

Ashli E. Brown

Biochemist/Assistant Professor/Director
Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology
Mississippi State Chemical Laboratory
Mississippi State University

PROFESSIONAL PREPARATION:

University of South Florida, Tampa, FL	Biology	BA 1993
University of South Florida, Tampa, FL	Chemistry/Biochemistry	PhD 2003
University of South Florida, Tampa, FL	Biochemistry	Postdoctoral 2004
USDA-ARS, Stoneville, MS	Chemistry/Entomology	Postdoctoral 2004-2006

APPOINTMENTS:

Mississippi State Chemist, Mississippi State Chemical Laboratory, October 2013–Present
Director of Research and Agricultural Forensics, Mississippi State Chemical Laboratory, May 2011–Present
Assistant/Associate Professor, Mississippi State University, Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, August 2008–Present
Research Assistant Professor, Mississippi State University, Department of Biochemistry, Molecular Biology, July 2006–August 2008
Post-Doctoral Research Associate, USDA-ARS, Biological Control of Pests Research Unit, May 2004–June 2006
Post-Doctoral Research Associate, University of South Florida, Chemistry and Biochemistry, January 2004–May 2004
Adjunct Professor, Bradenton Community College, Department of Chemistry, August 1998–August 2000
Graduate Research Assistant and Research Associate, University of South Florida, Department of Chemistry, August 1997–December 2003

AWARDS AND DISTINCTIONS:

- **2012** FDA Certificate of Commission
- **2011** William White Award, Use of Agricultural Forensic Science as a Teaching Tool
- **2010** Mississippi State Pride Award
- **2010** Shackouls Honors Faculty Award
- **2008** American Chemical Society, AGRO Division, National New Investigator Award
- **2008** William White Award, Addressing Bio-Analytical Concepts in Agriculture
- **2006** USDA, ARS Research Certificate of Merit

LEADERSHIP ACTIVITIES:

Supervisory Experience: Oversee 24 Mississippi State Chemical Laboratory (MSCL) analysts and 4 student workers, 3 active MSU graduate students, and advise 17 undergraduate students. **Managerial Activities:** Administer grants and contracts, Developed an ISO/IEC 17025:2005 management system for quality, administrative and technical operations at MSCL, Cofounder of the MAFES, MSCL, Agilent Food and Feed Safety Laboratory, Member of the Laboratory Managers Steering Committee: International Food Protection Training Institute (IFPTI) curriculum training project being developed by the Association of Food and Drug Officials (AFDO), Actively involved in American Chemical Society (ACS) Programming and Outreach, Biochemistry and Molecular Biology Orientation Coordinator. **Committees:** Mississippi Rapid Response Team (RRT) and FDA/Partners for Food Protection, ACS ARGO Strategic Planning Co-Chair, AGRO New Investigator Award Committee, MSU Library Committee, MSU Graduate Council.

SYNERGISTIC ACTIVITIES:

Courses Taught at MSU: Analytical Concepts in Agriculture, Directed Individual Study, Enzymes, Essentials of Molecular Genetics, General Biochemistry, Intermediary Metabolism, Introduction to Biochemistry, Molecular Biology, Principles of Biochemistry. **Manuscript Reviews:** PLOS ONE,

Annual Review & Research in Biology, Advanced Research Journals, Journal of Chemical Ecology, Insect Physiology, Insect Science, Journal of Ag and Food Chemistry, Journal Toxin Reviews. **CRIS Projects:** MIS-151200 Control of Food-Borne Pathogens in Pre- and Post-Harvest Environments, MIS-151110 Identifying Potential Aflatoxin Gene Regulators in Maize and *Aspergillus* to Increase Resistance in Maize. **Professional Affiliation:** Research Associate for the Memphis Zoological Society. **Professional Memberships:** American Chemical Society, American Oil Chemists' Society, American Society of Mass Spectrometry, Association of Public Health Laboratories, and Entomology Society of America. **Mentorship:** Mentor 19 undergraduate research students and 3 REU students (NSF Research Experience for Undergraduates). **Grant Review Committees:** CAN Grant Committee for Funding Recommendations, NSF Metabolism and Microbial Communities Grant Review Panel.

GRADUATE ADVISEES:

Graduated Students

- Biing-Ru Wu, Ph.D. Molecular Biology (Ph.D. Degree Conferred. December 2009)
- Bharath Bolla, MS Agriculture (Non-Thesis MS Degree Conferred, December 2009)
- Rebecca Burgett Singleterry, MS Biochemistry (MS Degree Conferred. August 2010)
- Chandler Pace, MS Agriculture (Non-Thesis MS Degree Conferred, May 2010)
- Whitney Crow Smith. MS Biochemistry (MS Degree Conferred. December 2010)
- Candace Williams, MS Biochemistry (MS Degree Conferred. December 2011, Ph.D. Degree Conferred. August 2015)
- Andrew McDaniel, MS Agriculture (Non-Thesis MS Degree Conferred, August 2011)
- J. Erik Mylroie, Ph.D. Molecular Biology (Ph.D. Degree Conferred. December 2011)
- Michael Robinson, MS Agriculture (Non-Thesis MS Degree Conferred, December 2012)
- Miriam Revellame, MS Biochemistry (MS Degree Conferred. December 2012)
- Curtis Atkinson, MS Biochemistry (MS Defended August, Degree Conferred. December 2013)
- Karl Bell, MS Biochemistry (Degree Conferred, December 2013)
- Christopher Ian Johnston, MS Agriculture (Non-Thesis MS Degree Conferred, August 2013)
- Erika Womack, Ph.D Molecular Biology (Degree Conferred, December 2015)
- Seval Ozkan, Ph.D. Molecular Biology (Degree Conferred, August 2016)
- Cedric Reid, Ph.D. Molecular Biology (Degree Conferred, August 2017)

Current Students

- Abbey Wilson, Ph.D. Animal Physiology (In Progress)
- Ashley Meredith, MS Biochemistry (In Progress)

RESEARCH PROFILE:

My research group is using a systems biology approach to identify and characterize factors in *Aspergillus* that control the degradation of aflatoxin for improved food safety. We are investigating the volatiles of Mp708, a line of maize resistant to feeding by fall armyworm in order to better understand the method of resistance. We use an analytical approach to improve method development for regulatory testing. My laboratory also studies the microflora from the gastrointestinal tract of the giant panda to monitor health, and determine the role this bacterial population plays in the digestion of bamboo. We are also using analytical methods similar to the fall armyworm study to unlock the chemical communication code of these generally solitary animals. Additionally, my research is focused on the optimization of renewable alternatives such as green fuel, biodiesel, and bioethanol (including panda poop microflora to biofuels). Additionally, I am investigating how university teacher-researchers can pique interest and motivate students using a studio based learning pedagogy.

While at MSU, I have obtained over \$6.4M of funding from federal, state, and industry sources to support and develop a research group as well as help fund the mission of MSCL. I have 22 peer-reviewed publications, two proceedings highlighting this work, and currently have one article under review. Additionally, these research projects and efforts have been presented at 103 local, national and international scientific meetings.

PUBLICATIONS: *Corresponding Author

Williams, C.L.; Dill-McFarland, K.A.; Sparks, D.L.; Kouba, A.J.; Willard, S.T.; Suen, G.; ***Brown, A.E.** (2017) Dietary Changes During Weaning Shape the Gut Microbiota of Red Pandas (*Ailurus Fulgens*), *Conservation Physiology*, Accepted.

Williams, C.L.; Dill-McFarland, K.A.; Vandewege, M.W.; Sparks, D.L.; Willard, S.T.; Kouba, A.J.; Suen, G.; ***Brown, A.E.** (2016) Dietary shift and dysbiosis may trigger mucous stools in giant pandas (*Ailuropoda melanoleuca*) *Frontiers in Microbiology*. DOI:10.3389/fmicb.2016.00661..

Reid, C.X.; Sparks, D.L.; Williams, W.P.; ***Brown, A.E.** (2016) Single Corn Kernel Aflatoxin B1 Extraction and Analysis Method, *Natural Resources* 7(7): 405-410.

Womack, E.; *Sparks, D.L.; **Brown, A.E.** (2016) "Aflatoxin M1 in Milk and Milk Products: A Short Review," *World Mycotoxin Journal*, DOI 10.3920/WMJ2014.1867.

*Tabler, T.; **Brown, A.**; Hagood, G.; Farnell, M.; McDaniel, C.; Kilgore, J. (2015) Nutrient Content in Mississippi Broiler Litter. *MSUcares*. Publication 2878 POD-02-15.

*Tabler, G. T., **Brown Johnson, A. E.**, Hagood, G., Farnell, M. B., McDaniel, C. D., Kilgore, J. (2015). Nutrient analysis of Mississippi broiler litter. *no*. International Poultry Scientific Forum.

Atkinson, C.; Pechanova, O.; Sparks, D.L.; ***Brown, A.**; *Rodriguez, J.M. (2014) Differentiation of Aflatoxigenic and Non-Aflatoxigenic Strains of Aspergilli by FT-IR Spectroscopy. *Applied Spectroscopy*. 68(8) DOI:10.1002/PMIC.201100659.

Womack, E.D.; ***Brown, A.E.**; Sparks, D.L. (2014) A Recent Review of Non-biological Remediation of Aflatoxin-Contaminated Crops. *Journal of Science, Food and Agriculture*. 94:1706-1714.

Williams, C.L.; Sparks, D.L.; ***Brown, A. E.** (2013) Could Panda Gut Microbes Power the Next-Generation Biorefinery. *INFORM* 24 (10). 630-632.

Pechanova, O.; *Pechan, T.; Rodriguez, J.M; Williams, W.P.; ***Brown, A.E.** (2013) A Two-Dimensional Proteome Map of the Aflatoxigenic Fungus *Aspergillus flavus*. *Proteomics*. 13(9):1513-1518.

Brown, A.E.; Sparks, D.L.; *Brocato, D.K. (2012) Studio Bio-Analytical Studio Bio-analytical: Using a Unique Interdisciplinary Combination of Topic Choice, Lecturing, Field Experience, and Laboratory Skills Preparation. *American Educational Research Association Online Paper Repository*. 4:1-21.

Williams, C.L.; Willard, S.T.; Kouba, A.; Sparks, D.L.; Holmes, W.E.; Falcone, J.; Williams, C.H.; ***Brown, A.E.** (2012) Dietary Shifts Affect the Gastrointestinal Microflora of the Giant Panda (*Ailuropoda melanoleuca*). *Journal of Animal Physiology and Animal Nutrition*. DOI10.1111/j.1439-0396.2012.01299.

Smith, W.E.; Shivaji, R.; Williams, W.P.; Luthe, D.S.; Sandoya, G.V.; Smith, C.L.; Sparks, D.L.; ***Brown, A.E.** (2012) A Maize Line Resistant to Herbivory Constitutively Releases (E)-beta-Caryophyllene. *Journal of Economic Entomology*. 105(1):120-128.

Frahm, A.J.; *Ward, S.H.; **Brown Johnson, A.**; Sparks, D.L.; Martin, J.M.; Rude, B.J.; Meiring, R. (2012) Case Study: Comparison of Fatty Acid Content in Homogenized and Non-homogenized Milk from Holstein and Jersey Cows. *The Professional Animal Scientist*. 26:689-693.

Johnston, C.I.; Singleterry, R.; Reid, C.X.; Sparks, D.L; Baldwin, B.; Hill-Ward, S.; Williams, W.P.; ***Brown, A.** (2012) The Fate of Alfatoxin in Corn Fermentation. *Natural Resources*. 3(3):126-136.

Paul, D.; Kumar, R.; Nanduri, B.; French, W.T.; Pendarvis, K.; **Brown, A.E.**; Lawrence, M.; *Burgess, S. (2011) Proteome and Membrane Fatty Acid Composition in *Oligotropha carboidovarans* OM5

Associated with Chemolithoautotrophic and heterotrophic Environmental Conditions. *PLoS ONE* 6(2): e17111.

McDaniel, A.; Holmes, W.E.; Armbrust, K.L.; *Sparks, D.L.; ***Brown, A.E.** (2011) Effect of Martix Clean-Up for Aflatoxin Analysis in Corn and Dried Distillers Grains. *Natural Resources*. 2:250-257.

*Riddick, E.W.; **Brown, A.E.**; Chauhan, K.R. (2008) *Harmonia axyridis* Adults Avoid Catnip and Grapefruit-Derived Terpenoids in Laboratory Bioassays. *Bullentin of Insectology*. 61(1):81-90.

van den Berg, B.H.J; Matyi, C.J.; **Brown, A.E.**; Holmes, W.E.; *Willeford, K.O. (2008) Mass Spectrometry-based Characterization of the Role Between an ICPF-related Angiogenic Peptidic Complex and Chronic Wound Healing. *Proceedings: Journal of the American Society of Mass Spectrometry*. 56:1351.

***Brown, A.E.**; Holmes, W.E.; Rogers, E.C.; Verioti, B.S.; Baldwin, B.S. (2007) FAME Analysis of *Hesperis matronalis*: GCxGC-TOFMS Better Resolution. *Proceedings: Journal of the American Society for Mass Spectrometry* 18(8S):169.

Brown, A.E.; Aldrich, J.R.; *Riddick, E.W.; Holmes, W.E. (2006) The Identification of (-)-beta-Caryophyllene as a Gender Specific Terpene Produced by the Multi-colored Asian Lady Beetle. *Journal of Chemical Ecology*. 32(11):2489-2499.

Wright-Webber, B.; Held, B.; **Brown, A.E.**; *Grossman, S.H. (2006) Immunological and Physical Comparison of Monomeric and Dimeric Phosphagen Kinases: Some Evolutionary Implications. *Biochimica et Biophysica Acta*. 1760:364-371.

Brown, A.E.; France, R.M.; *Grossman, S.H. (2004) Purification and Characterization of Arginine Kinase From the American Cockroach (*Periplaneta americana*). *Archives of Insect Biochemistry and Physiology*. 56(2):51-60.

Brown, A.E.; *Grossman, S.H. (2004) The Mechanism and Modes of Inhibition of Arginine Kinase from the American Cockroach (*Periplaneta americana*). *Archives of Insect Biochemistry and Physiology*. 57(4):166-177.

Publications in Review/Preparation:

Womack, E.D.; *Sparks, D.L.; Reid, C.X.; **Brown, A.E.**; DuBien, J.L.; Ward, S. (2017) Validation of Aflatoxin M₁ in Raw Milk Using QuEChERS as an Extraction Method. *Journal of Agricultural and Food Chemistry*, In Review.

Womack, E.; *Sparks, D.L.; **Brown, A.E.** (2017) The Remediation of Aflatoxin M₁ in Milk in Raw Milk Utilizing Activated Carbon as a Binder and Its Effect on Milk Quality, In Preparation.

Williams, C.L.; Dill-McFarland, K.A.; Sparks, D.L.; Kouba, A.J.; Willard, S.T.; Suen, G.; ***Brown, A.E.** (2017) The Red Pandas' (*Ailurus fulgens*) Gastrointestinal Tract Bacterial Composition Changes Seasonally, In Preparation.

ABSTRACTS AND PRESENTATIONS: * Award winning, ** Invited talk

Ashley Meredith, Tessie Wilkerson, Thomas Allen, Magan Green, Darrell Sparks, **Ashli Brown** (2016) Isolation and Analysis of Botryodiplodin in Soybean Plants by LCMS. American Chemical Society 252nd National Meeting, Philadelphia, PA (August 22).

Abbey Wilson, Darrell Sparks, **Ashli Brown-Johnson**, Katrina Knott (2016) It Takes Two: Chemical Cues in Giant Panda Urine. American Chemical Society 252nd National Meeting, Philadelphia, PA (August 22).

*Cedric Reid, Gary Cundiff, Daniel Reynolds, Darrell Sparks, **Ashli Brown** (2016) Development of FTIR Method to Identify Herbicides and Their Low Volatile Counterparts. FPRW, St. Pete Beach, FL (July 18, 2016).

****Ashli Brown** and Scott Boone (2016) MS Bidrin Exposure Case. FSIS FERN Meeting. Richmond, VA (May 3-4).

Scott Boone and **Ashli Brown (2016) MS Producer Catfish Program and TOX1 Method Validation FSIS FERN Meeting. Richmond, VA (May 3-4).

Gale Hagood, Ashli Brown, Dongping Jiang (2016) Control Charting of Data and What to Control Chart. APHL, AAFCO, AFDO, FDA 5th Manufacture Food Regulatory Program Alliance Meeting. Louisville, KY (February 2).

****Ashli Brown**, Darrell Sparks, Cedric Reid, Curtis Atkinson (2015) Using FTIR as a Tool. AOAC 129th Meeting, Los Angeles, CA (September 27-30).

****Ashli Brown** (2015) Pesticide Residue Analysis. Extension Professional Improvement Conference, MSU Extension, MS (August 12).

****Ashli Brown**, J. Scott Boone (2015) MSCL Overview and Catfish Monitoring Program. USDA FSIS FDA FERN Meeting, Richmond, VA (September 1).

****Ashli Brown** (2015) Mississippi Food Surveillance Program. ASMS American Society of Mass Spectrometry, Agilent Technologies Working Group, St. Louis, MI (May 30).

A. Kyler Rendon, Abbey Wilson, Katrina Knott, Andrew Kouba, **Ashli Brown Johnson**, Darrell Sparks (2015) Bovine Chemical Communication: Preliminary Study for Volatile Analysis in Urine. MSU Undergraduate Student Research Symposium, Shackouls Honors Society, Mississippi State, MS (April 23).

Olivia Crowe, Candace Williams, P. Tyler Reaves, Kimberly Dill-McFarland, Garret Suen, Andrew Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2015) Determining the Microorganisms Associated with Mucous Secretion by Giant Pandas. Undergraduate Student Research Symposium, Shackouls Honors Society, Mississippi State, MS (April 23).

Kaylin Chaney, **Ashli Brown**, Darrell Sparks, Erika Womack (2015) Removing Aflatoxin M1 from Milk using Activated Carbon and its Effects on Protein Concentration. Undergraduate Student Research Symposium, Shackouls Honors Society, Mississippi State, MS (April 23).

****Ashli Brown**, Ashley Meredith (2015) Mentoring Experiences: Mentor/Mentee. Pesticide Regulatory Education Program, Washington State University Extension, Savannah, GA (April 14-17).

Candace Williams, Kimberly Dill-McFarland, Darrell Sparks, Andrew Kouba, Scott Willard, Garret Suen, **Ashli Brown Johnson** (2015) An Initial Characterization of Giant Panda Mucous Excretions. Giant Panda Species Survival Plan Meeting, Memphis, TN (January 27).

Abbey Wilson, Katrina Knott, Andrew Kouba, **Ashli Brown**, Darrell Sparks (2015) Chemical Communication in Giant Pandas: Behavioral and Physiological Responses of Males to the Volatile Compounds in Estrus Urine. Giant Panda Species Survival Plan Meeting, Memphis, TN (January 27).

J. Scott Boone, Ashley Meredith, Christina Childers, Lee Ware, Cindy Foster, Jack Atkinson, Gale Hagood, **Ashli Brown** (2015) Analysis of Pesticides from Farm Raised Catfish in Mississippi. SETAC North American 36th Annual Meeting, Salt Lake City, UT (November 2).

Abbey Wilson, Katrina Knott, Darrell Sparks, **Ashli Brown**, Andrew Kouba (2014) Giant panda chemical communication: Male responses to estrus urine. 12th Annual MSU Graduate Student Research Symposium, Mississippi State University, MS (March 22).

Erika Womack, Darrell Sparks, Cedric Reid, **Ashli Brown**, Janice DuBein, Stephanie Ward (2014) Evaluation of adsorbents for the removal of aflatoxin M₁ from contaminated milk using QuEChERS as an extraction method. 12th Annual MSU Graduate Student Research Symposium, Mississippi State University, MS (March 22).

Olivia Crowe, Candace Williams, P. Tyler Reaves, Kimberly Dill-McFarland, Garret Suen, Andrew Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2014) The gastrointestinal microbiome of the vulnerable red panda. Shackouls Honors College Undergraduate Research Symposium, Mississippi State, MS (April 3).

P. Tyler Reaves, Candace Williams, Olivia Crowe, Garret Suen, Andrew Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2014) Lipid-producing microbes in the giant panda gut may aid in biofuel production. The gastrointestinal microbiome of the vulnerable red panda. Shackouls Honors College Undergraduate Research Symposium, Mississippi State, MS (April 3).

*Candace Williams, Kimberly Dill-McFarland, Darrell Sparks, Andrew Kouba, Scott Willard, Garret Suen, **Ashli Brown** (2014) Specialized bamboo diet selects for simplified gut microbiome in giant and red pandas. American Society of Microbiology, Boston, MA (May 17- 20).

Erika Womack, Darrell Sparks, Gale Hagood, Joey Raines, **Ashli Brown (2014) Aflatoxin Check Sample Program and Statictics and Aflatoxin Research in MS. ASFFPCO, Montgomery, AL (June 18-20).

*Erika Womack, Darrell Sparks, Cedric Reid, **Ashli Brown**, Janice DuBein, Stephanie Ward (2014) Evaluation of adsorbents for the removal of aflatoxin M₁ from contaminated milk using QuEChERS as an extraction method. Joint Annual Meeting ADSA, ASAS, CSAS, Kansas City, MO (July 20-24).

*Candace Williams, Kimberly Dill-McFarland, Darrell Sparks, Andrew Kouba, Scott Willard, Garret Suen, **Ashli Brown** (2014) Giant and red pandas utilize distinct microbial communities for their bamboo diet degradation. American Chemical Society, San Francisco, CA (August 10-14).

*Cedric Reid, Erik Mylorie, **Ashli Brown**, Darrell Sparks, Paul Williams (2014) Correlating Aflatoxin Accumulation and Fungal Biomass in *Aspergillus flavus* Inoculated Maize. American Chemical Society, San Francisco, CA (August 10-14).

*Ashley Meredith, Natalie Calatayud, Darrell Sparks, **Ashli Brown** (2014) Hormone profiling in the endangered boreal toad (*Anaxyrus boreas*) by LC-MS/MS. American Chemical Society Meeting, San Francisco, CA. (August 10-14).

***Erika Womack, Darrell Sparks, Cedric Reid, **Ashli Brown**, Janice DuBein, Stephanie Ward (2014) Validation of aflatoxin M₁ in raw milk using QuEChERS as an extraction method. American Chemical Society Meeting, San Francisco, CA. (August 10-14).

*Abbey Wilson, Katrina Knott, Andrew Kouba, **Ashli Brown**, Darrell Sparks (2014) Communicating sexual receptivity in giant pandas: Examination of volatile compounds through solid phase micro-extraction and gas chromatography mass spectrometry during estrus. American Chemical Society, San Francisco, CA (August 10-14).

Candace Williams, Ian Johnston, Andy Kouba, Scott Willard, Garret Suen, Darrell Sparks, **Ashli Brown** (2013) The Giant Panda and Biofuels: Metagenomics and Anaerobic Bacteriology. 104th AOCs Annual Conference & Expo. Montréal, Québec, Canada. (April 28-May 1).

Candace Williams, Ian Johnston, Andy Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2013) Microbiome Mining: Giant Panda Conservation and Biofuel. Congress for Conservation Biology (ICCB). Baltimore, MA. (July 21-25).

****Ashli Brown**, Xueyan Shan, Darrin F. Roberts, Paul Williams, Marilyn Warburton, Gary Windham, Robert Kemerait, Boazhu Guo, Zhi-Yuan Chen, S. Brooks Blanche, Dawn S. Luthe, Alisa Huffaker, Eric Schmelz (2013) Identification of Gene-Based Markers for Resistance to Aflatoxin Accumulation in Corn by Examination of the Plant/Pathogen/Environment Interactions. Commodity Classic, Kissimmee, FL. (February 26-March 2).

Ashli Brown, Curtis Atkinson, Darrell Sparks (2013) Identification of Agricultural Phytopathogens by Mobile FTIR. ASTS-Environmental and Food Safety Series Webinar Sponsored by Agilent Technologies and ACS. (March 5).

Alka Tiwari, W. Paul Williams, J. Erik Mylroie, Gary L. Windham, **Ashli Brown**, Xueyan Shan (2013) Computational Analysis of 2D Protein Gel Images for Identification of Differentially Expressed Proteins Associated with Resistance to Aflatoxin Accumulation in Maize. MCBIOS Annual Meeting, Columbia, MO. (April 5-7).

Curtis Atkinson, Darrell Sparks, **Ashli Brown**, Jose Rodriguez (2013) Toxigenicity Detection by FT-IR. 245th ACS National Meeting, New Orleans, LA. (April 7-11).

W. Isaac Jumper, Whitney C. Smith, W. Paul Williams, Darrell L. Sparks, **Ashli E. Brown** (2013) Reaction of Fall Army Worms to Jasmonate Based Volatiles. 245th ACS National Meeting, New Orleans, LA. (April 7-11).

Erika Womack, Darrell Sparks, Stephanie Hill, Ashli Brown (2013) Evaluation of Adsorbents for the Removal of Aflatoxin M1 from Contaminated Milk Using QuEChERS as an Extraction Method. 245th ACS National Meeting, New Orleans, LA. (April 7-11).

Cedric Reid, Erik Mylroie, W. Paul Williams, **Ashli Brown**, and Darrell Sparks (2013) Single Corn Kernel Aflatoxin Detection. 245th ACS National Meeting, New Orleans, LA. (April 7-11).

Emily Davis, Curtis Atkinson, **Ashli Brown**, and Darrell Sparks (2013) Developing NALDI-TOF MS for Aflatoxin Screening of Corn. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 22-23).

Curtis Atkinson, **Ashli Brown**, Darrell Sparks, and Gale Hagood (2013) Prep-Free Differentiation of Agriculturally Important Fungi by FT-IR Spectroscopy. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 22-23, 2013).

Ashley Meredith, Nat Calatayud, Scott Willard, Andy Kouba, **Ashli Brown**, Darrell Sparks (2013) Determination of Hormone Levels in *Anaxyrus boreas boreas* using LC-MS/MS. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 22-23).

Kaylin Chaney, Kevin L. Armbrust, **Ashli Brown** (2013) Sources and Perspectives of Arsenic in the Environment. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 22-23).

Emily Ousterhout, Karl Bell, Lenore Kelly, **Ashli Brown**, Darrell Sparks (2013) Novel Comparison of Methods for Species Differentiation. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 22-23).

Candace Williams, Ian Johnston, Andy Kouba, Scott Willard, Garret Suen, Darrell Sparks, **Ashli Brown** (2013) The Giant Panda and Biofuels: Metagenomics and Anaerobic Bacteriology. 104th AOCs Annual Conference & Expo. Montréal, Québec, Canada. (April 28-May 1).

Ashli Brown, Curtis Atkinson, Frederic Prulliere, Darrell Sparks (2013) Agricultural Phytopathogens Identified via Portable FT-IT. Gordon Research Conference on Mycotoxins and Phycotoxins. (June 16-21).

Candace Williams, Ian Johnston, Andy Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2013) Microbiome Mining: Giant Panda Conservation and Biofuel. Congress for Conservation Biology (ICCB). Baltimore, MA. (July 21-25).

*C. Ian Johnston, Candace Williams, Darrell Sparks, Andy Kouba, Scott Willard, **Ashli Brown** (2013) Quantitative Lipid Analysis of Gut Microflora Consortium in the Giant Panda. 246th ACS National Meeting. Indianapolis, IN. (September 8-12).

Karl Bell, **Ashli Brown**, Darrell Sparks, Jose Rodriguez (2013) Monitoring Catfish Quality in Mississippi. 246th ACS National Meeting. Indianapolis, IN. (September 8-12).

Olivia Crowe, Candace Williams, P. Tyler Reaves, Kimberly Dill-McFarland, Garrett Suen, Andy Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2013) Gastrointestinal Microbiome of the Vulnerable Red Panda. American Society for Microbiology, Texas Branch. New Orleans, LA. (October 31-November 2).

P. Tyler Reaves, Candace Williams, Olivia Crowe, Garrett Suen, Andy Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2013) Lipid Producing Microbes in the Giant Panda Gut May Aid in Biofuel Production. American Society for Microbiology, Texas Branch. New Orleans, LA. (October 31-November 2).

****Ashli Brown**, Darrell Sparks, Paul Williams, Jose Rodriguez, Stephanie Ward, Kevin Armbrust (2012) Monitoring Aflatoxin in Mississippi. Joint IFSH/FRI Mycotoxin Symposium, Rosemont, IL. (April 12).

Cedric X. Reid, Christopher I. Johnston, Karl Bell, Erick Larson, **Ashli Brown**, Darrell Sparks (2012) Monitoring Aflatoxin Contamination of Corn in Mississippi. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Curtis Atkinson, Olga Pechanova, Jose Rodriguez, Darrell Sparks, **Ashli Brown** (2012) Rapid Identification of Filamentous Fungi. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30-May 1).

Ashley Meredith, Andrew McDaniel, Christina Childers, Jack Atkins, Cindy Foster, Beth Thomas, Lee Ware, Gale Hagood, Darrell Sparks, **Ashli Brown** (2012) Comparison of PAH Analysis Using ASE/silica gel GC-MS and QuEChERS LC-FLD Detection. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Karl Bell, Ashley Meredith, Cindy Foster, Jose Rodriguez, **Ashli Brown**, Darrell Sparks (2012) Quantitative Determination of Nitrofurans Metabolites in Imported Fish Using Triple Quadrupole LC/MS. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Darrell L. Sparks, Cedric X. Reid, Kay Brocato, Amanda Lawrence, **Ashli Brown** (2012) Use of Agricultural Forensic Science as a Teaching Tool. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Cedric X. Reid, Christopher I. Johnston, Karl Bell, Erick Larson, **Ashli Brown**, Darrell Sparks (2012) Monitoring Aflatoxin Contamination of Corn in Mississippi. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Erika Womack, Stephanie Hill, Darrell Sparks, **Ashli Brown** (2012) Evaluation of Adsorbent for Removal of Aflatoxin M₁ from Contaminated Milk. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 30- May 1).

Ian Johnston, Candace Williams, **Ashli Brown**, Andrew Kouba, Darrell Sparks, Scott Willard (2012) Metagenomics for Bioprospecting. AOAC Southern Section Annual Meeting, Atlanta, GA. (April 26-May 3).

Candace Williams, Ian Johnston, Andrew Kouba, Scott Willard, Darrell Sparks, **Ashli Brown** (2012) Isolation of Giant Panda Intestinal Microbes to be Used in an Oil-Based Biofuel Platform. The 103rd Annual Meeting of the American Oil Chemists Society, Long Beach, CA. (April 29-May 3).

Olga Pechanova, Tibor Pechan, Jose Rodriguez, W. Paul Williams, **Ashli Brown** (2012) 2D Reference Map of the Aflatoxingenic Fungus *Aspergillus flavus*. America Society for Mass Spectrometry, Vancouver, Canada. (May 20-24).

***Ashli Brown**, Darrell Sparks, Cedric Reid, Andrew McDaniel, Olga Pechanova, Jose Rodriguez, Paul Williams (2012) Decreasing the Impact of Aflatoxin in Mississippi. Florida Pesticide Residue Workshop, St. Pete Beach, FL. (July 15-18).

Candace Williams, Ian Johnston, Andrew Kouba, Scott Willard, Darrell Sparks, **Ashli Brown (2012) Giant panda intestinal microbes: Biofuels and conservation. 244th National American Chemical Society Meeting, Philadelphia, PA. (August 19-23).

Gale Hagood, **Ashli Brown**, Darrell Sparks, Cedric Reid, Andrew McDaniel, Olga Pechanova, Jose Rodriguez, Paul Williams (2012) Research Decreasing the Impact of Aflatoxin in Mississippi. AOAC International Annual Meeting and Expo, Las Vegas, NV. (September 30- October 3).

*Karl Bell, Cindy Foster, Darrell Sparks, **Ashli Brown**, (2012) Monitoring Catfish Quality with Mass Spectrometry. American Society for Mass Spectrometry. Asilomar Conference, Pacific Grove, CA. (October 18-21).

*Curtis Atkinson, Olga Pechanova, Jose Rodriguez, **Ashli Brown**, Darrell Sparks (2012) MALDI-TOF-MS as a Tool for Soybean Fungal Pathogen Identification. Asilomar Conference, Pacific Grove, CA. (October 18-21).

*Candace Williams, Darrell Sparks, Andrew Kouba, Scott Willard, **Ashli Brown** (2011) The Potential Usage Of Giant Panda Fecal Material As A Pre-Treatment For Lignocellulosic Biomass For Biofuel Conversion. 242nd ACS National Meeting, Denver, CO. (August 28- September 1).

Whitney Smith, Renuka Shivaji, W. Paul Williams, Dawn Luthe, G. V. Sandoya, Chad Smith, **Ashli Brown**. (2011) A Maize (*Zea mays*) Line Resistant to Herbivory Constitutively Releases (E)- β -Caryophyllene. 242nd ACS National Meeting, Denver, CO. (August 28- September 1).

Ian Johnston, Rebecca Singleterry, **Ashli Brown**, Kevin Armbrust, Darrell Sparks (2011) Optimization of Mycotoxin Binding in Grains. 242nd ACS National Meeting, Denver, CO. (August 28- September 1).

Ashli Brown, Xia Kang, Kevin Armbrust, Gale Hagood, Joe Jewell, Dale Diaz, N. Gatian, Henry Folmer (2011) Monitoring Polycyclic Aromatic Hydrocarbons (PAHs) in Seafood in Mississippi in Response to the Gulf Oil Spill. Gulf Oil Spill SETAC Focused Topic Meeting, Pensacola Beach, FL. (April 26-28).

Andrew McDaniel, Darrell Sparks, William Holmes, W. Paul Williams, **Ashli Brown** (2011) Correlation Between *Aspergillus flavus* Volatiles and Aflatoxin Production. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 10-12).

Candace Williams, William Holmes, Carol Williams, Andy Kouba, Darrell Sparks, Scott Willard, J. Fields Falcone, **Ashli Brown** (2011) The Effect of Dietary Changes on Microbial Populations Within the Giant Panda. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 10-12).

Ian Johnston, Rebecca Singleterry, Darrell Sparks, Joanna King, **Ashli Brown** (2011) Mycotoxin Binding Optimization. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 10-12).

Miriam Revellame, Renuka Shivaji, Darrell Sparks, Rafael Hernandez, Todd French, and **Ashli Brown** (2011) Evaluation of the Capability of *Rhodotorula glutinis* to Produce Cellulase and Hemicellulase. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 10-12).

Katherine McGinley, Candace Williams, Renuka Shivaji, Andy Kouba, Scott Willard, and **Ashli Brown** (2011) Using Genomic Techniques to Identify Bacteria in Panda Fecal. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 10-12).

Andrew McDaniel, Wendy Rasmussen, Darrell Sparks, W. Paul Williams, William Holmes, Kevin Armbrust, **Ashli Brown** (2010) Rapid LC/MS Analysis of Aflatoxins From Corn and DDG's Utilizing Novel Column Technology. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 19-20).

Whitney Smith, Renuka Shivaji, Dawn Luthe, William Holmes, W.Paul Williams, **Ashli Brown** (2010) Detection and Characterization of Volatile Compounds as a Response to Fall Armyworm (*Spodoptera frugiperda*) Feeding in Maize (*Zea mays*). AOAC Southern Section Annual Meeting, GA. (April 19-20).

Andrew McDaniel, Beth Thomas, Darrell Sparks, William Holmes, Kevin Armbrust, **Ashli Brown** (2010) Automated Extraction and Analysis of Antibiotics in Livestock Feed using ASE/LC-MS/MS. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 19-20).

Candace Williams, Carol Williams, William Holmes, Scott Willard, Andrew Kouba, **Ashli Brown** (2010) Microbial Flora of the Giant Panda (*Ailuropoda melanoleuca*) Digestive Tract. AOAC Southern Section Annual Meeting. Atlanta, GA. (April 19-20).

****Ashli Brown**, William Holmes, Scott Willard, Andy Kouba (2010) Chemical communication in pandas: How to Move an *ex-situ* Program to *in-situ* Studies. China-U.S. Planning Meeting, Beijing, China. (May 8-21).

****Candace Williams**, Carol Williams, William Holmes, Scott Willard, Andrew Kouba, **Ashli Brown** (2010) The Microbial Flora of the Giant Panda Digestive Tract: Can we Compare *ex-situ* vs. *in-situ* Populations? China-U.S. Planning Meeting, Beijing, China. (May 8-21).

Katherine McGinley, Candace Williams, Renuka Shivaji, **Ashli Brown** (2010) Identification of the Bacterial Population in the Feces of the Giant Panda Using RT-PCR. The Shackouls Honors College NSF-funded Summer Undergraduate Research Symposium. Mississippi State University, MS.(July 29).

Andrew McDaniel, Beth Thomas, Darrell Sparks, William Holmes, Kevin Armbrust, **Ashli Brown** (2010) Detection of Antibiotics in DDGs Generated from Ethanol Production by ASE/LC-MS/MS. Mississippi State University Biofuels Conference. Jackson, MS. (August 12-13).

Whitney Smith, Renuka Shivaji, Dawn Luthe, William Holmes, W. Paul Williams, **Ashli Brown** (2010) Detection and Characterization of Volatile Compounds as a Response to Fall Armyworm (*Spodoptera frugiperda*) Feeding in Maize (*Zea mays*). Mississippi State University Biofuels Conference. Jackson, MS. (August 12-13).

Darrell L. Sparks, Tracy Benson, **Ashli Brown**, William Holmes, Rafael Hernandez (2009) Analytical Chemistry for Chemical Engineers. American Institute of Chemical Engineers (AIChE) Annual Meeting, Nashville, TN. (November 8-13).

Rebecca Burgett, Brian Baldwin, Jeff Wilkinson, William Holmes, **Ashli Brown** (2009) Micro-scale Ethanol Fermentation of Corn (*Zea mays*) to Determine Aflatoxin Concentration in End-Products. MSU Biofuels Conference, Jackson, MS. (August 5-6).

*Andrew McDaniel, Emmanuel Revellame, Hollis Bowman, Darrell Sparks, William Holmes, Rafael Hernandez, **Ashli Brown** (2009) Elucidation of Sludge Phospholipid Content By LC/MS. MSU Biofuels Conference, Jackson, MS. (August 5-6).

William Holmes, **Ashli Brown**, Jeff Wilkinson, Paul Williams (2009) Genomic Approach to Aflatoxin Degradation. Florida Pesticide Residue Workshop, St. Pete Beach, FL. (July 19-22).

William E. Holmes, Bharath K. Bolla, **Ashli E. Brown**, Arunkanth Ankala, W. Paul Williams, Jeff R. Wilkinson (2008) Economic Ethanol: Using Aflatoxin Contaminated Feedstocks. Pittcon. New Orleans, LA. (March 2-6).

Jaclyn Hall, W. Todd French, Rafael Hernandez, Andro Mondala, Mark White, William Holmes, **Ashli Brown** (2008) Conversion Of Wastewater Treatment Facilities Into Biorefineries. 99th American Oil Chemist Society Meeting. Seattle, WA. (May 16-20).

Ashli Brown, William Holmes, Tracy Benson, Darrell Sparks, Rafael Hernandez (2008) Online Mass Spectrometry Analysis Of Oxidized Lipids Generated In Situ Via Ozonolysis. 99th American Oil Chemist Society Meeting. Seattle, WA. (May 16-20).

Rebecca Burgett, **Ashli Brown**, William Holmes, Tracy Benson, Darrell Sparks, Rafael Hernandez (2008) Online Mass Spectrometry Analysis Of Autooxidized Lipids. Mississippi State University Biodiesel Workshop. Mississippi State, Mississippi, Mississippi State University, MS. (August 24-26).

* ****Ashli E. Brown**, Jeffery R. Wilkinson, W. Paul Williams, Tracy J. Benson, Darrell L. Sparks, W. Todd French, Rafael Hernandez, Elizabeth C. Rogers, William E. Holmes, (2008) Renewable Energy: Opportunities And Breakthroughs For The Future. 236th ACS National Meeting and Exposition. Philadelphia, PA. (August 15-20).

Jacqueline Hall, W. Todd French, Rafael Hernandez, Andro H. Mondala, Earl Alley, William E. Holmes, **Ashli Brown**, Mark G. White (2008) Wastewater Treatment Systems: The Next Biorefinery. AIChE Annual Meeting. Philadelphia, PA. (November 16-20).

Ashli E. Brown, W. Paul Williams, Jeffery R. Wilkinson (2007) The Importance of Aflatoxin to the Ethanol Fuel Industry. Annual Fungal Genomics Workshop. Atlanta, GA. (October 21-24).

Ashli E. Brown, Emily R. Easterling, Elizabeth C. Rogers, William E. Holmes, Rafael Hernandez, W. Todd French (2007) Alternative Feedstocks for Renewable Green Energy. National Meeting of the American Chemical Society. Chicago, IL. (March 25-29).

Jacqueline I. Hall, Todd French, Rafael Hernandez, Andro Mondala, Earl Alley, William Holmes, **Ashli Brown**, Mark White (2007) Conversion of Wastewater Treatment Facilities into Biorefineries. AIChE Annual Meeting, Salt Lake, UT. (November 4-9).

Bharath Bolla, **Ashli E. Brown**, William E. Holmes, Arun Anakala, W. Paul Williams, Jeffery R. Wilkinson (2007) Evaluation of Aflatoxin Degradation by *Aspergillus flavus*. Annual Fungal Genomics Workshop. Atlanta, GA. (October 21-24).

Ashli Brown, William Holmes, Beth Rogers, T. Verioti, Brian Baldwin (2007) FAME Analysis of *Hesperis matronalis*: GCxGC-TOFMS Better Resolution. The American Society for Mass Spectrometry Conference. Indianapolis, IN. (June 3-7).

William Holmes, **Ashli Brown**, Zach Parisan, T.E. Nebeker (2007) Winter Detection of Southern Pine Beetles Using Georeferenced Data. National Meeting of the American Chemical Society. Chicago, IL. (March 25-29).

S. Danviryakul, **Ashli Brown**, William Holmes, Beth Rogers, Juan Silva (2007) Characterization of Oxidation Products From Catfish Biodiesel. Mississippi Academy of Science, Mississippi State University, MS. (February 21-23).

FUNDING: Funding Received in Bold, *Funding Pending

January 2017: NY State Department of Environmental Conservation. GENERAL ANALYTICAL LABORATORY SERVICES: ANALYTE GROUP 1 (\$671,300.25 for 5yr) PI

*April 2017: FDA. MAINTAINING AND ENHANCING THE MSCL'S SCOPE OF ISO/IEC 17025 ACCREDITATION (\$349,882.00 for 2yr) PI

April 2017: Mississippi Rice Promotion Board. THE INFLUENCE OF LATE SEASON OFF-TARGET HERBICIDE MOVEMENT ON MS RICE (\$61,000.00 for 1yr) Co-PI

May 2017: National Corn Growers Association. DISSERCTION OF CORN RESISTANCE OTLs FOR AFLATOXIN REDUCTION USING GENOME SEQUENCES AND MULTIPLE POPULATION (\$85,000.00 for 1yr) Co-PI

*June 2017: USDA-NIFA. ENGAGING WOMEN AND MINORITIES IN AGRICULTUR-RELATED STEM DISCIPLINES THROUGH MENTORING, LEADERSHIP DEVELOPMENT AND EXPERIENTIAL LEARNING (\$99,900.00 for 3yr) Co-PI

August 2017: USDA FSIS. 2017-2018 FSIS FERN Cooperative Agreement Program (CAP) (\$113,000.00 for 1yr) Co-PI

February 2016: NSF-INGEWS. CONVERSION OF BIOMASS TO FUELS AND BIOCHAR FOR WATER PURIFICATION AND SOIL AMBENDMENT: INNOVATIONS AT THE NEXUS OF FOOD, ENERGY, AND WATER SYSTEMS (\$2,988,244.00 for 5yr) CoPI

May 2016: National Corn Growers Association. REDUCING AFLATOXIN ACCUMULATION IN CORN THROUGH WHOLE GENOME INVESTIGATION AND INTROGRESSION OF RESISTANCE GENES (\$55,000.00 for 1yr) CoPI

August 2016: USDA FERN FSIS. 2016-2017 FSIS FERN COOPERATIVE AGREEMENT PROGRAM (\$84,285.00 for 1yr) CoPI

August 2016: NSF. RESEARCH EXPERIENCE FOR UNDERGRADUATES-FOOD, ENGERGY AND WATER SERCURITY (\$287,865.00 for 3yr) CoPI

November 2016: EPA. EPA MDAC BPI PESTICIDE IVESTIGATION (\$41,600.00 for 1yr) PI

December 2016: Mississippi Soybean Promotion Board. 2,4 D AND DICAMBA RESISTANT SOYBEANS: STEWARDSHIP AND TESTING (\$42,310.00 for 1yr) Co-PI

December 2016: Mississippi Soybean Promotion Board. EVALUATION AND DEVELOPMENT OF EFFECTIVE TANK CLEANOUT PROCEDURES FOLLOWING USE OF AUXIN HERBICIDES (\$40,600.00 for 1yr) CoPI

January 2015: SRI. BINDING PREFERENCE OF AFLATOXIN M1 IN MILK (\$34,150.00 for 1yr) CoPI

January 2015: SRI. 2,4 D AND DICAMBA TOLERANT CROPS IN MISSISSIPPI (\$35,900.00 for 1yr) PI

February 2015: Conservation Action Network. PANDAS, PHEROMONES, AND THE PURSUIT OF ANATOMICAL ESTRUS CUES (\$5,090.66 for 1yr) CoPI

April 2015: USDA FSIS. EXPAND, OPTIMIZE, VALIDATE, AND IMPLEMENT THE DRUG AND POISONS SCREEN USING ACIDIC AND BASIC EXTRACTION (FERN CHE0006.01) WITH GC-MS IN CATFISH FILLETS (\$80,000.00 for 1yr) CoPI

June 2015: Memphis Zoological Society. GIANT PANDA CHEMICAL COMMUNICATION: BEHAVIORAL AND PHYSIOLOGICAL RESPONSES OF MALES TO THE VOLATILE COMPOUNDS IN ESTRUS URINE (\$30,000.00 for 1yr) CoPI

October 2015: AMCOE. REDUCING ALFATOXIN ACCUMULATION IN CORN THROUGH WHOLE GENOME INVESTIGATION AND INTROGRESSION OF RESISTANCE GENES (\$55,000 for 1yr) CoPI

October 2015: MS Center for Food Safety USDA-ARS. SURVEILLANCE OF CHEMICAL TOXINS IN IMPORTED CATFISH (\$41,350.00 for 1yr) CoPI

October 2015: SRI. SEQUESTRATION OF ANTIBIOTICS FROM BOVINE MILK USING BINDING AGENTS (\$32,500.00 for 1yr) CoPI

October 2015: SRI. LOW COST ADSORBENTS FOR REMOVING NITRATES AND PHOSPHATES FROM SURFACE WATERS (49,400.00 for 1yr) PI

November 2015: Mississippi Corn Promotion Board Pre-Proposal. 2,4 D AND DICAMBA RESISTANT CORN: STEWARDSHIP AND TESTING (\$47,994 FOR 1yr) PI

November 2015: Mississippi Soybean Promotion Board. EVALUATION AND DEVELOPMENT OF EFFECTIVE TANK CLEANOUT PROCEDURES FOLLOWING USE OF AUXIN HERBICIDES (\$40,818.00 For 1yr) CoPI

November 2015: Mississippi Soybean Promotion Board. 2,4 D AND DICAMBA RESISTANT SOYBEANS: STEWARDSHIP AND TESTING (\$39,898.00 for 1yr) PI

January 2014: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN AND DISTILLERS GRAINS (\$27,585.21 for 1yr) PI

February 2014: Conservation Action Network. CHARACTERIZING THE NUTRITIONAL ECOLOGY OF THE RED PANDA: IMPACTS OF MANAGEMENT OF DIET AND HEALTH (\$6,600 for 1yr) CoPI

February 2014: Conservation Action Network. WHAT'S THAT PERFUME? SNIFFING OUT THE SCIENCE BEHIND PANDA CHEMICAL COMMUNICATION (\$3,040 for 1yr) CoPI

May 2014: MS Department of Environmental Quality. ANALYTICAL SERVICES FOR ENVIRONMENTAL, PRIORITY POLLUTANT, HAZARDOUS CONSTITUENT, WATER QUALITY, AND WASTE SAMPLES (\$600,000.00 for 4yr) PI

June 2014: Memphis Zoological Society. A METAGENOMIC STUDY OF GIT MICROBES FROM GIANT AND RED PANDAS (\$30,000.00 for 1yr) PI

June 2014: Memphis Zoological Society. GIANT PANDA CHEMICAL COMMUNICATION: BEHAVIORAL AND PHYSIOLOGICAL RESPONSES OF MALES TO THE VOLATILE COMPOUNDS IN ESTRUS URINE (\$30,000.00 for 1yr) CoPI

June 2014: Gulf of Mexico Research Initiative. TRIGLYCERIDE PRODUCTION FROM BP OIL SPILL CONSEQUENT (\$1,000,000.00 for 3yr MSU subcontract) CoPI

October 2014: AMCOE. ADVANCING GENOME RE-SEQUENCING TO MARKER DISCOVERY TOWARD ASPERGILLUS FLAVUS RESISTANCE AND AFLATOXIN REDUCTION IN MAIZE (\$60,000 for 1yr) CoPI

December 2014: Leo Seal Family Foundation. GIANT PANDA CONSERVATION EFFORTS (\$15,000 for 1yr) PI

January 2013: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN AND DISTILLERS GRAINS (\$41,980 for 1yr) PI

January 2013: Mississippi Soybean Promotion Board. RAPID IDENTIFICATION OF SOYBEAN FUNGI BY SPECTROSCOPIC TECHNIQUES. (Year 3) (\$63,405 for 1yr) PI

April 2013: MS Department of Environmental Quality. ANALYTICAL SERVICES FOR ENVIRONMENTAL, PRIORITY POLLUTANT, HAZARDOUS CONSTITUENT, WATER QUALITY, AND WASTE SAMPLES (\$200,000.00 for 1yr) PI

May 2013: Memphis Zoological Society. A METAGENOMIC STUDY OF GIT MICROBES FROM GIANT AND RED PANDAS (\$30,000.00 for 1yr) PI

June 2013: Peanut and Mycotoxin Innovation Lab. RAPID DETECTION OF *ASPERGILLUS FLAVUS* IN PEANUTS (\$740,000.00 for 4yrs) CoPI

November 2013: AMCOE. ADVANCING GENOME RE-SEQUENCING TO MARKER DISCOVERY TOWARD ASPERGILLUS FLAVUS RESISTANCE AND AFLATOXIN REDUCTION IN MAIZE (\$90,000) CoPI

*December 2013: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN AND DISTILLERS GRAINS (\$40,000) PI

December 2013: MAFES Strategic Research Initiative. GIANT PANDA GI MICROBES POWERING NEXT GENERATION BIOREFINERIES (\$47,400) PI

December 2013: MAFES Strategic Research Initiative. RAPID DETECTION OF PHYTOPATHOGENIC FUNGI IN AGRICULTURAL AND BIOFUEL CROPS (\$43,200) CoPI

January 2012: Research Initiation Program. DEVELOPMENT OF A RAPID AND ADVANCED NADLI-MS METHOD FOR MYCOTOXIN ANALYSIS (\$42,200 for 1yr) PI

January 2012: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN AND DISTILLERS GRAINS (\$59,758 for 1yr) PI

January 2012: Mississippi Soybean Promotion Board. RAPID IDENTIFICATION OF SOYBEAN FUNGI BY SPECTROSCOPIC TECHNIQUES. (Year 2) (\$77,764 for 1yr) PI

March 2012: Agilent Technologies-Instrument Partnership. FISH SPECIES ID. (BioAnalyzer \$150,000) PI

April 2012: US Fish and Wildlife Services. ANALYSES OF PLANT AND ANIMAL TISSUES, WATER, SOIL, AND SEDIMENT FOR TRACE. (\$2,697,337 for 5yrs) PI

June 2012: Memphis Zoological Society. YEAR TWO: A METAGENOMIC STUDY OF GIT MICROBES FROM GIANT AND RED PANDAS (\$30,000 for 1yr) PI

September 2012: FDA. MISSISSIPPI STATE CHEMICAL LABORATORY FOR MFRPS LAB ACCREDITATION. (\$1,447,102 for 5yrs) PI

November 2012: Agilent Technologies-Instrument Partnership. MONITORING FUNGAL CONTAMINATION. (FT-IR \$50,000) PI

December 2012: Texas Corn Producers Board/USDA ARS. RAPID DETECTION OF *ASPERGILLUS FLAVUS* IN CORN. (\$35,000 for 1yr) Co-PI

December 2012: Special Research Initiative. RAPID FIELD DETECTION OF PHYTOPATHOGENIC FUNGI IN AGRICULTURAL AND BIOFUEL CROPS. (\$43,200 for 1yr) Co-PI

*December 2012: USDA AFRI Conference Grant. MSU AFLATOXIN SYMPOSIUM. (\$13,944) Co-PI

*December 2012: USDA AFRI. MITIGATION OF TRANSFER OF AFLATOXIN INTO MILK USING MYCOTOXIN ADSORBENTS (\$299,676 for 4yrs) Co-PI

January 2011: Research Initiation Program Office of Research and Economic Development Mississippi State University. IDENTIFICATION OF FACTORS INVOLVED IN DEGRADATION OR SEQUESTERING OF AFLATOXIN TO REDUCE THE ECONOMIC IMPACT (\$40,510 for 1yr) PI

January 2011: Research Initiation Program Office of Research and Economic Development Mississippi State University. GENERATION OF NUTRACEUTICALS FROM *RHODOTORULA GLUTINIS* GROWN ON SWEET SORGHUM JUICE (\$40,000 for 1yr) CoPI

February 2011: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN AND DISTILLERS GRAINS (\$59,358 for 1yr) PI

February 2011: Mississippi Corn Promotion Board. OXIDATIVE REMEDIATION OF AFLATOXIN-CONTAMINATED CORN (\$54,900 for 1yr) CoPI

March 2011: William White Special Project Grants. USE OF AGRICULTURAL FORENSIC SCIENCE AS A TEACHING TOOL (\$1,500 for 1yr) CoPI

March 2011: Mississippi Soybean Promotion Rapid. IDENTIFICATION OF SOYBEAN FUNGI BY SPECTROSCOPIC TECHNIQUES. (\$74,599 for 1yr) PI

March 2011: Agilent Technologies-Instrument Partnership. MONITORING MYCOTOXIN CONTAMINATION IN MISSISSIPPI. (LC-QQQ \$500,000) PI

March 2011: Internal MAFES Instrumentation Money. CHROMATOGRAPHIC MASS SPECTROMETRY DETECTION. (\$131,500) PI

March 2011: NSF Dimensions Of Biodiversity Grant Proposal. DYNAMIC NUTRITIONAL LANDSCAPE EFFECTS ON THE SYMBIOTIC DIVERSITY OF THE INTESTINAL MICROBIOTA OF OBLIGATE BAMBOO FORAGERS. (\$987,270 for 5yrs) PI

April 2011: Gulf States Marine Fishery Commission/National Marine Fisheries Service. ANALYSIS OF SEAFOOD FROM AREAS AFFECTED BY *DEEPWATER HORIZON* OIL SPILL DISASTER. (\$418,760 for 4yrs) PI

May 2011: Food Science Institute. IMPORTED CATFISH AND FOOD SAFETY. (\$50,000 for 1yr) CoPI

May 2011: Memphis Zoo. A METAGENOMIC STUDY OF GIT MICROBES FROM GIANT AND RED PANDAS. (\$27,500 for 1yr) PI

July 2011: MCISSP. RAPID IDENTIFICATION OF COTTON FUNGI BY SPECTROSCOPIC TECHNIQUES. (\$90,008 for 1yr) CoPI

July 2011: New York Department of Environmental Conservation. CHLORINATED HYDROCARBONS AND ORGANICS IN BIOLOGICAL TISSUE SAMPLES. (\$1,500,000 for 5yr) CoPI

July 2011: BP-GRI. COMPREHENSIVE INV. OF THE LONG TERM IMPACTS OF CRUDE OIL ON MARINE LIFE. (\$5,000,000 for 3yr) CoPI

August 2011: FDA. MISSISSIPPI STATE CHEMICAL LABORATORY FOR MFRPS LAB ACCREDITATION. (\$128, 473.54 for 1yr) CoPI

August 2011: AMCOE Aflatoxin Program. RAPID DETECTION AND REMEDIATION OF AFLATOXIN CONTAMINATED CORN. (\$192,700 for 2yrs) CoPI

August 2011: AMCOE Aflatoxin Program. IDENTIFICATION OF GENE-BASED MARKERS FOR RESISTANCE TO AFLATOXIN ACCUMULATION IN CORN BY EXAMINATION OF THE PLANT/PATHOGEN/ENVIRONMENT INTERACTIONS. (\$180,000 for 2yrs) PI

September 2011: USGS-WRRI. THE POTENTIAL THREAT TO HUMANS AND THE ECOSYSTEM QUALITY BY TRACE AMOUNTS OF PHARMACEUTICALS AND PERSONAL CARE PRODUCTS IN SURFACE WATERS. (\$59,999 for 1yr) PI

January 2010: Research Initiation Program Office of Research and Economic Development Mississippi State University. USE OF SOLID PHASE MICROEXTRACTION (SPME) FOR PROFILING FUNGAL VOLATILE METABOLITES (\$45,100 for 1yr) PI

January 2010: William White. USE OF AGRICULTURAL FORENSIC SCIENCE AS A TEACHING TOOL (\$3,500 for 1yr) PI

March 2010: Mississippi Corn Promotion Board. PRERFORMANCE OF CATTLE FED DRIED DISTILLER'S GRAINS PRODUCED FROM MYCOTOXIN CONTAMINATED CORN. (\$38,500 for 1yr) CoPI

March 2010: Mississippi Corn Promotion Board. EVALUATING AND DECREASING THE IMPACT OF AFLATOXIN ON CORN FOR ETHATHOL. (\$35,000 for 1yr) PI

April 2010: AFRI Sustainable Bioenergy Research Program. USE OF SWEET SORGHUM CULTIVARS FOR THE GENERATION OF RENEWABLE OLEOCHEMICALS. (\$300,000 for 3yrs)

May 2010: Corn-insect AFRI proposal. ENVIRONMENTAL EFFECTS ON INSECT FEEDING DAMAGE TO RESISTANT AND SUSCEPTIBLE ZEA MAYS GENOTYPES – MECHANISTIC AND MOLECULAR APPROACH. (\$300,000 for 3 yrs) CoPI.

May 2010: Memphis Zoo. DETERMINATION OF THE MICROBIAL FLORA FROM FECES OF THE GIANT PANDAS HOUSED AT THE MEMPHIS ZOO. (\$27,500 for 1yr) PI

June 2010: Proposal for Phase 1 NGI Assessment. RAPID SUPERCRITICAL FLUID EXTRACTION OF PAH'S FROM SEAFOOD, SOIL, AND SAND (\$14,000 for 1yr) PI

January 2009: Research Initiation Program Office of Research and Economic Development Mississippi State University. EARLY FUNGAL TOXIN DETECTION IN CORN CROPS (A GEO-REFERENCED ANALYTICAL TECHNIQUE) (\$45,100 for 1yr) PI

January 2009: Research Initiation Program Office of Research and Economic Development Mississippi State University. IDENTIFICATION OF AFLATOXIN DEGRADING ENZYMES. (\$45,100 for 1yr) PI

February 2009: NIH. A NON-INVASIVE, HIGHLY SENSITIVE, VOLATILE BASED FUNGAL DETECTION METHOD. (\$1,449,676 for 5yrs) CoPI

February 2009: NSF-PIRE. BIODIVERSITY CONSERVATION AT MULTIPLE SCALES – A LANDSCAPE APPROACH TO INTEGRATING RESEARCH, EDUCATION AND SOCIOECONOMIC CONSIDERATIONS IN THE QINLING MOUNTAINS OF CHINA. (\$2,691,616 for 5yrs) CoPI

March 2009: Mississippi Corn Promotion Board. PERFORMANCE OF CATTLE FED DRIED DISTILLER'S GRAINS PRODUCED FROM MYCOTOXIN CONTAMINATED CORN. (\$38,500 for 1yr) CoPI

March 2009: Mississippi Corn Promotion Board. EVALUATING AND DECREASING THE IMPACT OF AFLATOXIN ON CORN FOR ETHATHOL. (\$60,000 for 1yr) PI

March 2009: USDA/DOE. MODIFIED *MISCANTHUS X GIGANTEUS* AS A SECOND GENERATION BIO-ENERGY FEEDSTOCK (\$1,062,967 for 4yrs) PI

April 2009: NSF-Travel Grant. A U.S.-CHINA TRAVEL GRANT: LANDSCAPE-LEVEL BIODIVERSITY CONSERVATION, FOREST RESTORATION AND SOCIOECONOMICS AT MULTIPLE SCALES. (\$20,000 for 1yr) CoPI

August 2009: Memphis Zoo. DETERMINATION OF THE MICROBIAL FLORA FROM FECES OF THE GIANT PANDAS HOUSED AT THE MEMPHIS ZOO. (\$27,500 for 1yr) PI

February 2008: Sustainable Energy Research Center. PURIFICATION AND CHARACTERIZATION OF THE CELLULASE-HEMICELLULASE COMPLEX IN OLEAGINOUS YEAST (\$124,368 for 2yrs) PI

February 2008: Otilie Schilig Special Teaching Projects Program. BIO-ANALYTICAL CONCEPTS IN AGRICULTURE (\$3300 for 1yr) CoPI

February 2008: William White Special Project Grants. ADDRESSING ANALYTICAL CONCEPTS IN AGRICULTURE (\$3400 for 1 yr) CoPI

February 2008: USDA, ARS, Aflatoxin Collaborative Research Support Program (AFRCSP). A NOVEL METHOD OF MONITORING AND EARLY TOXIN DETECTION IN CORN CROPS (\$45,100 for 1yr) PI

May 2008: LSBI. *ASPERGILLUS FLAVUS* PROTEOMICS PROJECT (\$19,532.28 for duration of project) PI

June 2008: Sun Grant. CHARACTERIZATION OF CELLULASES-HEMICELLULASES FOR FEEDSTOCK BIOCONVERSION. (\$177,669 for 3yrs) PI

November 2008: Research Initiation Program Office of Research and Economic Development Mississippi State University. EARLY FUNGAL TOXIN DETECTION IN CORN CROPS (A GEO-REFERENCED ANALYTICAL TECHNIQUE) (\$45,100 for 1yr) PI

December 2008: Mississippi Corn Promotion Board. DECREASING THE IMPACT OF AFLATOXIN ON CORN FOR ETHANOL (\$60,000 for 1yr) CoPI

April 2007: South Eastern Regional Competitive Grant/ Sun Grant Initiative. IDENTIFICATION OF FACTORS INVOLVED IN DEGRADATION OF AFLATOXIN (\$297,138 for 3yrs) CoPI

May 2007. National Research Initiative Competitive Grants Program USDA-CSREES. IDENTIFICATION AND CHARACTERIZATION OF FACTORS IN ASPERGILLUS AFLATOXIN BIOSYNTHESIS AND DEGRADATION (\$984,250 for 4yrs) CoPI

June 2007. SERC BioCrude Thrust Group 3. PRODUCTION OF BIOCRUDE VIA INTEGRATION OF WASTEWATER TREATMENT AND THE SUGAR PLATFORM FOR PRODUCING GREEN TRANSPORTATION FUELS (\$80,000 for 1yr) PI

July 12, 2007. USDA/DOE Pre-Application RD-RBP-BIOMASS-2007. UTILIZATION OF AFLATOXIN CONTAMINATED MAIZE FOR ETHANOL PRODUCTION. (\$350,000 for 4yrs) CoPI