulono-1,4-lactone oxidase in *Arabidopsis.* Graduate Scholar's Day Conference, ASU, Jonesboro, AR, April 9, 2008.

2008 Lisko KA*, Harris RS*, Trujillo G*, Aboobucker SI*, **Lorence A**. Vitamin C biosynthesis in plants: An unfolding story. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, March 7, 2008.

2008 Lorence A. Vitamin C biosynthesis in plants: An unfolding story. Department of Entomology, University of Arkansas Fayetteville, January 29, 2008. (*Invited talk*)

2007 Lisko KA*, Trujillo G*, Wilson GA*, Belisle M*, Harris RS*, Crawford F, Yactayo JP*, Bestoso F*, Lorence A. Engineering vitamin C and taxanes levels in plants: An update. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, October 12, 2007.

2007 Medina-Bolivar F, Nopo-Olazabal C, Ganapathy S, Nopo-Olazaba L, Hannigan R, Redeker K, **Lorence A**, Purnell C, Harris RS*, Simeon S*. Thichloroethylene induces stilbenoid compounds and antioxidant activity in peanut roots. 2007 Phytochemical Society of North America Annual Meeting, St. Louis, MO, July 21-25, 2007. (*Invited talk*)

2007 **Lorence A**. The importance of networking. Seminar series for the scholars of the NSF-funded Research Internships in Science of the Environment (RISE), Arkansas State University, Jonesboro, AR, July 24, 2007.

2007 Wilson GA*, Trujillo-Luján G*, Belisle M*, **Lorence A**. Glucuronolactonase, a gene family encoding enzymes involved in vitamin C biosynthesis and degradation. McNair Scholars 2007 Summer Research Symposium, Jonesboro, AR, July 25-26, 2007.

2007 Cramer C, Dolan MC, **Lorence A**, Medina-Bolivar F, Weathers P. Biotechnology at the interface of agriculture and medicine. XII National Congress of Biotechnology and Bioengineering, Mexican Society of Biotechnology and Bioengineering, Morelia, Mexico, June 25-29, 2007. (*Keynote address*)

2007 Schroeter C, Offenbach L, **Lorence A**. Fruits and vegetable consumption among college students in Arkansas and Florida: food culture versus health knowledge. 17th Annual World Symposium, International Food and Agribusiness Management Association, Parma, Italy, June 23-26 2007. *Nominated to Best Paper Award in Agribusiness Symposium*

2007 **Lorence A**. Manipulation of the vitamin C content in plants: Implications for human health, agriculture and environment. National Council of Science, Technology and Innovation (*Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT)* and Institute of Advanced Scientific Reseach and High Technology Services (*Instituto de Investigaciones Científicas Avanzadas y Servicios de Alta Tecnología, INDICASAT)*, Panama, Panama, June 7, 2007. (*Invited talk*)

2007 Trujillo G*, Wilson GA*, Lisko KA*, Harris RS*, Simeon S*, Yactayo JP*, **Lorence A**. An update in the science of vitamin C. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, April 13, 2007.

2007 Lorence A. Engineering vitamin C levels in plants: New roles for an old molecule. University of Arkansas at Little Rock, Biosciences and Bioinformatics Spring Seminar Series, Little Rock, AR, February 12, 2007. (*Invited talk*)

2006 Harris RS*, Moss T, Hannigan R, **Lorence A**. Harnessing the potential of plant genomics in detection and remediation of explosives and chemical weapons. Symposium on Biological, Chemical Defense and Homeland Security, 2006

International Conference on Bio and Pharmaceutical Science and Technology (ICBPST), San Diego, CA, Dec 18-21, 2006. (*Invited talk*)

2006 **Lorence A**. The role of ascorbate in coordinating growth and senescence in *Arabidopsis thaliana*: an update. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, October 20th, 2006.

2006 **Lorence A**. The role of ascorbate in coordinating growth and senescence in *Arabidopsis thaliana*: an update. POI Aging Work Group at UAMS, Little Rock, AR, October 5th, 2006.

2006 **Lorence A**. The importance of networking. Seminar series for cholars of the NSF-funded Research Internships in Science of the Environment (RISE), Arkansas State University, Jonesboro, AR, July 20, 2006. (*Invited talk*)

2006 **Lorence A**, Woffenden BJ, Martínez-Quintana J*, Nopo-Olazabal L, Nessler CL, Medina-Bolivar F. Enhanced production of specialized metabolites in tobacco over-expressing an AP2-type transcription factor. Phytochemical Society of North America Meeting, Oxford, MS, July 8-12, 2006. (*Invited talk*)

2006 **Lorence A**. What is an ORCA doing in my tobacco? Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, July 7, 2006.

2006 **Lorence A**. Role of ascorbate in coordinating growth and senescence in *Arabidopsis thaliana.* POI Aging Work Group at UAMS, Little Rock, AR, June 1st, 2006.

2006 **Lorence A**. Synopsis of Symposium: RNA Biology – Novel Insights from Plants. Plant Biotechnology Discussion Group, Arkansas Biosciences Institute, Jonesboro, AR, May 26, 2006.

2005 **Lorence A**. Vitamin C, a master nutrient for humans and a crossroad in plant biochemistry. American Chemical Society Student Meeting, Arkansas State University, Jonesboro, AR, October 14, 2005. (*Invited talk*)

2005 **Lorence A**. Vitamin C biosynthesis in plants, a tale of many routes. Department of Chemistry, University of Memphis, Memphis, TN, September 30, 2005. (*Invited talk*)

2005 **Lorence A**, Woffenden BJ, Smith M, Nessler CL, Medina-Bolivar F. Over-expression of transcription factors to manipulate specialized metabolite biosynthesis. 2005 Meeting of the Phytochemical Society of North America, Salk Institute, CA, July 30 – August 3, 2005. (*Invited talk*)

2005 Nessler CL, **Lorence A**, Chevone BI, Mendes P. The vitamin C network – new branches in plant biochemistry. 2005 *In Vitro* Biology Meeting, Baltimore, MD, June 5-7, 2005. (*Invited talk*)

2005 **Lorence A**, Chevone BI, Mendes P, Nessler CL. Manipulation of the metabolic network of vitamin C for the production of plants with enhanced properties. 2nd National Meeting of Chemistry of Natural Products, "Dr. Alfonso Romo de Vivar Romo", Cocoyoc, Mexico, May 25-28, 2005. (*Invited talk*)

2005 **Lorence A**. Manipulating the vitamin C metabolic network for the nutritional and agronomical enhancement of plants. Clemson University, Clemson, SC, May 16th, 2005. (*Invited talk*)

2005 **Lorence A**. Manipulating the vitamin C metabolic network for the nutritional and agronomical enhancement of plants. Arkansas Biosciences Institute (ABI), Arkansas State University (ASU), Jonesboro, AR, April 21st, 2005. (*Invited talk*)

2005 **Lorence A**. Manipulating the vitamin C metabolic network for the nutritional and agronomical enhancement of plants. University of Texas – San Antonio (UTSA), San Antonio, TX, April 14th, 2005. (*Invited talk*)

2005 **Lorence A**. Manipulating the vitamin C metabolic network for the nutritional and agronomical enhancement of plants. Polytechnic University, Brooklyn, NY, March 4th, 2005. (*Invited talk*)

2002 **Lorence A**, Villatoro-Vera R, Pereda-Miranda R. Holes in the membranes: how allelochemicals in the morning glory family dispose of enemies? Arthur Neish Young Investigator Symposium Speaker, 2002 Annual Meeting, Phytochemical Society of North America (PSNA), Mérida, México, July 20-24, 2002. *Award Address*

2002 **Lorence A**. The relationship between ORCAs and the joy tree. Molecular Biology Seminar Series, CINVESTAV- Irapuato, Irapuato, México, March 20, 2002. (*Invited talk*)

2000 **Lorence A**. Metabolic engineering of medicinal plants. *CEIB, UAEM*, Cuernavaca, México, December 13, 2000. (*Invited talk*)

2000 **Lorence A**. Applications of molecular biology and biotechnology. 1St Engineering Congress, *Universidad Iberoamericana*, Mexico City, México, September 20, 2000. (*Invited talk*)

1999 **Lorence A**, Quintero R. Introduction of insect-resistant corn in Mexico. Morelos Delegation of the Mexican Society of Biotechnology and Bioengineering, Cuernavaca, México, October 22, 1999. (*Invited talk*)

1999 **Lorence A**, Quintero R. Evaluation of the socio-economical impact of the introduction of *Bt* corn to Mexico. *Centro de Investigación Biomédica del Sur/IMSS*, Xochitepec, Morelos, México, October 21, 1999. (*Invited talk*)

1999 **Lorence A**, Quintero R. The mechanism of action of *Bacillus thuringiensis* Cry proteins: implications for the management of *Bt* corn in Mexico. Molecular Biology Seminar Series, CINVESTAV- Irapuato, Irapuato, México, July 9, 1999. (*Invited talk*)

1996 **Lorence A**, Quintero R. In search of novel and better bioinsecticides. International Symposium "Modern strategies for contamination control and development of clean technologies", *Instituto de Ecología*, Boca del Río, México, March 11-13, 1996. (*Invited talk*)

1994 **Lorence A**, Quintero R. Alternatives to chemical pest control. 5th Week of Scientific Research, CONACYT and UAEM, Cuautla, México, April 1994. (*Invited talk*)

1993 **Lorence A**, Gonzalez RL, Solleiro JL. Basic elements for the development and diffusion of biotechnology in Mexico, a comparative analysis. V Congress of Biotechnology and Bioengineering, Puerto Vallarta, México, September 1993. (*Invited talk*)

1991 **Lorence A**, Rojas H. Feasibility study of the production and commercialization of insect-resistant tomato seeds. *Instituto de Investigaciones Económicas (UNAM), Instituto de Investigaciones Sociales (UNAM)* and *Departamento de Sociología (UAM-A)*, Mexico City, México, November 25-27, 1991. (*Invited talk*)

Posters (221)

2018 Walia H, Adviento-Borbe A, Asebedo A, Jagadish K, **Lorence A**, Morota G, Obata T, Yu H, Zhang C, Zhang Q. Comparative genomics and phenomics approach to discover genes underlying heat stress resilience in cereals. Plant and Animal Genome Conference, San Diego, CA, January 13-17, 2018.

2017 Campbell Z*, Acosta-Gamboa LM*, Nepal N*, Cunningham S*, **Lorence A**. Digital phenotyping at the A-State Phenotyping Facility. ABI Fall Symposium, Fayetteville, AR, October 26, 2017.

2017 Harris RS, Dolan M, **Lorence A**, Moody E. A-State ABI Outreach: Reaching Out to Arkansas. ABI Fall Symposium, Fayetteville, AR, October 26, 2017.

2017 Iverson J*, Yactayo-Chang JP*, Nepal N*, Turner N*, Campbell Z*, **Lorence A**. Phenomics study of Arabidopsis lines over-expressing genes in the *myo*-inositol

pathway to ascorbate under water deficit stress. 2017 Arkansas INBRE Research Conference, Fayetteville, AR, October 27-28, 2017.

2017 Yactayo-Chang JP*, Nepal N*, Aboobucker SI*, Trujillo G*, Wilkie A*, Teoh K*, Wilson G*, **Lorence A**. Arabidopsis gluconolactonase, the first enzyme involved in ascorbate biosynthesis localized in the chloroplast protects plants from light stress. 56th Meeting of the Phytochemical Society of North America, Columbia, MO August 5-9, 2017.

2017 Nepal N*, Yactayo-Chang JP*, Acosta-Gamboa LM*, Medina-Jiménez K, Arteaga MA, **Lorence A**. Molecular mechanisms mediating the enhanced growth and abiotic stress tolerance phenotype of Arabidopsis MIOX over-expressers. 56th Meeting of the Phytochemical Society of North America, Columbia, MO August 5-9, 2017. ***N Nepal-won a travel award from PSNA***

2017 Iverson J*, Yactayo-Chang JP*, Nepal N*, Turner N*, Campbell Z*, **Lorence A**. Phenomics study of Arabidopsis lines over-expressing genes in the *myo*-inositol pathway to ascorbate under water deficit stress. Fourth Annual Summer Research Symposium, Bridge Program, Arkansas State University, Jonesboro, AR, August 3, 2017.

2017 Acosta-Gamboa LM*, Liu S*, Campbell Z*, Torres R*, **Lorence A**. The role of the *myo*-inositol pathway in abiotic stress tolerance in Arabidopsis. Plant Biology 2017, American Society of Plant Biologists, Honolulu, Hawaii, June 24-28, 2017. ***L Acosta-Gamboa winner minority travel award from ASPB and travel award from MBS***

2017 Harris RS, Shah D, Balasubramanian S, Goggin F, **Lorence A**. PIC outreach efforts. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Angel C, Johnston B, Cothren J, Goggin F, Campbell Z*, **Lorence A**, Liu S*. An integrated, open-source, MIAPPE-conformant pipeline for collecting, distributing and analyzing HTPP datasets" 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Wickramanayake J, Lee JA, **Lorence A**, Nepal N*, Goggin G. Statistical analysis methods for high throughput phenotyping of plant growth and development. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Acosta-Gamboa LM*, Liu S*, Campbell Z*, Torres R*, Suza WP, Yactayo-Chang JP*, Gaxiola R, **Lorence A**. Phenomic Approaches to Understand the Role of the Inositol Pathway to Abiotic Stress Tolerance in Arabidopsis. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Langley E*, Acosta-Gamboa LM*, **Lorence A**. MultispeQ: A Powerful Tool to Better Understand the Physiology of Arabidopsis Plants Grown Under Water Stress Conditions. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A**. Water Limitation Differentially Affects the *Phenome* and *Ionome* of Arabidopsis. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Campbell Z*, Cunningham S*, Braun D, **Lorence A**. Furthering our Understanding of Early Phenotypes in Sucrose Transport Deficient Maize Lines. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Creameans J*, Medina K, Arteaga-Vazquez M, **Lorence A**. *Marchantia polymorpha* As a Model to Study the Evolution of Ascorbate Biosynthesis in Plants. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Nepal N*, Yactayo-Chang J*, Acosta-Gamboa LM*, Medina K, Arteaga-Vazquez MA, **Lorence A**. Global Gene Expression Analysis of a High Ascorbate MIOX Over-expresser Arabidopsis Line. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Liu S*, Acosta-Gamboa LM*, Huang X, **Lorence A**. Novel Low Cost 3D Surface Model Reconstruction System for Plant Phenotyping. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Yactayo-Chang JP*, Aboobucker SI*, Trujillo G*, Wilkie A*, Wilson G*, Nepal N*, Teoh K*, Medina K, **Lorence A**. Characterization of an Arabidopsis Gulonolactonase, the First Enzyme Involved in Ascorbate Biosynthesis Localized in the Chloroplast. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Fischer K*, Phelps A*, Green C, Goggin F, Hood E, **Lorence A**. High Throughout Phenotyping of the Genomes to Fields Maize Seed Collection Grown in Arkansas. 2017 PIC Annual Meeting, St. Louis, MO, June 5-6, 2017.

2017 Langley E*, Acosta-Gamboa LM*, **Lorence A**. Uses and benefits of the MultispeQ to better understand the physiology of Arabidopsis growing under water limitation conditions. Create@State, Arkansas State University, Jonesboro, AR, April 20-21, 2017.

2017 Fischer K*, Tripod N*, Campbell Z*, Campbell M, Walia H, **Lorence A**. Characterization of salt tolerant accessions within a rice diversity panel using phenomic approaches. 31st Annual National Conference on Undergraduate Research, Memphis, TN, April 6-8, 2017.

2017 Langley E*, Acosta-Gamboa LM*, **Lorence A**. Uses and benefits of the MultispeQ to better understand the physiology of Arabidopsis plants grown under abiotic stress conditions. 31st Annual National Conference on Undergraduate Research, Memphis, TN, April 6-8, 2017.

2017 Langley E*, Acosta-Gamboa LM*, **Lorence A**. Uses and benefits of the MultispeQ to better understand the physiology of Arabidopsis plants grown under abiotic stress conditions. Posters at The Capitol, Little Rock, AR, February 15, 2017.

2016 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A.** Analysis of water limitation effects on the *phenome* and *ionome* of Arabidopsis at the Plant Imaging Consortium. Meeting of the International Plant Phenotyping Network (IPPN), CIMMYT, Texcoco, Mexico, December 12-15, 2016.

2016 Campbell Z* Tripod N*, Fisher K* Morris E*, Castillo-Gonzalez SE*, Blair W*, Smith A*, Oliver K*, Grant R*, Cunningham S*, Mull CL* Lima JL*, Parker K*, Robinson Z*, Dietz P*, DeVito N*, Knecht A, Campbell M, Walia H, **Lorence A**. High-throughput phenotyping of a rice diversity panel to determine salinity tolerance. Phenodays 2016, Berlin, Germany, October 26-27, 2016.

2016 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero NA, Mendoza-Cozatl D, **Lorence A**. Moderate to severe water limitation differentially affects the *phenome* and *ionome* of Arabidopsis. Phenodays 2016, Berlin, Germany, October 26-27, 2016.

2016 Goggin FL, **Lorence A**, Jurisson S, Braun D, Tai Y, Mendoza-Cozatl D, Cothren J, Walker JC, Stanley S. The Plant Imaging Consortium (PIC): Collaborative Approaches for Imaging Plant Stress Responses. North American Plant Phenotyping Network Inaugural Convening Event. Purdue University, West Lafayette, IN, August 29-31, 2016.

2016 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Elevated ascorbate content in plants improves the accumulation of human interleukin-12. 2016 Fall ABI Symposium, Little Rock, AR, September 13, 2016.

2016 Acosta-Gamboa LM*, Liu S*, Campbell Z*, Torres R*, Suza W*, Yactayo-Chang JP*, Gaxiola R, Huang X, **Lorence A.** Characterization of high ascorbate Arabidopsis lines under salt and water limitation conditions using phenomic approaches. 55th Meeting Phytochemical Society of North America, Davis, CA, August 6-10, 2016.

2016 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A.** Moderate to severe water limitation differentially affects the *phenome* and *ionome* of Arabidopsis. Plant Biology 2016, Austin, TX, July 9-13, 2016.

2016 Harris RS*, Shah D, Balasubramanian S, Goggin FL, **Lorence A**. PIC outreach efforts year 2. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.

2016 Campbell Z*, Long G*, Tran T, Braun B, **Lorence A**. Elucidating the effects of heat stress on the phenotype of maize seedlings. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.
G Long won 1st place for best undergrad poster award

2016 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A.** Water limitation differentially affects the *phenome* and *ionome* of Arabidopsis. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016. ***L Acosta won 1st place for best grad student poster award.***

2016 Acosta-Gamboa LM*, Nepal N*, **Lorence A**. Assessing the contribution of multiple ascorbate pathways to abiotic and biotic stress tolerance. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.

2016 Nepal N*, Yactayo-Chang JP*, Acosta-Gamboa LM*, Arteaga M, Lorence A. Global gene expression profiling of a high ascorbate Arabidopsis MIOX over-expresser line. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.
N Nepal won 2nd place best grad student poster award

2016 Castillo-Gonzalez SE*, Tibbs M*, Wilkie, A*, Yeater K, Edwards J, McClung A, Eizenga G, McCouch S, **Lorence A.** Studying the effects of foliar ascorbate content in rice cold tolerance. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.

2016 Liu S*, Acosta-Gamboa LM*, Huang X, **Lorence A**. A novel PlantCV module for leaf counting. 2016 Plant Imaging Consortium Annual Meeting, Fayetteville, AR July 7-8, 2016.

2016 Campbell Z*,, Tran T, Braun B, **Lorence A**. Understanding heat stress and its effect on the phenotype of maize seedlings. Arkansas NSF EPSCoR Annual Conference, Little Rock, AR May 24-25, 2016.

2016 Liu S*, Acosta-Gamboa LM*, Huang X, **Lorence A**. A novel approach to leaf counting for Arabidopsis. Arkansas NSF EPSCoR Annual Conference, Little Rock, AR May 24-25, 2016.

2016 Acosta-Gamboa LM*, Liu S*, Langley E*, Campbell Z*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A**.Water limitation affects the *phenome* and *ionome* of Arabidopsis. Arkansas NSF EPSCoR Annual Conference, Little Rock, AR May 24-25, 2016.

2016 Nepal N*, Yactayo-Chang JP*, Acosta-Gamboa LM*, Arteaga M, **Lorence A**. A transcriptomic analysis of a high ascorbate Arabidopsis MIOX over-expresser line. Arkansas NSF EPSCoR Annual Conference, Little Rock, AR May 24-25, 2016.

2016 Harris RS*, Shah D, Goggin FL, **Lorence A**. An Update on Mutant Millets and Other PIC Outreach Efforts. Arkansas NSF EPSCoR Annual Conference, Little Rock, AR May 24-25, 2016.

2016 Acosta-Gamboa LM*, Langley E*, Campbell Z*, Liu S*, Castro-Guerrero N, Mendoza-Cozatl D, **Lorence A**. Optimization of drought stress high throughput phenotyping assays in Arabidopsis. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 6-7, 2016.
L Acosta won 2nd place as best graduate student poster in the STEM category

2016 Tibbs M*, Castillo-Gonzalez SE*, McClung A, **Lorence A**. Effect of water stress on the foliar ascorbate content of selected rice cultivars. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 6-7, 2016.

2016 Fischer K*, Tripod N*, Campbell Z*, Campbell M, Walia H, **Lorence A**. Identifying salt tolerant accessions within a rice diversity panel using phenomic approaches.

Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 6-7, 2016.
K Fischer won 1st place as best undergraduate poster in the division of other analytical techniques and STEM

2016 Castillo-Gonzalez SE*, Tibbs M*, Wilkie, A*, Yeater K, Edwards J, McClung A, Eizenga G, McCouch S, **Lorence A**. Assessing foliar ascorbate content in the rice diversity panel 1. 36th Rice Technical Working Group Meeting, Galveston, TX, March 1-4, 2016.

2016 Goggin, FL, **Lorence A**, Jurisson S, Braun D, Tai WC, Mendoza-Cozatl D, Walker JC, McClure G. The Plant Imaging Consortium: Picturing stress resistant crops. Computational Aspects of Phenotypic Prediction: Image Acquisition and Analysis, Iowa State University, Ames, IA, February 23-25, 2016.

2015 Campbell Z*, Acosta-Gamboa LM*, Liu S*, Mendoza-Cozatl D, **Lorence A**. Optimization of drought tolerance assays at the Plant Imaging Consortium. PhenoDays 2015, Munich, Germany, October 28-30, 2015.

2015 Campbell Z*, Tripod N*, Morris E*, Castillo-Gonzalez SE*, Blair W*, Fischer K*, Smith A*, Oliver K*, Grant R*, Mull CL*, Lima JL*, Parker K*, Robinson Z*, Dietz P*, DeVito N*, Knecht A, Campbell M, Walia H, **Lorence A** (2015) High-throughput phenotyping of rice lines within a diversity panel to determine salinity tolerance. UNL Plant Science Symposium, Plant Phenomics: From Pixels to Traits, Lincoln, NE, October 15-16, 2015.

2015 **Lorence A**, Walia H (2015) Broader impacts of the collaborative project on rice phenomics between the Walia and Lorence laboratories. UNL Plant Science Symposium, Plant Phenomics: From Pixels to Traits, Lincoln, NE, October 15-16, 2015.

2015 **Lorence A**, Goggin, FL, Jurisson S, Braun D, Tai WC, Mendoza-Cozatl D, Walker JC, McClure G. The Plant Imaging Consortium: Picturing more stress resistant plants. UNL Plant Science Symposium, Plant Phenomics: From Pixels to Traits, Lincoln, NE, October 15-16, 2015.

2015 Liu S*, Acosta-Gamboa LM*, Campbell Z*, Huang X, **Lorence A.** Improved plant imaging and analysis approach based on the PlantCV platform**.** UNL Plant Science Symposium, Plant Phenomics: From Pixels to Traits, Lincoln, NE, October 15-16, 2015.

2015 Acosta-Gamboa LM*, Campbell Z*, Torres R*, Mull CL*, **Lorence A**. Phenomics approaches to elucidate the role of the various ascorbate pathways to abiotic stress tolerance in Arabidopsis. AR NSF EPSCoR Annual Meeting, Fayetteville, AR, September 14-15, 2015.

2015 Liu S*, Acosta-Gamboa LM*, Campbell Z*, Huang X, Lorence A. An improved image analysis method based on the PlantCV suite**.** AR NSF EPSCoR Annual Meeting, Fayetteville, AR, September 14-15, 2015.

2015 Acosta-Gamboa LM*, Campbell Z*, Torres R*, Mull CL*, **Lorence A**. Phenomics approaches to elucidate the role of the various ascorbate pathways to abiotic stress tolerance in Arabidopsis. 2015 Annual Meeting of the Phytochemical Society of North America, Urbana, IL, August 8-12, 2015. ***L Acosta won a travel award from PSNA***

2015 Tripod N*, Campbell Z*, Campbell M, Walia H, **Lorence A**. High-throughput phenotyping of rice lines within a rice diversity panel to determine salinity tolerance. 2015 Annual Meeting of the Phytochemical Society of North America, Urbana, IL, August 8-12, 2015.

2015 Colebrooke L*, Campbell Z*, Tran T, Braun D, **Lorence A**. Cost-effective chamber to study the response of maize plants to heat stress. Bridge Program Summer Research Symposium, Arkansas State University, Jonesboro, AR, August 4, 2015.

2015 Castillo-Gonzalez SE*, Tibbs M*, Wilkie A*, Steckling B*, McClung A, Eizenga G, McCouch S, **Lorence A**. Does ascorbate protect rice seedlings from cold stress? Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Acosta-Gamboa LM*, Campbell Z*, Torres R*, Mull CL*, **Lorence A**. Phenomics approaches to elucidate the role of the various ascorbate pathways to abiotic stress tolerance in Arabidopsis. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Yactayo-Chang JP*, Trujillo G*, Wilkie A*, Teoh KH*, Wilson G*, **Lorence A**. Characterization of Arabidopsis gulonolactonase lines with the Scanalyzer HTS platform. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Morris E*, Yactayo-Chang JP*, Campbell Z*, Rodriguez-Gonzalez G*, **Lorence A** Characterization of high ascorbate tobacco lines using a high throughput phenotyping platform. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Phelps GA*, Rowlan JA*, Aboobucker SI*, Yactayo-Chang JP*, Rivas F, Marsico T, **Lorence A**. What is the discriminatory power of *rbcL* and *matK* to correctly identify Arkansas plants? Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.
G Phelps won 3rd place for best undergraduate poster after peer review

2015 Tripod N*, Campbell Z*, Campbell M, Walia H, **Lorence A**. High-throughput phenotyping of rice accessions within a rice diversity panel to determine salinity tolerance. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Liu S*, Huang X, **Lorence A.** An improved image analysis method based on the PlantCV suite**.** Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Goggin FL, **Lorence A**, Jurisson S, Braun D, Tai WC, Mendoza-Cozatl D, Walker JC, McClure G. The Plant Imaging Consortium: Picturing more stress resistant plants. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Humphreys A, Lee MW, Huffaker A, **Lorence A**, Goggin FL. Impact of plant elicitor peptides on growth, reproduction, and nematode resistance. Arkansas P3 Center Symposium, University of Arkansas, Fayetteville, AR, June 28-30, 2015.

2015 Goggin FL, **Lorence A**, Jurisson S, Braun D, Tai WC, Mendoza-Cozatl D, Walker JC, McClure G. Plant Imaging Consortium (PIC): Picturing plant stress responses. IPG 2015 Symposium Plants Between A Rock and a Hard Place: The Interface Between Abiotic and Biotic Stress Responses, University of Missouri, Columbia, MO, May 27-29, 2015.

2015 Humpreys A, Lee MW, Huffaker A, **Lorence A**, Goggin FL. Impact of plant elicitor peptides on growth, reproduction and nematode resistance. Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015 and IPG 2015 Symposium Plants Between A Rock and a Hard Place: The Interface Between Abiotic and Biotic Stress Responses, University of Missouri, Columbia, MO, May 27-29, 2015.

2015 Castillo-Gonzalez SE*, Steckling B*, Tibbs M*, Wilkie A*, McClung A, Eizenga G, McCouch S, **Lorence A**. Establishing how ascorbate is related to cold tolerance in rice. Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015 and IPG 2015 Symposium Plants Between A Rock

and a Hard Place: The Interface Between Abiotic and Biotic Stress Responses, University of Missouri, Columbia, MO, May 27-29, 2015.

2015 Acosta-Gamboa LM*, Campbell Z*, Torres R*, Mull CL*, Lorence A. Designing phenomics protocols to assess the contribution of multiple ascorbate pathways to abiotic stress tolerance. Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015 and IPG 2015 Symposium Plants Between A Rock and a Hard Place: The Interface Between Abiotic and Biotic Stress Responses, University of Missouri, Columbia, MO, May 27-29, 2015.

2015 Harris RS*, Dhaval S, Goggin FL, Dolan M, Cramer C, **Lorence A**. Having fun PICturing plants. 2015 Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015.

2015 Liu X*, Huang X, **Lorence A**. Improve plant imaging and analysis approach based on the PlantCV platform. 2015 Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015.

2015 Tripod N*, Campbell Z*, Campbell M, Walia H, **Lorence A**. Screening of cultivars within the rice diversity panel 1 for salinity tolerance. 2015 Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015.

2015 Yactayo-Chang JP*, Wilkie A*, Trujillo G*, Teoh KH*, Wilson G*, **Lorence A**. An Arabidopsis gulonolactonase protects plants from high light stress. 2015 Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015.

2015 Morris E*, Yactayo-Chang JP*, Campbell Z*, Rodriguez-Gonzalez G*, **Lorence A** High throughput phenotyping of high vitamin C tobacco. 2015 Annual Meeting of the Plant Imaging Consortium, University of Missouri, Columbia, MO, May 26-27, 2015.

2015 Castillo-Gonzalez SE*, Steckling B*, Tibbs M*, McClung A, Eizenga G, McCouch S, **Lorence A**. Assessing foliar ascorbate content in a rice diversity panel and selected mapping population lines with varying levels of seedling cold tolerance. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 7, 2015.

2015 Morris E*, Yactayo-Chang JP*, Campbell Z*, Rodriguez-Gonzalez G*, **Lorence A** Investigation of the role of *myo*-inositol oxygenase in vitamin C synthesis and its effects on the growth and stress tolerance of tobacco plants. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 7, 2015. ***E Morris won 1st place for best undergraduate poster in the plant science category***

2015 Yactayo-Chang JP*, Trujillo G*, Teoh KH*, Wilson G*, **Lorence A**. Characterization of an Arabidopsis gulonolactonase, an enzyme involved in ascorbate biosynthesis. Southern Section of the American Society of Plant Biologists, Dauphin Island, AL, March 28-30, 2015.

2014 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Elevated ascorbate content in plants improves the accumulation and recovery of complex human proteins. Fall 2014 INBRE Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2014.

2014 Aboobucker SI*, Suza WP*, **Lorence A**. Characterization of an *Arabidopsis* L-gulono-1,4-lactone oxidase (GulLO) involved in ascorbate biosynthesis. Fall 2014 INBRE Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2014.

2014 Morris E*, Campbell Z*, Rodriguez-Gonzalez G*, **Lorence A**. Investigation of the role of *myo*-inositol oxygenase in vitamin C synthesis and its effects on tobacco plants. Fall 2014 INBRE Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2014.

2014 Phelps G*, Aboobucker SI*, Yactayo-Chang JP*, Rivas F, Marsico T, **Lorence A**. Use of DNA barcodes to identify Arkansas native plants, potential sources of leads against drug-resistant leukemia cells. Fall 2014 INBRE Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2014. **G *Phelps received Honorable Mention in Biological Sciences Category.***

2014 Campbell Z*, Torres R*, Yactayo-Chang JP*, Martin J*, Gaxiola R, **Lorence A.** High-throughput phenotyping of transgenic *Arabidopsis* using the Scanalyzer HTS reveals novel stress phenotypes. 2014 Fall ABI Symposium, Arkansas State University, Jonesboro, AR, October 7, 2014.

2014 **Lorence A**, Goggin FL, Jurisson S, Braun D, Tai YC, Walker JC, McClure G. The Arkansas and Missouri Bioimaging Consortium for Plant Stress Biology. 2014 Fall ABI Symposium, Arkansas State University, Jonesboro, AR, October 7, 2014.

2014 Robinson Z*, Campbell Z*, Blair W*, DeVito N*, Morris E*, Campbell M, Walia H, **Lorence A**. Response to salt of a rice diversity panel. Annual Meeting of The Phytochemical Society of North America, Raleigh, NC, August 9-13, 2014.
Z Robinson won a travel award

2014 Robinson Z, Campbell Z, Blair W, DeVito N, Morris E, Campbell M, Walia H, **Lorence A**. High throughput phenotyping to identify novel sources of salt tolerance in rice. Bridging the Divide Symposium, Arkansas State University, Jonesboro, AR, August 7, 2014.

2014 Phelps GA, Freeman J, Rivas F, Marsico TD, **Lorence A**. Silica gel allows tissue preservation under field conditions and leads to acceptable DNA yields for plant DNA barcoding. Bridging the Divide Symposium, Arkansas State University, Jonesboro, AR, August 7, 2014.

2014 Yactayo-Chang JP, Dolan ME, **Lorence A**. Positive impact of elevated ascorbate content on hIL-12 production and recovery. Arkansas P3 Center Symposium, Winthrop Rockefeller Institute, Morrilton, AR, July 28-30, 2014.

2014 Phelps GA, Freeman J, Yactayo-Chang JP, Aboobucker SI, Rivas F, Marsico TD, **Lorence A**. Arkansas native plants as a source of leads for the treatment of high risk pediatric hematological cancers, Arkansas P3 Center Symposium, Winthrop Rockefeller Institute, Morrilton, AR, July 28-30, 2014.

2014 Morris E, Campbell Z, Rodriguez G, **Lorence A**. High throughput phenotyping of high vitamin C tobacco lines. Arkansas P3 Center Symposium, Winthrop Rockefeller Institute, Morrilton, AR, July 28-30, 2014.
E Morris, winner, 2nd Place Best Undergraduate Poster

2014 Blair W, Campbell Z, Parker K, Castillo Gonzalez SE, Lima H, De Vito N, Campbell M, Walia H, **Lorence A**. High throughout phenotyping approaches to identify salt tolerance lines within a rice diversity panel. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 10, 2014.
W Blair, winner, 1nd Place Overall Undergraduate Poster, 2014 Create@State
Winner 1st place 2014 Create@State Chemistry Poster

2014 Morris E, Campbell Z, Rodriguez Gonzalez G, **Lorence A**. High throughput phenotyping of high vitamin C tobacco lines. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 10, 2014.
E Morris, 1st Prize Winner, Undergraduate Poster Presentation, Division of Science, Technology, Engineering and Mathematics
Winner 2nd Prize 2014 Create@State Chemistry Poster

2014 Castillo Gonzalez SE, Lisko KA, McClung A, **Lorence A**. Link between foliar ascorbate content and cold tolerance in rice. Create@StAte, A Symposium of

Research and Scholarship, Arkansas State University, Jonesboro, AR, April 10, 2014.

E Castillo 1st Prize Winner, Best Poster by A Graduate Student in Environmental Sciences, College Sciences and Mathematics

Winner People's Choice Award, 3 Minute Thesis Competition

2014 Yactayo-Chang JP, Dolan MC, **Lorence A**. Testing the effect of ascorbate on human interleukin 12 accumulation in tobacco Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 10, 2014.

2014 Phelps G, Aboobucker SI, Rivas F, Marsico T, **Lorence A**. Arkansas native plants as a source of leads for the treatment of high risk pediatric hematological cancers. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 10, 2014.

2014 Morris E, Campbell Z, Rodriguez Gonzalez G, **Lorence A**. High throughput phenotyping of high vitamin C tobacco lines. Regional Meeting of the American Society of Plant Biologists, Lexington, KY, March 29-31, 2014.

2013 Blair W, Campbell Z, Parker K, De Vito N Campbell M, Walia H, **Lorence A**. The Scanalyzer HTS, a powerful phenomics tool to identify salt tolerance lines within a rice diversity panel. SE Regional IDeA Meeting, Little Rock, AR, November 15-17, 2013.

2013 Yactayo-Chang JP, Trujillo-Lujan G, Teoh KH, Wilson GA, **Lorence A**. Characterization of a gulonolactonase, the first enzyme involved in ascorbate biosynthesis localized in the chloroplast. SE Regional IDeA Meeting, Little Rock, AR, November 15-17, 2013.

2013 Castillo Gonzalez SE, Lisko KA, Yan WG, McClung A, **Lorence A**. Link between vitamin C content and cold tolerance in rice. SE Regional IDeA Meeting, Little Rock, AR, November 15-17, 2013.

2013 Blair W, Parker K, Cambell Z, De Vito N Campbell M, Walia H, **Lorence A.** High throughput plant phenotyping to identify salt tolerance lines within a rice diversity panel. Fall 2013 INBRE –Research Conference, University of Arkansas, Fayetteville, AR, October 18-19, 2013.

2013 Martin J*, Torres R*, Campbell Z, Yactayo-Chang J, Gaxiola R, **Lorence A.** Expression of H^+- pyrophosphatase and an inositol oxygenase enhances resistance to salt and drought stresses in *Arabidopsis.* Fall 2013 INBRE –Research Conference, University of Arkansas, Fayetteville, AR, October 18-19, 2013.

2013 Campbell Z*, Torres R*, Martin J*, Yactayo-Chang J*, Gaxiola R, **Lorence A**. High throughput Arabidopsis phenotyping at the Arkansas Center for Plant Powered Production. PhenoDays USA: Imaging and Robotics for the 21st Century Science, Donald Danforth Plant Science Center, St. Louis, MO, Sep 25-27, 2013.

2013 Yactayo-Chang JP*, Torres R*, Martin J*, Gaxiola R, **Lorence A.** Testing the effect of pyramiding the expression of a H^{+}-pyrophosphatase and an inositol oxygenase in Arabidopsis with the Scanalyzer HTS platform. Regional Meeting of the American Society of Plant Biologists (ASPB), Little Rock, AR, April 6-9, 2013.

2013 Tatambhotla SV*, Aboobucker SI*, Suza WP, **Lorence A**. All four biosynthetic pathways leading to vitamin C formation are active in tomato. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 11, 2013.

2013 Torres R*, Yactayo-Chang JP*, Martin J*, Gaxiola R, **Lorence A**. Phenomics at the Arkansas Center for Plant Powered Production. NSF Bioinformatics Workshop to Foster Collaborative Research, Little Rock, AR, March 3-5 2013.

J Yactayo-Chang got honorable mention at best poster competition

2012 Yactayo-Chang JP*, Torres R*, Martin J*, Gaxiola R, **Lorence A**. The Scanalyzer HTS, a powerful platform for non-destructive plant phenotyping. ABI 2012 Fall Symposium Fayetteville, AR, October 23, 2012.

2012 Tatambhotla SV*, Aboobucker SI*, Suza WP, **Lorence A**. All four biosynthetic pathways leading to vitamin C formation are active in tomato. Fall 2012 INBRE – Research Conference, University of Arkansas, Fayetteville, AR, October 5-6, 2012.

2012 Radin JA*, Suza WP, Yactayo-Chang JP*, Goggin FL, **Lorence A**. Effects of exogenously applied abscisic acid in modulating foliar ascorbate content in *Arabidopsis thaliana.* Fall 2012 INBRE –Research Conference, University of Arkansas, Fayetteville, AR, October 5-6, 2012.

2012 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Stable co-expression of vitamin C enhancing genes for improved production of a recombinant therapeutic protein, hIL12, in *Arabidopsis thaliana.* 3rd Annual Conference of the American Council for Medicinally Active Plants, Jonesboro, AR, May 22-25, 2012.

2012 Ayala J, Medrano G, Condori J, Acosta W, Fergus R, Rubio N, Behrens E, Flory A, Radin D, **Lorence A**, Dolan MC, Cramer CL. Optimizing recombinant protein yield in an A*grobacterium*-mediated transient expression system. 3rd Annual Conference of the American Council for Medicinally Active Plants, Jonesboro, AR, May 22-25, 2012.

2012 Sharma A, Folch Mallol JL, Cardoso-Taketa A, **Lorence** A, Villarreal ML. DNA barcoding of the Mexican sedative plant *Galphimia glauca.* Meeting to celebrate Prof. Robert Verpoorte's academic career, Leiden, Netherlands, April 2012.

2012 Radin JA*, Suza WP, Goggin FL, **Lorence A**. Effects of exogenously applied abscisic acid in modulating foliar ascorbate content in *Arabidopsis thaliana*. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 5, 2012.
J Radin won 2nd place for best undergraduate student poster

2012 Martin J*, Yactayo-Chang J*, Gaxiola R, **Lorence A**. Pyramiding H^+-pyrophosphatase and *myo*-inositol oxygenase to enhance plant growth and stress tolerance in *Arabidopsis*. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, April 5, 2012.

2012 Phillips GC, **Lorence A**, Green S. Vitamin C to increase yields of *Camelina* and *Miscanthus*. Annual Meeting of the Consortium for Plant Biotechnology Research, Washington, D.C, March 6-7, 2012.

2012 Lisko KA*, Wilson GA*, Hubstenberger JF, Underwood J, Srivastava V, Phillips GC, and **Lorence A**. Engineering Rice for Elevated Vitamin C Content. 2012 Rice Technical Working Group, Hot Springs, AR, February 27 – March 1st, 2012.

2011 Rodriguez-Gonzalez G*, Nessler CI, **Lorence** A. *Myo*-Inositol oxygenase expression in tobacco leads to plants with enhanced biomass and vitamin C content. 2011 Annual Biomedical Research Conference for Minority Students, St. Louis, MO, November 9-12, 2011. ***G Rodriguez-Gonzalez won best poster awards in two categories: cell biology and interdisciplinary research***

2011 Martin J*, Yactayo-Chang JP*, Gaxiola R, **Lorence A**. Pyramiding expression of a H^+-pyrophosphatase and an inositol oxygenase to enhance plant growth and stress tolerance in *Arabidopsis.* 2011 SE Regional IDeA Meeting, New Orleans, LA, September 22-24, 2011.

2011 Wilson GA*, Torres R*, Harris RS*, Gilbert K, **Lorence A**. Phytoremediation potential of morning glory and lupin species. ABI 2011 Fall Symposium, Little Rock, AR, September 21, 2011.

2011 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Stable co-expression of vitamin C enhancing genes for improved expression of a recombinant therapeutic protein,

hIL12, in *Arabidopsis thaliana.* 2011 P3 Annual Meeting, Hebert Springs, AR, July 26-28, 2011.

2011 Torres R*, Yactayo-Chang JP*, García-López PM, Gurrola-Díaz CM, **Lorence A**. Domesticated and wild lupins accumulate elevated foliar ascorbate levels. 13th International Lupins Conference, Poznan, Poland, June 6-10, 2011.

2011 Lisko KA*, Hubstenberger JF, Belefant-Miller H, Phillips GC, Yan WG, McClung A, **Lorence A**. Screening rice cultivars for elevated vitamin C content. 2011 In Vitro Biology Meeting, Society for In Vitro Biology, Raleigh, NC, June 4-8, 2011.

2011 Radin JA*, Suza WP*, Goggin FL, **Lorence A**. Ascorbate regulation in *Arabidopsis* jasmonate, abscisic acid and ethylene mutants. 2011 In Vitro Biology Meeting, Society for In Vitro Biology, Raleigh, NC, June 4-8, 2011.

2011 Trujillo-Luján G*, Wilson GA*, Lewis D*, **Lorence A**. Characterization of an *Arabidopsis* gluconolactonase involved in ascorbate biosynthesis. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011. ***G Trujillo-Lujan won 2nd place for best graduate student poster in the STEM category***

2011 Aboobucker SI*, Suza WP*, **Lorence A**. Identification and characterization of a functional L-gulono-1,4-lactone oxidase in Arabidopsis. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011.

2011 Lisko KA*, Hubstenberger JF, Belefant-Miller H, Phillips GC, **Lorence A**. Ontogenetic changes of vitamin C in rice. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011.

2011 Kulkarni S*, Suza WP*, Goggin FL, **Lorence A**. Development of high-vitamin C tomatoes. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011.

2011 Yactayo-Chang JP*, Dolan MC, **Lorence A**. Can vitamin C enhance the accumulation of a model human protein in stable transgenics? Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011.

2011 Torres R*, Yactayo-Chang JP*, Gurrola-Diaz CM, Garcia PM, **Lorence A**. Selected members of the *Lupinus* genus accumulate elevated levels of vitamin C. Create@StAte, A Symposium of Research and Scholarship, Arkansas State University, Jonesboro, AR, March 29, 2011.

2010 Radin JA*, Suza WP*, Goggin FL, Lorence A. Ascorbate regulation in *Arabidopsis* jasmonate, ethylene, and abscisic acid mutants. Fall 2010 INBRE –Research Conference, University of Arkansas, Fayetteville, AR, October 15-16, 2010.

2010 Suza WP*, Trujillo-Luján G*, Aboobucker SI*, **Lorence A**. Leveraging Genevestigator data to better understand how the vitamin C network is regulate. ABI 2010 Fall Symposium, Little Rock, AR, September 29, 2010.

2010 Avila C, Carruthers K, Suza WP, **Lorence A**, Goggin FL. Role of plant-derived ascorbate in plant-herbivore interactions. EPSCoR P3 Meeting, Petit Jean, AR, August 15-17, 2010.

2010 Medrano G, Rubio N*, Yactayo-Chang JP*, Srivastava V, Dolan MC, **Lorence A**. Using antioxidants to improve recombinant protein production in transient and stable plant-based bioproduction platforms. EPSCoR P3 Meeting, Petit Jean, AR, August 15-17, 2010.

2010 Underwood J, Wilson GA*, Rubio N*, Medrano G, Dolan MC, Srivastava V, **Lorence A**. Over-expression of ascorbate biosynthesis genes for improved protein production and stress tolerance in rice. EPSCoR P3 Meeting, Petit Jean, AR, August 15-17, 2010.

2010 Kulkarni S*, Suza WP*, Yactayo-Chang JP*, Khodakovskaya MV, Goggin FL, **Lorence A**. Engineering elevated vitamin C in tomato for enhanced growth and stress tolerance. EPSCoR P3 Meeting, Petit Jean, AR, August 15-17, 2010.

2010 Lisko KA*, Hubstenberger JF, Belefant-Miller H, Phillips GC, **Lorence A**. Screening rice cultivars for elevated vitamin C content. EPSCoR P3 Meeting, Petit Jean, AR, August 15-17, 2010.

2010 Potts K, **Lorence A**, Goggin FL. Identification of Arabidopsis MIOX4 over-expressing lines with high vitamin C content. 2010 Poster Competition of the George Washington Carver Research Program, Fayetteville, AR, July 7, 2010. ***K Potts won best poster competition.***

2010 Nair VDP, Lisko KA*, **Lorence A**. Simultaneous determination of key vitamin C precursors using liquid chromatography- electrospray ionization mass spectrometry. 35th International Symposium on High Performance Liquid Phase Separations and related Techniques (HPLC 2010), Boston, MA, June 19-24, 2010.

2010 Trujillo-Luján G*, Wilson GA*, **Lorence A**. Characterization of an *Arabidopsis* gluconolactonase involved in ascorbate biosynthesis. NIH, NCRR Third Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Bethesda, MD, June 16-18, 2010.

2010 Medrano G, Rubio N*, Yactayo-Chang JP*, Srivastava V, Dolan MC, **Lorence A**. Using antioxidants to improve recombinant protein production in transient and stable plant-based bioproduction platforms. IAPB/SIVB Meeting, St. Louis, MO, June 6-11, 2010.

2010 Quatermous K, **Lorence A**, Suza WP*. Exploring the role of sterols in the plant's response to drought stress. Water for Food: Growing More with Less, Second Annual International Conference, Lincoln, NE, May 2-5, 2010. ***WP Suza winner of the "outstanding poster" after judged competition***

2010 Underwood J, Wilson GA*, Rubio N*, Medrano G, Dolan MC, Srivastava V, **Lorence A**. Over-expression of ascorbate biosynthesis genes for improved protein production and stress tolerance in rice. 33rd Meeting of the Rice Technical Working Group, Biloxi, MS, February 22-25, 2010.

2010 Lisko KA*, Hubstenberger JF, Belefant-Miller H, Phillips GC, **Lorence A**. Ontogenetic changes in vitamin C in selected rice varieties. 33rd Meeting of the Rice Technical Working Group, Biloxi, MS, February 22-25, 2010.

2010 Suza WP*, Trujillo-Luján G*, Aboobucker S*, **Lorence A**. Leveraging Genevestigator data to better understand how the vitamin C network is regulated. 2010 Conference of the MidSouth Computational Biology and Bioinformatics Society (MCBIOS), Jonesboro, AR, February 19-20, 2010.

2009 Kulkarni S*, Suza WP*, Goggin FL, **Lorence A**. Metabolic engineering of vitamin C in tomato via over-expression of genes in the *myo*-inositol pathway. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Trujillo-Luján G*, Wilson GA*, **Lorence A**. Characterization of an Arabidopsis glucuronolactonase involved in ascorbate metabolism. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Aboobucker SI*, Suza WP*, **Lorence A**. Identification and characterization of a functional L-gulono-1,4-lactone oxidase in Arabidopsis. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Suza WP*, Avila C, Carruthers K, Goggin FL, **Lorence A**. Influence of mechanical wounding on ascorbate metabolism in Arabidopsis and tomato. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Avila C, Carruthers K, Suza WP*, **Lorence A**, Goggin FL. Role of plant-derived ascorbate in plant-herbivore interactions. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Underwood J, Wilson GA*, Dolan MC, Srivastava, V, **Lorence A**. Over-expression of ascorbate biosynthesis genes for improved protein production in rice cells. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Medrano G, Rubio N*, Radin JA*, Srivastava V, **Lorence A**, Dolan MC. Strategies for improving recombinant protein expression in transient and stable plant-based bioproduction platforms. 9th International Plant Molecular Biology Congress, St. Louis, MO, October 25-30, 2009.

2009 Avila C, Carruthers K, Suza WP*, **Lorence A**, Goggin FL. Influence of modified ascorbate metabolism in plants on an herbivorous insect. 2009 Arkansas NSF EPSCoR Annual Conference, Little Rock, AR, October 1-2, 2009. ***K Carruthers winner best graduate student po*ster**

2009 Suza WP*, Kulkarni S*, Avila C, Carruthers K, Goggin FL, **Lorence A**. Effect of mechanical wounding on ascorbate metabolism in Arabidopsis and tomato. 2009 Arkansas NSF EPSCoR Annual Conference, Little Rock, AR, October 1-2, 2009. ***S Kulkarni winner best graduate student po*ster**

2009 Quatermous K, **Lorence A**, Suza WP*. Major sterols of flowering and non-flowering plants and their proportions in plants experiencing drought. ABI 2009 Fall Symposium, Jonesboro, AR, September 25, 2009.

2009 Quatermous K, **Lorence A**, Suza WP*. Major sterols of flowering and non-flowering plants and their proportions in plants experiencing drought. RISE Scholars 2009 Summer Research Symposium, Jonesboro, AR, August 6, 2009.

2009 Weathers PJ, Mannan A, Liu CZ, Towler MJ, Vail D, **Lorence** A. DMSO stimulates production of artemisinin and also suggesting that the sesquiterpene may function as a ROS sink in *Artemisia annua.* 2009 Society for In Vitro Biology Annual Meeting, Charleston, SC, June 6-10, 2009.

2009 Fawcett EM*, Ayala J, **Lorence A**, Dolan MC. Impact of introducing ascorbate in transient plant-based bioproduction of recombinant proteins with therapeutic utility. 23rd National Conference on Undergraduate Research (NCUR), LaCrosse, WI, April 18, 2009.

2009 Medrano G, Radin JA*, Rubio N*, Lorence A, Dolan MC. Enhancing recombinant protein expression by modulating cellular antioxidant levels on both transient and stable plant-based production platforms. NSF EPSCoR P3 Center and the P3 Technical Advisory Committee (TAC) Meeting, Little Rock, AR, April 2, 2009.

2008 Yactayo-Chang JP*, Trujillo G*, Aboobucker SI*, Lisko KA*, Harris RS*, Parbatani A*, Kulkarni S*, Wilson GA*, Radin JA*, Suza WP*, **Lorence A**. A holistic approach to understand the roles of vitamin C in plant physiology and development. Fall 2008 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2008.

2008 Harris RS*, Wilson GA*, Radin JA*, Suza WP, **Lorence A**. Phytoremediation potential of plants with elevated vitamin C content. Fall 2008 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 7-8, 2008.

2008 Aboobucker SI*, Suza WP*, **Lorence A**. Identification and characterization of a functional L-gulono-1,4-lactone oxidase in Arabidopsis. ABI 2008 Fall Symposium, Little Rock, AR, October 7, 2008.

2008 Suza WP*, Medrano G, Yactayo-Chang JP*, Parbatani A*, Underwood J, Srivastava V, Goggin FL, Dolan MC, **Lorence A**. Insect defense and recombinant protein production in plants in the realm of ascorbate metabolism. SF EPSCoR Annual Meeting Poster Session, Little Rock, AR, October 6, 2008.

2008 Lisko KA*, Harris RS*, Buchanan R, **Lorence A**. Vitamin C is essential not only for human health, but also for cotton growth and stress tolerance. Cotton Field Day, Judd Hill Foundation, Truman, AR, August 28, 2008.

2008 Trujillo-Lujan G*, Wilson GA*, **Lorence A**. Leveraging Arabidopsis genetic resources to identify a functional glucuronolactonase. Arkansas EPSCoR P3 Training Conference, Petit Jean, AR, August 20-22, 2008.

2008 Willis C*, Yactayo-Chang JP*, Dolan MC, **Lorence A**. Study of ascorbic acid capacity in *Nicotiana* species. Arkansas EPSCoR P3 Training Conference, Petit Jean, AR, August 20-22, 2008.

2008 Lisko KA*, Harris RS*, Crawford F*, Yactayo JP*, **Lorence A**. Harnessing the power of vitamin C for enhancing human and plant health. Arkansas EPSCoR P3 Training Conference, Petit Jean, AR, August 20-22, 2008.

2008 Lisko KA*, Harris RS*, **Lorence A**. Elevated vitamin C enhances growth, stress tolerance and phytoremediation potential in Arabidopsis. 2nd Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, August 6-8, 2008. ***K Lisko won a Student Travel Award from NISBRE***

2008 Trujillo-Lujan G*, Wilson GA*, **Lorence A**. Leveraging Arabidopsis genetic resources to identify a functional glucuronolactonase. 2nd Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, August 6-8, 2008.

2008 Willis C*, Yactayo-Chang JP*, Dolan MC, **Lorence A**. Study of ascorbic acid capacity in the *Nicotiana* species. RISE Scholars 2008 Summer Research Symposium, Jonesboro, AR, August 7, 2008.

2008 Fawcett E*, Ayala J, Dolan MC, **Lorence A**. Impact of introduction of vitamin C in transient recombinant RTB fusion protein expression. RISE Scholars 2008 Summer Research Symposium, Jonesboro, AR, August 7, 2008.

2008 Belisle M*, Wilson GA*, Trujillo G*, **Lorence A**. Cloning and characterization of two putative glucuronolactonases from *Arabidopsis thaliana* involved in ascorbate degradation. Poster Competition, Departments of Biology and Biotechnology and Chemistry and Biochemistry, Worcester Polytechnic Institute, Worcester, MA, April 15, 2008.

2007 Trujillo G*, Wilson GA*, Belisle M*, Aboobucker SI*, Yactayo JP*, Simeon S*, **Lorence A**. Exploring the plasticity of the *myo*-inositol pathway to vitamin C in plants. Fall 2007 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 9-10, 2007. ***G Wilson got a Travel Award from the Honors College at A-State***

2007 Lisko KA*, Harris RS*, Crawford F*, Yactayo-Chang JP*, **Lorence A**. Harnessing the power of vitamin C for enhancing human and plant health. Fall 2007 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 9-10, 2007.

2007 Crawford F*, Yactayo-Chang JP*, Vanderpool S, **Lorence A**. Mustards for better human health and a cleaner environment. Einstein's in the City 2 International Students Research Conference 2007, City College of New York, New York, NY, October 30-31, 2007. ***F Crawford won Award to Best Undergraduate Poster***

2007 Lisko KA*, Harris RS*, Crawford F*, Yactayo-Chang JP*, **Lorence A**. Harnessing the power of vitamin C for enhancing human and plant health. ABI 2007 Fall Symposium Little Rock, AR, October 23, 2007.

2007 Gilbert KM, Pzybyla B, Pumford N, Han T, Fuscoe J, Schnackenberg L, Dosss JC, Macmillan-Crow LA, **Lorence A**, Medina-Bolivar F, Cramer C, Blossom SJ. Environmental contaminants, autoimmune disease and phytoremediation. ABI 2007 Fall Symposium Little Rock, AR, October 23, 2007.

2007 Crawford F*, Yactayo-Chang JP*, Vanderpool S, **Lorence A**. Searching for the "C" in mustards. RISE Scholars 2007 Summer Research Symposium, Jonesboro, AR, August 9, 2007.

2007 Wilson GA*, Martínez-Quintana J*, **Lorence A**. Glucuronolactonase, a gene family encoding enzymes involved in vitamin C biosynthesis and degradation. Arkansas Bioinformatics Society (ARBIOS) Symposium: Building Careers in Bioinformatics, Arkansas State University, Jonesboro, AR, April 19-21, 2007. ***G Wilson received Award for Best Undergraduate Poster***

2007 Uwase J*, Wilson GA*, Martínez-Quintana J*, Simeon S*, Hill S*, Vanderpool S, **Lorence A**. Vitamin C biosynthesis in mustard species. 21st National Conference on Undergraduate Research (NCUR), Dominican University of CaliforniaSan Rafael, CA, April 12-14, 2007.

2007 Simeon S*, Hannigan R, Martínez-Quintana J*, Medina-Bolivar F, **Lorence A**. HPTLC method for simultaneous cellular redox and energy state determination of plant samples. Pittsburgh Conference (Pittcon 2007) Meeting, Chicago, IL, February 25 – March 1, 2007.

2006 Wilson GA*, Uwase J*, Simeon S*, Martínez-Quintana J*, **Lorence A**. Screening of *Arabidopsis thaliana* knockout lines looking for genes encoding glucuronolactonase, the third enzyme in the *myo*-inositol pathway to ascorbate. Fall 2006 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 3-4, 2006.

2006 Lisko KA*, Martínez-Quintana J*, Jullian B*, Vaughan M*, Chevone BI, Nessler CL, **Lorence A**. Elevated foliar vitamin C content confers plants tolerance to stresses Fall 2006 INBRE – Undergraduate Research Conference, University of Arkansas, Fayetteville, AR, November 3-4, 2006.

2006 **Lorence A**, Woffenden BJ, Martinez-Quintana J*, Nopo-Olazabal L, Nessler CL, Medina-Bolivar F. ORNA: a master regulator of genes in the tobacco plant. ABI 2006 Fall Symposium, Little Rock, AR, October 25, 2006.

2006 Uwase J*, Wilson GA*, Martínez-Quintana J, Simeon S*, Hill S, Vanderpool S, **Lorence A.** Vitamin C biosynthesis in mustard species. ABI 2006 Fall Symposium, Little Rock, AR, October 25, 2006.

2006 Cramer C, Hood E, Dolan MC, **Lorence A**. Seeding success… from people to products. ABI 2006 Fall Symposium, Little Rock, AR, October 25, 2006.

2006 Wilson GA*, Uwase J*, Simeon S*, Martínez-Quintana J*, **Lorence A**. Screening of *Arabidopsis thaliana* knockout lines looking for genes encoding glucuronolactonase, the third enzyme in the *myo*-inositol pathway to ascorbate. Society for Advancement of Chicanos and Native Americans in Science Meeting, Tampa, FL, October 26-28, 2006.

2006 Lisko KA*, Martínez-Quintana J*, Jullian B*, Vaughan M*, Chevone BI, Nessler CL, **Lorence A**. Elevated foliar vitamin C content confers plants tolerance to stresses. Society for Advancement of Chicanos and Native Americans in Science Meeting, Tampa, FL, October 26-28, 2006.

2006 Medina-Bolivar F, Nopo-Olazabal L, Simeon S*, Shelton K, Condori J, Hannigan R, **Lorence A**. HPTLC as a tool to rapidly assess the elicitor responsiveness of hairy roots cultured in the Liquid Lab™ reactor. International Symposium on High Performance Thin Layer Chromatography, Berlin, Germany, October 9-11, 2006.

2006 Uwase J*, Wilson G*, Martínez-Quintana J*, Simeon S*, Hill S*, Vanderpool S, **Lorence A**. Vitamin C biosynthesis in mustard species. RISE Scholars 2006 Summer Research Symposium, Jonesboro, AR, August 11, 2006.

2006 Wilson GA*, Uwase J*, Simeon S*, Martínez-Quintana J*, **Lorence** A. Screening of Arabidopsis lines looking for genes encoding glucuronolactonase, the third enzyme in

the *myo*-inositol pathway to ascorbate. McNair Scholars 2006 Summer Research Symposium, Jonesboro, AR, July 26-27, 2006.

2006 Simeon S*, Nopo-Olazabal L, Hannigan R, **Lorence A**, Medina-Bolivar F. Elicitation and secretion of sesquiterpenes in hairy roots cultured in the Liquid Lab™ bioreactor. Phytochemical Society of North America Meeting, Oxford, MS, July 8-12, 2006. ***S Simeon won a Student Travel Award from PSNA***

2006 **Lorence A**, Rogers A*, Martínez-Quintana J*, Robinson J, Zhang W, Mendes P, BI Chevone BI, Nessler CL. *Myo*-Inositol oxygenase and D-glucuronic acid reductase, the two first enzymes in a new route to vitamin C formation in plants. 16th Penn State Symposium in Plant Physiology, State College, PA, May 18-20, 2006.

2005 **Lorence A**, Rogers A*, Robinson J*, Zhang W, Mendes P, Chevone BI, Nessler CL. *Myo*-inositol oxygenase and glucuronic acid reductase, the two first enzymes in a new route to vitamin C formation in plants. 2005 Fall Symposium, Arkansas Biosciences Institute, Little Rock, AR, September 28-29, 2005.

2005 Zhang W, **Lorence A**, Nessler CL, Chevone BI. A novel F-box gene, *osf1*, regulates leaf ascorbate in Arabidopsis and alters ozone sensitivity. 1st Gordon Conference in Plant Metabolic Engineering, Tilton, NH, July 10-15.

2005 Zhang W, **Lorence A**, Nessler CL, Chevone BI. A novel F-box gene, *osf1*, regulates leaf ascorbate in Arabidopsis and alters ozone sensitivity. 37th Air Pollution Workshop, Alberta, Canada, April 25-28, Banff.

2005 Smith M, Woffenden BJ, Nessler CL, **Lorence A**, Medina-Bolivar F. Metabolic engineering of specialized metabolite biosynthesis, a novel approach for the discovery of human therapeutics. 21st Annual Research Symposium and Exposition of the Graduate Student Assembly of Virginia Tech, Blacksburg, VA, March 23, 2005.

2004 **Lorence A**, Robinson J*, Chevone BI, Mendes P, Nessler CL. Contribution of the *myo*-inositol oxygenase (*miox*) gene family of *Arabidopsis thaliana* to ascorbate biosynthesis. 15th International Conference on Arabidopsis Research, Berlin, Germany, July 11-14 2004.

2004 **Lorence A**, Rogers A*, Mendes P, Zhang W, Chevone BI, Nessler CL. Identification and characterization of a putative glucuronic acid reductase in *Arabidopsis thaliana.* 15th International Conference on Arabidopsis Research, Berlin, Germany, July 11-14 2004.

2004 Villatoro-Vera RA*, Bah M, **Lorence A**, Pereda-Miranda R. Convolvulaceous resin glycosides induce non-selective pore formation in cell membranes. 2004 International Congress on Natural Products Research, Phoenix, AZ, July 31-August 4 2004.

2003 Robinson R*, **Lorence A**, Chevone BI, Mendes P, Nessler CL. Genetic engineering of an alternative vitamin C pathway in Arabidopsis. 2003 Symposium, Undergraduate Summer Research Internship of the Multicultural Academic Opportunities Program. Blacksburg, VA, Summer, 2003.

2002 **Lorence A**, Medina-Bolivar F, Nessler CL. Production of camptothecin and 10-hydroxycamptothecin from *Camptotheca acuminata* hairy roots. First International Congress on Plant Metabolomics, Wageningen, The Netherlands, April 7-11 2002.

2001 Angeles JS*, Villarreal ML, Quintero R, Pereda-Miranda R, **Lorence A**. Camptothecine production by *Camptotheca acuminata* cell suspensions. 42nd Annual Meeting of the *American Society of Pharmacognosy* "Exploring Natural Products from Latin American Biodiversity", Oaxaca, México, July 14-18 2001.

2000 **Lorence A**, Angeles JS*, Villarreal ML, Nessler CL, Quintero R. Tranformation of *Camptotheca acuminata* cell cultures for the production of camptothecin, a terpene with anticancer and antiretroviral activities. First Congress of Principal Investigators of Research Projects in Applied Biological Sciences, CONACYT, Acapulco, México.

2000 Angeles JS*, Quintero R, **Lorence A**. Camptothecine production by *Camptotheca acuminata* cell line cultures, a case of study of economic feasibility. Perspectives and Limitation of Biotechnology in Developing Countries, San José, Costa Rica, January, 24-28, 2000.

1999 Solleiro JL, Del Valle C, Nuñez I, Hernández H, López R, Calderón R, **Lorence A**, Castañón R, Pérez-Jerónimo G. Technological innovation in Mexican agriculture and agroindustry. X Week of Scientific Research, UAM-X, Mexico City, México, September 27 – October 1st, 1999.

1997 Bravo A, **Lorence A**, Sánchez J, Flores H, Güereca L, Nuñez ME. Phylogenetic and functional analysis of the *Bacillus thuringiensis* insecticidal crystal protein family. 30th Annual Meeting SIP Banff' 97, Society for Invertebrate Pathology, Banff, Alberta, Canada, August 24-29 1997.

1997 **Lorence A**, Darszon A, Bravo A. Is aminopeptidase N the receptor of Cry1Ac δ-endotoxin in *Trichoplusia ni* midgut? 12th World Congress on Animal, Plant and Microbial Toxins, International Society on Toxinology, Cuernavaca, México, September 21-26, 1997.

1997 Bravo A, **Lorence A**, Sánchez J, Flores H, Güereca L, Nuñez, ME. The insecticidal crystal protein family from *Bacillus thuringiensis.* 12th World Congress on Animal, Plant and Microbial Toxins, International Society on Toxinology, Cuernavaca, México, September 21-26, 1997.

1996 **Lorence A**, Sánchez J, Darszon A, Bravo A. Ionic channels formed by the Cry1Ac toxin in presence of its receptor in black lipid bilayers. XXI National Congress of Biochemistry, Manzanillo, México, November 3-7, 1996.

1996 Bravo A, **Lorence A**, Sánchez J, Nuñez ME. Functional and phylogenetic studies of the pore formation domain from the *Bacillus thuringiensis* delta-endotoxins. XX International Congress of Entomology, Florence, Italy, August 25-31, 1996.

1996 **Lorence A**, Sánchez J, Darszon A, Bravo A. Pore formation of the *Bacillus thuringiensis* Cry1Ac toxin in presence of the *Trichoplusia ni* toxin-receptor in planar lipid bilayers. Third International Workshop on Pore-Forming Toxins, Mainz, Germany, September 26-28, 1996.

1994 **Lorence A**, Darszon A, Quintero R, Bravo A. Permeability changes on *Spodoptera frugiperda* BBMV caused by *Bacillus thuringiensis* δ-endotoxins. XX National Congress of Biochemistry, SMB, Zacatecas, México, October 30-November 4, 1994.

1994 Díaz C, **Lorence A**, Darszon A, Liévano A, Quintero R, Bravo A. Cry toxins induce an increase in cation membrane permeability involving ion channels in BBMV containing functional receptors. International Cooperation for Development of Biotechnology Conference organized by the National Steering Committee for Biotechnology, the Chief Scientist Ministry of Industry and Trade, the Ministry of Science and the Arts, the Israel Center for R&D (MATIMOP), the Israel Export Institute and the Rashi Foundation, , Jerusalem, Israel, October 30 – November 3, 1994.

1994 **Lorence A**, Darszon A, Quintero R, Bravo A. Effects of *Bacillus thuringiensis* δ-endotoxins on the permeability of *Spodoptera frugiperda* brush border membrane vesicles. Second Meeting of the Mexican Society of Cell Biology, Mexico City, Mexico, October 5-7, 1994.

1994 **Lorence A**, Darszon A, Quintero R, Bravo A. Effects of *Bacillus thuringiensis* δ-endotoxins on the permeability of *Spodoptera frugiperda* midgut brush border membrane vesicles. VIth International Colloquium on Invertebrate Pathology and Microbial Control y IIth International Conference on *Bacillus thuringiensis*, Society for Invertebrate Pathology (XXVIIth Annual Meeting), Montpellier, France, August 28 – September 2, 1994.

1994 **Lorence A**, Darszon A, Quintero R, Bravo A. Design of a detection system of new *Bacillus thuringiensis* δ-endotoxins. Academic Meeting, X Anniversary of the Graduate Program in Biotechnology, CCH/UNAM, Mexico City, México, June 2-3, 1994.

1993 **Lorence A**, Darszon A, Quintero R, Bravo A. Fluorometric assay of potential changes of *Spodoptera frugiperda* midgut brush border membrane shows that δ-endotoxin from *Bacillus thuringiensis* induces cation selective pore formation. Second Workshop on Pore-Forming Toxins, Mainz, Germany, September 29 - October 2, 1993.

1993 **Lorence A**, Quintero R, Darszon A, Bravo A. Design of a detection system for new *Bacillus thuringiensis* δ-endotoxins based on changes in ion transport of brush border membrane vesicles. First Meeting of the Mexican Society of Cell Biology, Mexico City, México, June 14-16, 1993.

1992 Solleiro JL, González RL, **Lorence A**, Gómez G. Biotechnology for the development of Mexico. The Ninth International Biotechnology Symposium, *American Chemical Society,* Crystal City, VA, August 16 – 21, 1992.

1991 López-Baca A, Trejo-Loyo M, **Lorence A**, Gómez J. Comparative kinetic study of *Candida utilis* and *Saccharomyces cerevisiae* cultures in different carbon sources. IV National Congress of Biotechnology and Bioengineering, SMBB, Mexico City, México, September 8-12, 1991.

1991 **Lorence A**, Medina A, Mora M, Roldán T, Gómez J. Effect of the carbon source concentration in the biochemistry and physiology of *Saccahromyces cerevisiae* biomass production. II Week of Experimental Biology, *Universidad Autónoma Metropolitana*, Iztapalapa, México City, México, May 6-9, 1991.

Attention of the Media to my Research

Newspapers, Magazines, and Newsletter Articles (33)

- "Lorence named co-investigator for NSF project", special section "Harvest ", *the Jonesboro Sun*, October 15, 2017.
- "Professor recognized for crop research" by Sunshine Crump. *The Jonesboro Sun*, December 4, 2014, A8-A9.
- "Professor: Robot to revolutionize plant science" by Sunshine Crump. Lead story (my picture in the front page) of *The Jonesboro Sun*, September 14, 2014.
- Four articles highlighting important accomplishment from my research team were published in *ASSETS of Arkansas*, Fall 2012. The articles are: 1) "Director's welcome" 2)"Highlights ASSET student researchers" 3)"Arkansas researchers use new techniques to boost plant productivity", 4) "ASSET impacts" Publication available online at : http://issuu.com/ assetsofarkansas/docs/fall2012newsletterfinal.
- Four articles highlighting important accomplishments from my research team were published in *ASSETS of Arkansas*, Fall/Winter 2012. The articles are: 1) "P3 researcher edits new book on recombinant gene expression" 2) "SURF awards 2012", 3) "P3 student defends MS thesis", and 4) "P3 researcher mentors national conference poster winner". Publication available online at http://issuu.com/assetsofarkansas/docs/fallwinter2012.
- "Dr. Lorence nominated as "faculty member" of *Faculty of 1000*, Agriculture and Biotechnology Section. *ASSETS of Arkansas* Volume 6, Spring/Summer 2011.
- "Lorence invited to participate in prestigious Leadership Institute", *ASSETS of Arkansas*, Volume 5, Fall/Winter 2010.
- "Dr. Argelia Lorence Honored with Prestigious Award", *ASSETS of Arkansas*, Volume 4, Spring/Summer 2010.

- "Research involving medicinal plants starts", *El Diario de Morelos*, March 1st, 2010. This article highlights the graduate level course entitled: "Plant DNA Barcoding" I taught at the Research Center of Biotechnology (*Centro de Investigación en Biotecnología*) of the Autonomous University of the State of Morelos (*Universidad Autónoma del Estado de Morelos*) the first week of March. "El *Diario de Morelos"* is the most read newspaper in the State of Morelos. "*La Unión de Morelos*" and "*El Regional del Sur*", two additional newspapers also published a picture of the press conference where the course was announced.
- "Dr. Lorence Invited to Speak in Mexico". *ASSETS of Arkansas*, Volume 2, Spring/Summer 2009.
- "Fiona Goggin and Argelia Lorence Gave an Invited Presentation". *Vision*, the magazine of the Dale Bumpers College of Agricultural, Food and Life Sciences of the University of Arkansas, Volume 35, No. 6, November- December, 2008.
- "Highlights in Research and Sponsored Programs", 2007-2008 Report, Arkansas State University Jonesboro, a picture of myself and one of my PhD students was chosen to illustrate this article in page 12 of this annual report.
- "ABI Faculty Attend World In Vitro Congress", "P3 Symposium" "Arkansas EPSCoR P3 Seed Grants" and "2008 Arkansas NSF EPSCoR Annual Conference", these short articles highlight conferences I have presented, and proposals I have gotten funding for. *ASSETS of Arkansas*, Volume 1, Fall/Winter 2008.
- "CSI: ASU" A photo highlighting Dr. Maureen Dolan and my participation at the CSI Summer camp was published in this article. *Voices*, the Magazine of ASU Alumni Association- Fall 2008.
- "ASU researchers study nanoparticles and their effects in the environment" by Jennifer Bouldin. *The Jonesboro Sun*, October 5th, 2008.
- "New science program designed to peak interest" by David Pierce, *The Osceola Times*, September 25, 2008. This article describes the work that Shea Harris, one of my MSc students has been doing by teaching science to 4th and 5th grade students.
- "Lisko receives Student Travel Award", article describing the award winning abstract that Katherine Lisko, one of my students received from the NIH-INBRE. The *Grand Prairie Herald*, August 27, 2008.
- "A better understanding: ABI research seeks to find solutions to environmental concerns" by Susan O'Connor. *Jonesboro Occasions* magazine, April 2008. Article describing the research my group is doing in the area of phytoremediation.
- "The power of green". My photo was chosen to be included in recruiting materials designed by ASU to highlight research carried out at various academic departments in plant biotechnology. *AY Magazine*, Volume XIX, Number 12, April 2008. Also published in the *Jonesboro Occasions* magazine.
- "Visitors from Arkansas Biosciences Institute" by Dr. Rosa Buxeda. The visit Dr. Pamela Weathers and I paid to the University of Puerto Rico campus Mayagüez was highlighted. *Newsletter of the Industrial Biotechnology Program*, UPR-Mayagüez, December 2007.
- "New path for vitamin C production can improve crop values" by Siddique Imran. *The Jonesboro Sun*, November 11, 2007. S. Imran is one of the PhD students of my group.
- "Research at A-State gets $9 million boost" by Susan O'Connor. Lead story (picture of my group in the front page) of the *Jonesboro Sun*, September 3rd, 2007.
- "Biosciences board tours ASU campus" by Sherry F. Pruitt. Lead story (my picture in the front page) of *The Jonesboro Sun*, August 1st, 2007.
- "2006 Proves to be year of achievements for A-State" by Aldemaro Romero, my research mentioned in this article published by the *Jonesboro Sun*, December 31, 2006.

- "A-State teaching students how to investigate crime scenes" by Sherry F. Pruitt. Lead story (my picture in the front page) of *The Jonesboro Sun*, July 1st, 2006.
- My research program was chosen by Dr. Elizabeth Hood, Associate Vice Chancellor for Research and Technology Transfer to represent ASU in the American Association of State Colleges and Universities, July 2006.
- "ABI reaches out to future leaders" by Sherri F. Pruitt. My participation in the ABI/ASU Outreach Program is highlighted. *The Jonesboro Sun*, June 20, 2006.
- "Biosciences Center researchers optimistic about work in plants" by Sherry F. Pruitt. Lead story of *The Jonesboro Sun*, March 12, 2006.
- "Biosciences director describes research" by Grover Welch. *The Jonesboro Sun*, January 19th, 2006.
- Interview for "*The Herald*" (ASU Newspaper), September 15th 2005, Jonesboro, AR.
- "The Arkansas Biosciences Institute" by Tom Moore. *Arkansas Agriculture*, 2005, Vol. 3, Issue 1, p. 15-18.
- "New Scientists Recruited to Arkansas", note describing my hiring at ABI/ASU. Arkansas *Tobacco Settlement Commission*, Quarterly Report, July 2005.
- Book I co-edited: "Recombinant Gene Expression. Reviews and Protocols" featured at *Virginia Tech Magazine*, 2004, Vol. 27, No. 1 (section books by alumni, faculty and staff).

TV Appearances (2)

- Participant of the televised panel discussion entitled: "Clash of the Minorities". Event organized as part of the Hispanic Heritage Week Celebration, Arkansas State University, TV Studio at the College of Communications Building. September 14th 2005, Jonesboro, AR.
- TV and radio interview: "Biotechnology in Mexico". TV and Radio Show entitled: *"Detrás de la Noticia con Ricardo Rocha*", *Grupo IMER* Radio 660 AM and 94.5 FM and Cable TV. Guesses: Drs. Argelia Lorence and Enrique Galindo. November 10, 2001, Mexico City, México.

Radio Interviews (2)

- "Arkansas Research Alliance Fellow Award", interview aired December 5, 2014, KASU.
- "Vitamin C and aging", interview aired November 6, 2006, KASU.

Articles Published in Newspapers (2)

- "ASU team seeks keys to aging process" by Argelia Lorence, *The Jonesboro Sun*, April 30, 2006.
- "The Monarch Butterfly and Genetically Modified Corn" by Paulina Balbás and Argelia Lorence, *La Jornada - Investigación y Desarrollo*, December, 2001.

Advisory Activities

Primary Advisor

Post-doctoral Research Associates

Dr. Walter Suza	Aug 08 – May 11	Lecturer at Iowa State Univ.
Dr. Thomas Teoh	Nov 11 –Feb 12	Post-doc, ABI/A-State
Dr. Suxing Liu	Jan 15 – June 17	Post-doc, U Georgia
Dr. Jessica Yactayo-Chang	Aug 16 – March 18	A-State.

Visiting scientist

Dr. Gabriel Betanzos	Sep – Oct 2011	Faculty, UAH, Hidalgo, Mexico

Program manager

Molly Alexander	Aug 14 to date

Lab technicians

Current

Zachary Campbell	April 13 to date

Past

Raquel Torres	Jan 12 - April 13
Gwendolyn Wilson	Feb 09 - Dec 11
Nora Rubio (half time)*	March 09 - Aug 10

* co-advised in collaboration with Dr. Maureen Dolan

Jessica Yactayo-Chang	March 07 - Jan 09
Shannon Hill (part time)	Sep 05 - Dec 06
Javier Martínez-Quintana	Jan 06 - Feb 07

Graduate students

Current

Lucía M Acosta-Gamboa	PhD-Molecular Biosciences	Jan 15 - date
Nirman Nepal	PhD-Molecular Biosciences	Aug 15 - date
Gerardo Chacón-Naranjo	PhD-Molecular Biosciences	June 18
Kharla Mendez	PhD-Molecular Biosciences	June 18

Completed

Katherine A Lisko- PhD Molecular Biosciences (2008-2013)
Thesis: "Engineering elevated vitamin C content in rice (*Oryza sativa*) to improve abiotic stress tolerance"
Winner: Outstanding Graduating Senior Award, College of Sciences and Mathematics, ASU, April 2014
Now: Senior Research Scientist, DuPont Pioneer, Union City, TN (Sep 2014 to date).

Siddique I Aboobucker-PhD-Molecular Biosciences (2007-2014)
Thesis: "Identification and characterization of a functional L-gulono-1,4-lactone oxidase in *Arabidopsis thaliana*"
Now: Post-doctoral Research Associate, Iowa State University, Ames, IA (Jan 2015 to date)

Jessica P Yactayo-Chang- PhD Molecular Biosciences (2012-2016)
Thesis: "The role of the chloroplastic and endoplasmic reticulum ascorbate subcellular pools in plant physiology"
Now: Post-doctoral Research Associate, A-State, Jonesboro, AR (Aug 16 to March 18)

Scott Simeon- MS Chemistry (2006-2008) Note: He finished the MS program of study and also the experimental work. He was recruited out by BP Oil based on a six figure salary before completing writing the thesis.
Now: GC-MS specialist, Chemical and Petrochemical Inspectors, TX.

Rodney Shea Harris – MS Environmental Sciences (2007-2009)
Thesis: "Analysis of the protective effects of ascorbic acid on thrichloroethylene and pyrene phytotoxicity"
Now: Outreach coordinator, ABI/A-State

Jessica Yactayo-Chang – MS Chemistry (2008-2011)
Thesis: "Stable co-expression of vitamin C enhancing genes for improved production of a recombinant therapeutic protein, hIL-12, in *Arabidopsis thaliana*"

Now: Post-doc, my group (A-State)

Shashank Kulkarni – MS Chemistry (2008-2012), ASU
Thesis: "Elevating ascorbate content in tomato and studying the role of jasmonates in modulating ascorbate in *Arabidopsis"*
Now: PhD Medicinal Chemistry, Northeastern University (Aug 2012 to May 2017); Research Scientist, EMD Serono, Boston, MA

Sonia Elizabeth Castillo-Gonzalez – MS Environmental Sciences (2013-2015)
Thesis: "Assessing foliar ascorbate content in a rice diversity panel and in selected mapping population lines with varying levels of seedling cold tolerance"
Now: Research Assistant, Gehan Laboratory, Donald Danforth Plant Science Center

Guillermo Trujillo-Luján – MS Molecular Biosciences (2007-2012), Note: He finished the program of study, experimental work, and initial draft of the thesis. He did not complete the defense.
Thesis: "Functional expression and analysis of the expression pattern of a gluconolactonase involved in the *myo*-inositol pathway to ascorbate in *Arabidopsis thaliana*"
Now: Unknown.

Satya Veena Tatambhotla - Professional Masters in Biotechnology (Aug 11- May 13)
Research Project: Vitamin C metabolism in tomato
Now: Researcher, Cognizant Technology Solutions, Hyderabad, India.

Zachary Campbell –Professional Masters in Biotechnology (Aug 11 – Dec 13)
Research project: Arabidopsis and rice phenomics
Now: Phenotyping technician, my group.

Honor's thesis students

Students I have mentored (main adviser)

Earl Morris	BS-Biology/Chemistry	Aug 13 - May 15

Winner R.E. Wilson Award 2015
Thesis: "High throughput phenotyping of high vitamin C tobacco lines"

Gregory Phelps	BS-Biology/Chemistry	Jan 14 - May 15

Thesis: "DNA barcoding to identify Arkansas plants with potential anti-leukemia activity"

Molly H Tibbs	BS-Biology/Chemistry	Jan 15 - May 16

Thesis "Effect of water stress in the ascorbate content of selected rice cultivars"

Students I have mentored (committee member)

Alyssa Caparas	BS-Biology	May 14 - May 15

Baccalaureate students

Natalie Turner	BS-Biology	May 17 to date
Shannon Cunningham	BS-Biology	May 15 to date
Katherine A Lisko	BS-Forensic Science	Jan - Aug 08
Gwendolyn A Wilson	BS-Biology	May 08 - Jan 09
Raquel Torres	BS-Biology	Jan - Dec 2011
Earl Morris	BS-Chemistry	June - Aug 15
Nathan Tripod	BS-Interdis. Studies	Dec 15 - July 16
Kendl Fischer	BS-Chemistry	Jan 17 to June 17
Jarrod Creameans	BS-Biology	June 16 to July 17
Chance Langley	BS-Chemistry	May – July 17

Undergraduate students (all A-State students, except when indicated)

Ricky Gable	BS-Biology	March 17 to date
Aylin Villalpa-Arroyo	BS-Biology	March 17 to date
Chineche Lilian Aniemena	BS-Biology	April 17 to date
Madeline Malloy	BS-Biology/Chemistry	August 17 to date
Abigail Wilkie	BS-Biology	Nov 17 to date
Katherine A Lisko	BS-Forensic Science	Oct 05 - Dec 07
Gwendolyn Wilson	BS-Biology	Aug 06 - May 08
Casey Robinson	BS-Chemistry	August - Sept 07
Hillary Colvard	BS-Chemistry	Jan - Feb 07
Rodney Shea Harris	BS-Biology	July - Dec 06
Ebony Love	BS-Chemistry	Nov 09 - May 10
Raquel Torres	BS-Biology	Sept - Dec 10
Dorcee Lewis	BS-Chemistry	Sept 10 - April 11
Kayla Watkins	BS-Physics	Sept 11 - Jan 12
Jonathan A Radin	BS-Chemistry	Summer 08 - May 13
Kayla Parker	BS-Chemistry	July 12 - Dec 13
Jazmin Martin	BS-Chemistry	Aug 10 - May 14
Judith Lima	BS-Biotechnology (UAQ)	Jan - May 2014
William Blair	BS-Biology	Aug 13 - Aug 14
Patrick Dietz	BS-Biology/Chemistry	August - Nov 14
Benjamin Steckling	BS-Chemistry	Oct 14 - Jan 15
Nathan Tripod	BS-Interdisciplinary studies	Aug 14 - May 15
Skyler McKissock	BS-Biology	Aug 15
J Alex Rowlan	BS-Biology	Feb - Dec 15
Kara Oliver	BS-Biology	Sept - Dec 15
Lindsay Mull	BS-Biology	Jan 15 - Jan 16
Austin Wilkie	BS-Biology	Jan 15 to July 16
Ross Grant	BS-Biology	Sept 15 to June 16
Alaina R Smith	BS-Biology/Chemistry	Aug 15 to Dec 16
Kendl Fischer	BS-Chemistry	Aug 15 to Dec 16
Erin Langley	BS-Biology/Chemistry	Aug 15 to June 17
Austin Phelps	BS-Biology	Sep 16 to Dec 17

Summer interns

Gwendolyn Wilson	McNair Scholar	ASU-Biology	Summers 06 and 07
Jeannette Uwase	RISE Scholar	Ivy Tech CC	Summer 06
Melinda Belisle	WPI-Scholar	Worchester Polytechnic Institute	May - Oct 07
Fayeann Crawford	RISE Scholar	Brooklyn College of CUNY	Summer 07
Emily Fawcett*	RISE Scholar	St Mary's College, MD	Summer 08
Corinna Willis*	RISE Scholar	Lincoln Univ. MO	Summer 08

*co-advised in collaboration with Dr. Maureen Dolan

Gabriela del Mar Rodríguez González	MARC Scholar	UPR-Mayagüez	Summer 11

Kayla Parker	NSF-Plant Genome	ASU-Chemistry	Summer 13
Nykole DeVito	NSF-Plant Genome	ASU-Biology	Summer 13 & 14
William Blair	NSF-Plant Genome	ASU-Biology	Summer 13 & 14
Earl Morris	NSF-Plant Genome	ASU-Biol/Chem	Summer 14
Zana Robinson	ASTA, NSF Track 3	Philander Smith	Summer 14
JiVone Freeman	NSF Track 3	Philander Smith	Summer 14
Lauriel Colebrooke	P3 intern	Philander Smith	Summer 15
Nathan Tripod	NSF-Plant Genome	ASU	Summer 15
Kendl Fischer	NSF-Plant Genome	ASU	Summer 15
Gideon Long	NSF-Bridge	UA Forth Smith	Summer 16
Jordan Iverson	NSF-Bridge	UAPB	Summer 17

Visiting scholars (main advisor)

Reinier Gesto-Borroto	*CEIB/UAEM* (Mexico)	PhD-Biotechnology	Nov – Dec 17
Karina Medina	U. Veracruzana (Mexico)	PhD-Biotechnology & Applied Ecology	June - Dec 2015
Ashutosh Sharma	*CEIB/UAEM* (Mexico)	PhD- Biotechnology	Aug 28-Oct 30, 10
Federica Bestoso	University of Genova (Italy)	PhD candidate Bioengineering	July - Aug 07
In collaboration with Drs. Gregory Phillips and Helen Miller			
Audrei Nisio	State University of Ponta Grossa (Brazil)	BS-Agronomy	July - Dec 06
In collaboration with Dr. Maureen Dolan			
Aydin Akbudak	UA-Fayetteville	PhD	July 21-25, 2008

High school students

Daniel Jackson	Valley View-High School	June 17 to date
Lilly Jones	Jonesboro High School	Jan 13 – Jan 14
Austin Slaven	West Side High School	Sept –Dec 10
Jonathan Radin	Jonesboro High School	Summer 06 - May 08

<u>Committee Member (current and past)</u>

USA

Claudia González V	UNT	PhD Biol Sci	Sep 13 to date
Patrick Arsenault	WPI	PhD-Biol. & Biotechnol.	May 09 - May 10
Alejandra Ratti	ASU	PhD-EVS	Feb 07 - Oct 10
Cesar Ňopo	ASU	PhD-MBS	Aug 07 - June 13
Allison Asher	ASU	MS-EVS	Oct 07 - May 09
Kelly Carruthers	UAF	MS-Entomology	May 09 - May 12
Tianhong Yang	ASU	MS-Biology	Oct 11- May 13

Mexico

Ashutosh Sharma	*CEIB/UAEM*	PhD- Biotechnology	Dec 08 - April 12
Yeni Santos Mendoza	*CINVESTAV*	MS-Biochemical Eng	June 08 - Oct 10
Janet María León M	*CEIB/UAEM*	MS-Biotechnology	June 06 - Feb 08

As an Assistant Professor (Mexico)

1999-2003 Primary Advisor

Student	*Major*	*Degree*	*Year granted*
Ana Lilia Mercado-Sánchez	Chemical Engineering	BS	2002
Alejandra Rueda-Deagüeros	Chemistry	BS	2003

1998-2003 Committee Member

Student	*Degree*	*Period*	*Year granted*
Nubia C Moreno-Sarmiento	MS	1998-1999	March 99
Rubí Hernández-Rubio	MS	1998-1999	Sep 99
Alfredo Regalado-Páramo	MS	1998-2001	Aug 01
Víctor H Chávez-Tovar	MS	2001-2003	July 03
María Alejandra Brito-Cruz	MS	2000-2002	Dec 03
Ricardo Villatoro-Vera	PhD	1999-2002	Deceased
Lucila Valdéz-Castro	PhD	1999-2003	June 03

As a Post-doctoral Research Associate

April 02 – July 05

Supervisor of lab technicians, graduate students, undergraduate students and summer interns in Craig Nessler laboratory at Virginia Tech

Lab technicians

Martha Vaughan	March - Aug 05
Amy Vance	Nov 02 - Feb 05
Karen Stump	April - July 02

Graduate students

Jessica Radzio	MS	2002 - 2003
Michelle Raymond	MS	2002 - 2004

Visiting scholar

Berangère Jullian	BS-Bioinformatics Universite D'Auvergne (France)	April - Aug 05

Undergraduate students

Catherine O'Mara	March 04 - Aug 05
James A Gardner	Aug 04 - Aug 05
Joseph D Wood	Jan - Aug 05
Jennifer A Witten	March - Aug 05
Thomas R Evans	April - Aug 05
Amber M Rogers	Sept 02 - May 05
Martha Vaughan	Sept 03 - Feb 05
Melanie Turner	May 02 - Jan 05
Katherine Mitchell	May 02 - July 04
Jefferson Stroud	May 03 - Feb 04
Courtney Rudd	April 02 - April 03
Kristos Vaughan	Feb - Dec 04
David Harbourt	Feb - Aug 04
Jessica Caldwell	Sept - Dec 02

Rebecca Miller Aug - Dec 02

Summer Interns (Minority students, Multicultural Academic Opportunities Program, MAOP)

Janeth Carranza	Prairie View A&M	Summer 04
Jon Robinson	Cornell University	Summer 03
Deanna Conquest	Delaware State University	Summer 02

High school students

Laura Nessler	Blacksburg High School	Summer 05

August 00 – June 01

Supervisor of lab technician, and undergraduate students in Craig Nessler laboratory at Virginia Tech

Lab technician

Jocelyn Fraga-Müller Oct 00 - June 01

Undergraduate student workers

Jessica Radzio	Aug 00 - June 01
Scott McFarlain	Oct 00 - June 01

Teaching

Arkansas State University

"Biochemistry Laboratory" (CHEM 4241, Undergraduate level)
Main instructor

Spring 2018	5 students, mentoring Nirman Nepal in teaching
Fall 2017	9 students, mentoring Nirman Nepal in teaching
Spring 2017	10 students, mentoring Nirman Nepal in teaching
Fall 2016	7 students, mentoring Nirman Nepal and Lucia Acosta-Gamboa in teaching
Fall 2015	2 students, mentored L Acosta-Gamboa and J Yactayo-Chang in teaching
Fall 2014	13 students, mentored J Yactayo-Chang in teaching
Spring 2014	Developed the content of this course

"Chemistry Seminar" (CHEM 4281, Undergraduate level)
Main instructor

Spring 2018	6 students	Lecture only
Spring 2017	4 students	Lecture only
Fall 2016	1 student	Lecture only
Spring 2016	5 students	Lecture only
Spring 2015	1 student	Lecture only
Fall 2014	2 students	Lecture only

"*Making Connections*" (PSCH 1913 sections 001 and 003, Undergraduate level)
Main instructor

Fall 2016	37 students	Lecture only
Fall 2006	24 students	Lecture only

"*Biochemistry"* (CHEM 4243, Undergraduate level)
Main instructor

Spring 2014	41 students	Lecture only

"*Molecular Genetics and Genomics*" (MBS 6243, Core Course, Molecular Biosciences, PhD level)
Main instructor:

Fall 2017	7 students	Lecture only
Fall 2015	7 students	Lecture only
Fall 2013	5 students	Lecture only
Fall 2012	4 students	Lecture and laboratory sections
Fall 2011	5 students	Lecture and laboratory sections
Fall 2010	16 students	Lecture only
Fall 2009	8 students	Lecture only
Fall 2008	12 students	Lecture only
Fall 2007	11 students	Lecture only
Fall 2006	Developed the content of this course	

"*Plant DNA Barcoding*" (One-week theoretical/practical course, graduate level)
Main instructor:
15 graduate students enrolled in the MS and PhD Programs in Biotechnology of the Research Center of Biotechnology (*Centro de Investigación en Biotecnología, CEIB*, of the Autonomous University of the State of Morelos (*Universidad Autónoma del Estado de Morelos, UAEM*), Cuernavaca, México, March 1st - 5th, 2010.

"*Topics in Molecular Biosciences*" (Core Course, Molecular Biosciences, PhD level)
Team taught

Fall 2009	8 students	Lecture only
Spring 2007	6 students	Lecture only

"*Advanced Biochemistry"* (CHEM 4913, Undergraduate level)
Main instructor

Spring 2008	2 students	Lecture only
Fall 2007	Developed the content of this course	

"CSI Camps I and II" (High school level course to recruit students into STEM disciplines)
Team-taught

Summer 2007	I developed the lecture and hands-on module on molecular speciation of cultivars of Arabidopsis
Summer 2006	I developed the lecture and hands-on module on thin layer chromatography of plant pigments

"*Topical Seminar in Phytoremediation"* (ESCI 7121-002; Graduate level course)
Team taught

Fall 2006	6 students

Co-organized *1st International Workshop on Hairy Roots: Exploiting Plant Metabolism for Agriculture and Medicine* in collaboration with Dr. Fabricio Medina-Bolivar. Undergraduate and graduate students were able to get credit for enrolling in the workshop and attending additional sessions of classes and approving a test and final project. The name of the classes and corresponding codes are: "Biotechnological applications of hairy root cultures" BIOL 4441

(undergraduates) and BIOL 5441 (graduates), also “Exploiting Plant Metabolism for Agriculture and Medicine” ESCI 7121 (graduates).

Invited lectures

Specialized Biochemistry Class (MBS 6233), course led by Dr. Fabricio Medina-Bolivar, “Vitamin C metabolism in plants”, March 7, 2013.

Agriculture and the Environment (AGRI 4223), course led by Dr. William Baker “Genetically modified plants: issues and opportunities”, November 14, 2006

McNair Scholar: “Studying and manipulating vitamin C levels in plants”, April 17, 2006.

Virginia Tech

September 28-30, 2004. Invited lectures in the advance course: Advanced Plant Physiology and Metabolism I. Fall 2004. PPWS/HORT 5524. Lecture: “Genome Organization and Expression”. Virginia Tech.

March 4, 2004. Invited lecture in the advanced course: Topics in Molecular, Cell Biology and Biotechnology Spring 2004. ALS/BCHM/BIOL/PPWS Departments. Lecture: “Metabolic Engineering of Plant Antioxidants” Virginia Tech.

Universidad Autónoma del Estado de Morelos

“*Molecular Biology*” (Core Course, Biotechnology Program, PhD level)
Co-instructor:

Fall 2001	*Centro de Investigación en Biotecnología*	Lecture
Spring 1999	*Centro de Investigación en Biotecnología*	Lecture

“*Mexican Biotechnology Today*” (Special Topics, Biotechnology Program, PhD level)
Main instructor:

Fall 1999	*Centro de Investigación en Biotecnología*	Lecture
Spring 1999	Developed the content of the course	

“*Biotechnology and Its Applications*” (Special Topics, Biotechnology Program, PhD level)
Main instructor:

Fall 1998	*Centro de Investigación en Biotecnología*	Lecture
Spring 1998	Developed the content of the course	

“*Introduction to Molecular Biology*” (Undergraduate level)
Co-instructor:

Summer 2001	*Facultad de Biología/UAEM*	Lecture

“*Physical chemistry*” (Undergraduate level)
Main instructor:

Spring 1999	*Facultad de Biología/UAEM*	Lecture
Fall 1998	*Facultad de Biología/UAEM*	Lecture
Spring 1998	*Facultad de Biología/UAEM*	Lecture

September 19, 2001. Lecturer of course “Applications of Genetic Engineering in Health, Agriculture, Food Production and Protection of the Environment” for high school biology teachers. *AgroBio México.*

August 21, 2001. Co-lecturer for the workshop “Teaching Methodologies, Genetics and Environmental Impact” for high school Biology teachers. *Dirección de Educación Media Superior/UAEM.*

January 1999. Co-lecturer for the advanced course “Introduction to Modern Genetics and Biodiversity” for high school Biology teachers. *Coordinación del Nivel Medio Superior/UAEM*.

August 10-15, 1998. Co-lecturer for the course “Advanced Topics of Modern Biology” for Biology high school teachers. *Coordinación del Nivel Medio Superior/UAEM*.

November 3-7, 1997. Co-lecturer for the Theoretical-Practical Course “Biotechnology of *Bacillus thuringiensis*”. *Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León (UANL)*.

October 3-14, 1994. Co-lecturer for the 5th Advanced Course of “Biotechnological Processes: Biotechnological Applications in Integrated Pest Management for Crops”, *Instituto de Biotecnología (IBT/UNAM),* Biotechnology Program for Latin America and the Caribbean/UNIDO, and *CEIB/UAEM.*

Membership in Editorial Boards of Peer-Reviewed Journals

- *Frontiers in Plant Metabolism and Chemodiversity,* 2012 - date
- *F1000 Research*, 2012 - date
- International Scholarly Research Notices (previously *Oxidative Medicine),* 2012 - date
- *Recent Advances in Phytochemistry,* 2013 - 2014
- *Phytochemistry Reviews,* 2014 - date
- *Advances in Plants and Agricultural Research,* 2014 – date
- *Reactive Oxygen Species,* April 2016 – date (3 year appointment)

Manuscript Reviewer for Peer-Reviewed Journals

- *African Journal of Biotechnology*
- *Applied Microbiology*
- *Biochemical Engineering Journal*
- *BioMed Central*
- *Biotechnology and Bioengineering*
- *Biotechnology Progress*
- *Engineering in Life Sciences*
- *Environmental and Experimental Botany*
- *In Vitro Plant*
- *International Journal of Experimental Pathology*
- *Journal of Agricultural and Food Chemistry*
- *Journal of Experimental Botany*
- *Journal of Plant Physiology*
- *Nanomedicine*
- *OMICS: A Journal of Integrative Biology*
- *Physiologia Plantarum*
- *Phytochemistry*
- *Plant Cell Reports*
- *Plant Cell Tissue and Organ Culture*
- *Plant Journal*
- *Plant Physiology and Biochemistry*
- *Plant Science*
- *Plants*
- *PLoS ONE*
- *Transgenic Research*
- *Trends in Plant Sciences*

Grant Proposal Reviewer

- *Adhoc* reviewer 1 proposal, Natural Sciences and Engineering Research Council of Canada (NSERC), June-July 2017
- *Adhoc* reviewer 1 proposal, MJ Murdock Charitable Trust (April-May 2016)
- Primary reviewer and panelist, Investigators Programme, Science Foundation Ireland (December 2015-February 2016).
- *Adhoc* reviewer 1 proposal, National Science Foundation (August-September 2015)
- *Adhoc* reviewer 2 proposals, BREAD Program, National Science Foundation (June-July 2015)
- Primary reviewer of 9 proposals and panelist at the Physiological Mechanisms and Biomechanics program within the Physiological and Structural System Cluster of the Integrative Organismal Systems Division of the National Science Foundation (August - October 2014).
- *Adhoc* reviewer 1 proposal, Systems and Synthetic Biology Cluster within the Molecular and Cellular Biology Division of the National Science Foundation (Jan-Feb 2014)
- Primary reviewer of 15 proposals and panelist at the Systems and Synthetic Biology Cluster within the Molecular and Cellular Biology Division of the National Science Foundation (March-May 2013).
- Member of the EPSCoR Missouri Advisory Board (2012): My tasks included serving as primary reviewer of 6 proposals, participating in the panel discussion to rank all 50 concept papers submitted to this program, and recommend specific proposals to move to the next phase of the selection process.
- Reviewer for the South African Medical Research Council (MRC), South Africa (2012).
- National Science Foundation, Integrative Organismal Systems – Physiological and Structural System Cluster (2009).
- National Science Foundation, Genes and Genome Systems (MCB) - RUI (2009).
- U.S. Civilian Research and Development Foundation (URDF) – Science and Technology Center in Ukraine (2009).
- External Evaluator *Ad-Honorem*, *Secretaría Nacional de Ciencia, Tecnología e Innovación (SENACYT)*, Panama, Panama (March 2007 to date).
- National Science Foundation, Integrative Plant Biology - Functional and Regulatory Systems Cluster (2006).
- National Science Foundation, Division of Biological Infrastructure – Research Experience for Undergraduates Sites (2005).
- BARD, the United States - Israel Binational Agricultural Research & Development Fund (2004).
- *Universidad Autónoma del Estado de Morelos*, Cuernavaca, México (1997).

Service

Service to Arkansas State University

Service to the University overall

- Member of the *Molecular Biosciences (MBS) Graduate Program Committee*, December 2008 to date
- Member of the Patent Policy Task Committee, January 2016 to date
- Member of the Search Committee for the STEM Associate Dean for the A-State Queretaro campus, November 2016 to March 2017

- Member of the *General Education Committee*, Sep 2013 – 2016
- Judge, Create @ State, A Symposium of Research and Scholarship, 2011-2016, Jonesboro, AR
- Member of the Search Committee for Executive Director of Arkansas Biosciences Institute, October 2011 – April 2012
- Member of the Search Committee, Director of Pre-Awards, Office of Research and Technology Transfer (ORTT), April – May 2010
- Member of the *Arkansas State University Biosafety Committee (IBC)*, June 2006 – March 2009
- Member of the *Faculty Research Awards Committee*, September 2006 to September 2009.
- Secretary (elected) of the *Faculty Research Awards Committee*, September 7, 2007 to 2008. Re-elected for 2009 calendar year
- Collaborator with Dr. Marty Allen and Lenore Shoults in organizing celebration of "Día de Muertos" (Day of the Death) at the ASU Museum, August 2007-November 2007; 350 people attended the event the night of November 2nd from 6 to 9 pm. Participation on this event on November 1st, 2008, 500 people attended the second event

Service to the College of Sciences and Mathematics

- Member of the PRT College Committee, Aug 2016 to date.
- Member of the Science Seminar Committee, Aug 2012 - May 2013.
- Member of the Ad Hoc Committee to Identify Aspirational Peers, Nov 2011 – March 2012.
- Member of Search Committee, Professor and Head of the Department of Biological Sciences, Arkansas State University, March – May 2010.
- Master of ceremony, at the "Convocation of Scholars 2006 Honors Banquet" of the College of Science and Mathematics, ASU, Jonesboro, AR, April 12, 2006.
- Coordinator of all First Year Experience (FYE) instructors of the College of Sciences and Mathematics, ASU, Fall semester 2006.

Service to the Arkansas Biosciences Institute

- Member of Search Committee, Professor and Director of Molecular Biosciences Graduate Program, Arkansas Biosciences Institute, January - August 2006.
- Member of Search Committee, Post-doctoral Research Associate for the laboratory of Dr. Robyn Hannigan, July – December 2007.
- Member of Search Committee, Post-doctoral Research Associate for the laboratory of Dr. Elizabeth Hood, January – February 2007.
- Member of Search Committee, Post-doctoral Research Associate for the laboratory of Dr. Elizabeth Hood, May – June 2008.
- Chair and member of Search Committee, Post-doctoral Research Associate for my laboratory (June-July 2008).
- Member of Search Committee, Post-doctoral Research Associate for the laboratory of Dr. Elizabeth Hood, July – August 2008.
- Participation on recruitment tour to *Universidad de Puerto Rico - Río Piedras* (San Juan, Puerto Rico) and *Universidad de Puerto Rico* - Mayagüez (Mayagüez, Puerto Rico) to bring students to the Molecular Biosciences PhD Program, Nov 28 to Dec 1st, 2007.
- On-site administrator of a Promega Freezer. This freezer served several laboratories doing molecular biology at ASU (November 2005 - July 2010).
- Member Committee to Redesign ABI Rm. 107 for Advanced Teleconferencing Jan 2011.
- Member of Committee to recommend hiring of two custodians, October 2012 to April 2013.

Service to the Department of Chemistry and Physics

- Department representative in the Honors College, March 2013 – date.
- Member of the Search Committee for an Assistant Professor in Organic Chemistry. Department of Chemistry and Physics, January 2017 – date.
- Member of the Search Committee for an Assistant Professor in Organic Chemistry. Department of Chemistry and Physics, August 2012 – Jan 2013.
- Member of the Search Committee for an Assistant Professor in Organic Chemistry. Department of Chemistry and Physics, October 2011 – March 2012 (failed search).
- Member of the Search Committee for two Assistant Professors in Analytical Chemistry. Department of Chemistry and Physics, November 2008 to May 2009.
- Chair, Search Committee that selected a candidate for the Assistant Professor position in Chemistry/Forensics. Department of Chemistry and Physics, August 2007 to May 2008.
- Main coordinator of the Advanced Biochemistry class, and consultant on the preparation of a proposal for a new Biochemistry Major.
- Member of the Search Committee for an Assistant Professor in Organic Chemistry. Department of Chemistry and Physics, August 2006 - January 2007.
- Member of the Search Committee of an Assistant Professor in Analytical Forensic/Environmental Chemistry, Department of Chemistry and Physics, August 2005 - January 2006.
- Main coordinator of content design and printing of brochures and posters to recruit students to both the undergraduate and the graduate programs in Chemistry, Department of Chemistry and Physics, ASU. Among other activities I searched for funds in the office of Dr. Glen Jones, gathered pictures from all colleagues and co-wrote wording for the brochure and poster in collaboration with Drs. John Pratte and Robyn Hannigan.

Outreach

- I am one of the most active faculty members at leading tours of the ABI building. I have developed teaching materials (posters, flyers, installations, etc) and hands-on activities for visitors of various ages. In the period 2005-2017 I have given yours to over 2,000 people.

Service to the Society for In Vitro Biology

- Since March 2009 and to date I have been serving on the Student Affairs Awards Committee. I served as interim chair of the committee in 2011.
- I co-organized a session on "*Herbal Medicines: In Vitro and Clinical Validation*". This event took place at the 2011 Society for In Vitro Biology Meeting, in Raleigh, NC, June 4-8, 2011. My activities included inviting speakers, fundraising and serving as co-convener of this session.
- I co-organized a session on "*New Strategies for the Production of Specialized Metabolites*" and organized and served as convener of the session on "*Biodiversity for Improving Human Health*", at the World Congress on In Vitro Biology Meeting, Society for In Vitro Biology, Tucson, AR June 14-18, 2008. My activities included inviting speakers, fund rising, coordinating travel arrangements, and hosting speakers during the meeting. I served as main negotiator of support from Fisher Scientific ($3000) to partially cover the expenses of speakers from Mexico (Drs. Maria Luisa Villarreal, and Ana Ramos Valdivia) and Brazil (Dr. Claudia Simoes).

Service to the Phytochemical Society of North America (PSNA)

- I was elected Secretary of PSNA. I have been serving on that capacity since August 2014 to date.

- Since 2013 I have been a member of the Student Awards Committee. I served as interim Chair in 2013.
- I was a member of the Organizing Committee for the 55th Annual PSNA Meeting in Davis, CA, August 6-10, 2016. I co-chaired the Eric Conn Symposium, fundraised and served on the Awards Committee.
- From August 2012 to August 2014 I served as a member of the Advisory Board.
- I was a member of the Organizing Committee for the 54th Annual PSNA Meeting in Urbana, IL, August 8-12, 2015. I co-chaired the Phytochemical Lipids and Metabolism symposium, fundraised, and served on the Awards Committee.
- I was a member of the Organizing Committee for the 53rd Annual PSNA Meeting in Raleigh, NC, August 9-13, 2014. I co-chaired the Neish symposium, and served on the Awards Committee.
- I was member of the Organizing Committee for the 52nd Annual PSNA Meeting in Corvallis, Oregon, August 3-7 2013. I also co-chaired a symposium on "Biosynthesis and Metabolism". My activities included fundraising, inviting, and hosting speakers during the meeting.

Service to the North American Plant Phenotyping Network (NAPPN)
- I have been serving in the *Ad Hoc Board* of this organization since inception (2016 to date). We developed the provisional bylaws and organized elections to get an Executive Committee in place.
- I helped organized the inaugural convening event in 2016. Chaired a session in abiotic and biotic stress tolerance.

Service to the American Council for Medicinally Active Plants (ACMAP)
- I organized a session on "*Traditional Medicine from Mexico and South America*". This event took place at the 3rd Annual Conference of the ACMAP, in Jonesboro, AR, May 22-25, 2012. My activities included inviting speakers, fundraising, hosting speakers and serving as convener of this session. I served as main negotiator of support from LemnaTec ($1000) to partially cover the expenses of speakers from Mexico (Drs. Rogelio Pereda-Miranda, Felipe Vázquez-Flota) and Brazil (Dr. Claudia Simoes).

Service to Universidad Autónoma del Estado de Morelos (UAEM)
- Member of *Centro de Investigación en Biotecnología (CEIB/UAEM)*-Graduated Students Admission Committee (1998-2002).

Community Service
- I am serving as a mentor of the science program (NOVA) for the Pack 1225 Cub Scouts group, Jonesboro, AR, 2016 to date.
- Member of the Policy Council, Arkansas Early Learning (AEL), Inc. Aug 2013 to Oct 2014.
- Judge of the Science Fair, Valley View School, Jonesboro, AR (3/10/14).
- Member of the Policy Council, Community Development Institute (CDI) Head Start, Jonesboro, AR, October 2011 to 2013. Served as Secretary of the Council (2011).
- Judge of the Science Fair, Blessed Sacrament School, Jonesboro, AR (2006, 2007 and 2009).

Synergistic activities
- Co-organized "1st International Workshop on Hairy Roots: Exploiting Plant Metabolism for Agriculture and Medicine" in collaboration with Dr. Fabricio Medina-Bolivar, July 13 2006, Jonesboro, AR. My activities included planning the content of the workshop, inviting international speakers, hosting speakers during their visit, fund raising (got $1,500 support

from state wide ABI and $300 from Fisher Scientific), lead one of the hands-on exercises in the afternoon and planning all logistic aspects of the meeting.

- Main coordinator of signature of Memorandums of Agreement and Understanding between Arkansas State University and Universities in Mexico:
  1) Division of Natural Sciences and Engineering, *UAM-Cuajimalpa,* México (liaison Dr. Rodolfo Quintero), signed: April 2007.
  2) Academic Body of Natural Products, *UAEM*, Cuernavaca, México (liaison Dr. María Luisa Villarreal), signed: April 2007.
  3) Universidad de Guadalajara (liaison Dr. Carmen Gurrola-Díaz), signed March 2012.

- Main coordinator and host of visits of speakers to ABI/A-State
  - Dr. Rachel Mata (Oct 16-18, 2006)
  - Dr. Rodolfo Quintero (Nov 1-4, 2006)
  - Dr. Rogelio Pereda-Miranda (Nov 30 - Dec 9, 2006)
  - Dr. Mario De Tullio (Sept 4-6, 2007)
  - Dr. Robert Reis (Feb 20, 2008)
  - Dr. Dimuth Siritunga (May 13-16, 2008)
  - Dr. Walter Suza (June 23-24, 2008)
  - Dr. Rogelio Pereda-Miranda (July 1st-12, 2008)
  - Dr. Alan Tackett (Sept 17, 2008)
  - Dr. Mariya Khodakovskaya (Nov 5th, 2008)
  - Dr. Fiona Goggin (Dec 2nd-4rd, 2008)
  - Dr. Paul Miller (Feb 18, 2009)
  - Dr. Toni Kutchan (April 21-22, 2010)
  - Dr. Carmen Gurrola-Díaz and Dr. Pedro García-López (Jan 8-15, 2011)
  - Dr. Rogelio Pereda-Miranda (April 15-27, 2011)
  - Dr. Roberto Gaxiola (April 19-21, 2011)
  - Dr. Karen Browning (September 24-26, 2013)
  - Dr. Robert Hancock (November 6-9, 2013)
  - Dr. Ben Vosman (November 7-9, 2013)
  - Dr. Fatima Rivas (November 13, 2013)
  - Dr. Chris Topp (April 2-3, 2014)
  - Dr. Gary Bannon (April 29 -30, 2014)
  - Dr. Harkamal Walia (July 24-25, 2014)
  - Dr. Mario A. Arteaga-Vázquez (November 18-21, 2014)
  - Dr. Benjamin Babst (February 27, 2016)
  - Dr. David Mendoza-Cozatl (March 30, 2016)

Membership in professional societies

- American Association for the Advancement of Science (AAAS), 2001 to date
- Phytochemical Society of North America (PSNA), 2000 to date
- Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), 2006 to date
- Society for In Vitro Biology (SIVB), 2008 to date
- Worldwide Who's Who®, 2012 to date
- North East Arkansas Hispanic Professional Network, 2016 to date.