

CURRICULUM VITAE

Education

- **Doctorate of Philosophy.** Iowa State University. Major: Meat Science (Food safety emphasis).
Dissertation title: Improving the control of bacterial pathogens on ready-to-eat processed meats manufactured to simulate traditionally cured meats, but without the direct addition of nitrite or nitrate. (May 2010)
- **Master of Science.** Iowa State University. Major: Meat Science (Food safety emphasis).
Thesis title: Enumeration of *Escherichia coli* O157:H7 in ground beef using the PATHATRIX® detection system. (May 2006)
- **Bachelor of Science.** University of Arkansas-Pine Bluff. Major: Animal Science (May 2003)

Research Experience

Post-Doctoral Research Associate

Iowa State University, Department of Animal Science

May 2010-present

- Research Project: Novel aseptic processing and packaging of ready-to-eat frankfurters (Collaboration with Purdue University; Responsibilities include: Microbiological testing of product and validation of the chlorine dioxide chamber in the BSL-2 laboratory)
- Responsible for the preparation of manuscripts for publication in peer-reviewed journals

Graduate Research Assistant

Iowa State University, Department of Animal Science

Aug. 2003 – May 2010

- Assisted with industry-funded research projects in the Food Safety Research Laboratory
- Worked with other graduate students with individual projects
- Assisted visiting students from China and Spain with research experiments
- Gained experience in standardized microbiology laboratory methods and analytical laboratory equipment (e.g. incubators, water baths, centrifuges, biological safety cabinets, spiral plater, etc.)
- Assisted in the Analytical Laboratory with AOAC approved methods

Research Internships

Kraft Foods, Madison, WI, May 2007 – Aug. 2007

- Research project focused on value-added processed meats
- Designed experiment to adequately address the project's objective
- Executed benchtop and plant tests
- Collected data
- Submitted a final written report
- Presented an oral presentation
- Participated in poster sessions in Madison, WI and Glenview, IL
- Group leader for the Intern Iron Chef Competition, Glenview, IL (Group won the Best Appetizer Award)

Pennsylvania State University, State College, PA, May 2002 – Aug. 2002

- Research Experiences for Undergraduates (REU) Program

- Research project entitled “Enzyme-linked immunosorbent assay (ELISA): Lactoferrin in mammary secretions”
- Effectively utilized various laboratory techniques, which led to successful completion of research project
- Became familiar with laboratory techniques
- Enhanced team-building skills
- Presented work in oral form and poster presentation

University of Missouri, Columbia, MO, June 2001 – Aug. 2001

- Miller Undergraduate Summer Research Program in Animal Science
- Research project entitled “The effect of buffers on rumen fermentation patterns”
- Effectively utilized various laboratory techniques, which led to successful completion of research project
- Worked with other graduate students on projects
- Became familiar with laboratory techniques
- Enhanced team-building skills

Teaching Experience

Fun with Microbiology

Office of Precollegiate Programs for Talented and Gifted, Iowa State University

June 2012-Instructor for class

- Developed a one-week course designed to expose students to the fascinating world of microbiology
- Students were engaged with hands-on laboratory activities and introduced to basic food microbiology techniques
- One-week (half day) session was taught to 3-5th graders while another one-week (half day) session was taught to 6-7th graders

Crossing the Great Divide: Science, Technology, Engineering and Mathematics (STEM) Exploration!

Office of Precollegiate Programs for Talented and Gifted, Iowa State University

July 2012-Co-Instructor for class

- Co-developed a one-week course designed to expose students to different areas and careers in STEM fields
- Students participated in STEM related activities and discussions
- One-week (half day) session was taught to 6th-7th graders

Issues in Food Safety (Food Science and Human Nutrition 489)

Department of Food Science and Human Nutrition, Iowa State University

Spring 2012-Instructor for class

- Lead students in discussions related to domestic and international food safety issues
- Oversee and evaluate students’ independent projects
- Secure speakers with a food safety interest

Addressing Issues in Animal Science (Animal Science 411)

Department of Animal Science, Iowa State University

Fall 2011 and Spring 2012-Instructor for class

- Prepare and present lectures to students, organize students’ group activities and students’ presentation schedule

- Provide an environment where students are able to freely ask questions regarding any aspect of the class
- Secure speakers to provide students a different perspective
- Assist students in the development of a written editorial for publication in newspapers
- Evaluate and score the students' oral presentations and written assignments
- Meet with students to discuss their scores and advice for future presentations

Spring 2006 – Fall 2009-Teaching Assistant

- Assisted the professor with class preparations
- Entirely responsible for one section of the class
- Contributed in the delivery of instructions to students
- Advised students on the development of topics related to animal science
- Provided assistance to students in the development of a written editorial for publication in local newspapers
- Guided students in the development of a PowerPoint presentation for oral presentations
- Evaluated and scored the students' oral presentations and written editorials
- Met with students to discuss their scores and advice for future presentations

Working with Animals (Animal Science 101), Fall 2004 – Spring 2005

Teaching Assistant, Iowa State University, Department of Animal Science

Professor in charge: Brad Skaar, Ph.D., Associate Professor

- Accompanied students each week to Iowa State University Teaching Farms for laboratory classes
- Scored homework, quizzes and exams
- Guest food safety lecturer each semester (Fall 2004 – present)

Distance Education Experience

- Trained in using Blackboard Learn
- Utilized Blackboard Learn in classes “Addressing Issues in Animal Science” and “Issues in Food Safety”

Grant Writing Experience

- July 2011 (submitted October 2011) - Invited Proposal: USDA Agriculture and Food Research Initiative (AFRI) Program, Critical and Emerging Food Safety Issues, “Investigating the microbiological safety of natural and organic juice”. (**PD Armitra Jackson-Davis**, Co-PD Aubrey Mendonca, Collaborating Investigators James Dickson, Joseph Sebranek)
- July 2011 – Assisted with the writing of Pre-Proposal (American Meat Institute Foundation): Improving the Control of *Listeria monocytogenes* in Retail Delicatessen Environments by Reducing or Eliminating Cross-Contamination and Transmission from Product Contact Surfaces (Investigators: Joseph Sebranek, James Dickson, Mark Morgan, **Armitra Jackson-Davis**)
- August 2010 - Assisted with the writing of a grant with the Agriculture and Food Research Initiative Competitive Grants Program (Program Area Priority-Addressing Critical and Emerging Food Safety Issues)

Publications

Refereed Journal Articles

- Sullivan, G.A., **A.L. Jackson**, K.D. Schrader, Y. Xi, C. Kulchaiyawat, J.G. Sebranek, J.S. Dickson. 2012. Survey of naturally and conventionally cured products for physio-chemical characteristics that affect bacterial growth. *Meat Science* (in press).
- Sebranek, J.G., **A.L. Jackson-Davis**, K.L. Myers, N.A. Laverie. 2012. Beyond celery and starter culture: Advances in natural/organic curing processes in the United States. *Meat Science*. 92: 267-273.
- Kudra, L.L., J.G. Sebranek, J.S. Dickson, A.F. Mendonca, Q. Zhang, **A.L. Jackson-Davis**, K.J. Prusa. 2012. Control of *Campylobacter jejuni* in chicken breast meat by irradiation combined with modified atmosphere packaging including carbon monoxide. *Journal of Food Protection* (in press).
- Sullivan, G.A., **A.L. Jackson**, S.E. Niebuhr, K.D. Schrader, J.G. Sebranek, J.S. Dickson. 2012. Inhibition of *Listeria monocytogenes* using natural antimicrobials in no-nitrate-or-nitrite added ham. *Journal of Food Protection* (in press).
- Kudra, L.L., J.G. Sebranek, J.S. Dickson, E.M. Larson, A.F. Mendonca, K. J. Prusa, J.C. Cordray, **A.L. Jackson-Davis**, and L. Zheng. 2012. Control of *Listeria monocytogenes* on frankfurters and pre-cooked pork chops by irradiation combined with modified atmosphere packaging. *Journal of Food Protection*. 75: 1063-1070.
- Kudra, L.L., J.G. Sebranek, J.S. Dickson, A.F. Mendonca, E.M. Larson, **A.L. Jackson-Davis**, Z. Lu. 2012. Control of *Escherichia coli* O157:H7 in ground beef patties by irradiation combined with vacuum and modified atmosphere packaging. *Journal of Food Protection*. 74: 2018-2023.
- Yuan, Xi, G.S. Sullivan, **A.L. Jackson**, G.H. Zhou, J.G. Sebranek. 2011. Effects of natural antimicrobials on inhibition of *Listeria monocytogenes* and on chemical, physical and sensory attributes of naturally-cured frankfurters. *Meat Science*. 90: 130-138.
- Kudra, L.L., J.G. Sebranek, J.S. Dickson, A.F. Mendonca, Q. Zhang, **A.L. Jackson-Davis**, K.J. Prusa. 2011. Control of *Salmonella enterica* Typhimurium in chicken breast meat by irradiation combined with modified atmosphere packaging. *Journal of Food Protection*. 74: 1833-1839.
- Yuan, Xi, G.S. Sullivan, **A.L. Jackson**, G.H. Zhou, J.G. Sebranek. 2011. Use of natural antimicrobials to improve the control of *Listeria monocytogenes* in a cured meat model system. *Meat Science*. 88: 503-511.
- **Jackson, A.L.**, G.S. Sullivan, C. Kulchaiyawat J.G. Sebranek, J.S. Dickson. 2011. Survival and growth of *Clostridium perfringens* in commercial no-nitrate-or-nitrite added (natural and organic) frankfurters, hams and bacon. *Journal of Food Protection*. 74: 410-416.
- **Jackson, A.L.**, C. Kulchaiyawat, G.S. Sullivan, J.G. Sebranek, J.S. Dickson. 2011. Use of natural ingredients to control growth of *Clostridium perfringens* in naturally cured frankfurters and hams. *Journal of Food Protection*. 74: 417-424.

Abstracts/Conference Presentations

- Sebranek, J.G., **A.L. Jackson-Davis**, K.L. Myers, N.A. Lavieri. 2012. Beyond celery and starter culture: Advances in natural/organic curing process in the United States. 58th International Congress of Meat Science and Technology. Montreal, Canada.
- Sebranek, J.G., **A.L. Jackson-Davis**. 2012. Meat Processing: A Functional marriage of meat materials and non-meat ingredients. 58th International Congress of Meat Science and Technology. Montreal, Canada.
- **Jackson-Davis, Armitra**. 2011. The history of natural and organic products and the current status of labeling. 100th Annual International Association of Food Protection. Milwaukee, WI (lead symposium planner and presenter).
- Sullivan, G.A., **A.L. Jackson**, S.E. Niebuhr, K.D. Schrader, J.G. Sebranek, J.S. Dickson. 2010. Use of natural antimicrobials for *L. monocytogenes* control on ham. 56th International Congress of Meat Science and Technology. Jeju Island, Republic of Korea.
- Sullivan, G.A., **A.L. Jackson**, K.D. Schrader, J.G. Sebranek, J.S. Dickson. 2010. Comparison of commercially available uncured processed meats with conventionally cured products for physio-chemical properties that affect bacterial growth. Reciprocal Meat Conference Proceedings. Meat Science. 86:570.
- **Jackson, A.L.**, G.A. Sullivan, C. Kulchaiyawat, J.G. Sebranek, J.S. Dickson. 2010. Survival and growth of *Clostridium perfringens* on no-nitrate-or-nitrite added (natural and organic) frankfurters, bacons and hams. International Association of Food Protection Conference. Anaheim, CA. (presenter)
- Yuan, Xi, **A.L. Jackson**, K.D. Schrader, G.A. Sullivan, K.D. Schrader, J.G. Sebranek. 2009. Use of natural antimicrobials to improve the control of bacterial pathogens in cured processed meats manufactured without direct addition of nitrite. Pacific Rim Animal Science Conference. Beijing, China.
- **Jackson, A.L.**, G.A. Sullivan, C. Kulchaiyawat, J.G. Sebranek, J.S. Dickson. 2009. Improving the control of bacterial pathogens on ready-to-eat processed meats manufactured to simulate traditionally cured meats, but without the direct addition of nitrite or nitrate. Project Directors' Meeting for the National Integrated Food Safety Initiative. Grapevine, TX. (presenter)

Non-Referred Articles

- Kimber, M., **A.L. Jackson**. 2010. The Salmonella smorgasbord: The problem with too many choices. Food Protection Trends, Vol. 30, No. 11.
- **Jackson, A.L.**, W. Chang. 2010. Microbiological environmental testing and validation: Leading-edge issues for low-moisture foods. Food Protection Trends, Vol. 30, No. 11.
- Hartman, A., **A.L. Jackson**. 2005. Pre-harvest issues associated with the transmission of viruses and parasitic protozoa-the problem and the solutions. Food Protection Trends Vol. 25, No. 11.

- **Jackson, A.L.,** H. Zhang. 2005. Data for decision making. Food Protection Trends Vol. 25, No. 11.

Extension Publications

- **Jackson, A.L.,** G.S. Sullivan, J.G. Sebranek, J.S. Dickson. January 2010. Use of natural ingredients to control growth of *Clostridium perfringens* on frankfurters and ham. A.S. Leaflet R2492 Iowa State University Animal Industry Report.
- **Jackson, A.L.,** G.S. Sullivan, J.G. Sebranek, J.S. Dickson. January 2010. Survival and growth of *Clostridium perfringens* on commercial no-nitrate-or-nitrite added (natural and organic) bacon and ham". A.S. Leaflet R2491 Iowa State University Animal Industry Report.
- Niebuhr, S.E., G.S. Sullivan, **A.L. Jackson** J.G. Sebranek, J.S. Dickson. January 2010. Use of natural ingredients to control growth of *Listeria monocytogenes* on ham. A.S. Leaflet R2493 Iowa State University Animal Industry Report.
- **Jackson, A.L.,** G.S. Sullivan, J.G. Sebranek, J.S. Dickson. January 2009. Growth of *Clostridium perfringens* on natural and organic frankfurters. A.S. Leaflet R2385 Iowa State University Animal Industry Report.

Book Publication

Eating Safe With Ace and Mace: The Birthday To Remember Forever

Outskirts Publishing Company, Published Dec. 2007

ISBN Number: 9781432712556

Author: **Armitra L. Jackson**

Objective of publication: To use storytelling as a manner to teach safe food handling to children

Book featured in the following:

- Food Safety Magazine (April/May 2008)
- Stories in Agriculture and Life Sciences, Iowa State University (Fall 2008)
- Iowa State University Visions Alumni Magazine (Summer 2008)
- School Nutrition Magazine (June/July 2008)
- Focus On Microbiology Education, American Society for Microbiology Publication, (Summer 2008 – Vol. 14, No. 4)
- Institute of Food Safety and Security Newsletter, Iowa State University (Summer/Fall2007 – Vol. 3, Issue 2)

Extension Activities

Iowa State University Meat Science Extension Short Courses 2004 – 2012

- Served as a group leader for group projects in the Iowa State University Meat Laboratory
- Served as a moderator for sessions presented by invited speakers
- Conducted tours of the Iowa State University Meat Laboratory
- Assisted with food microbiology experiments for Short Course participants in the Food Safety Research Laboratory

Fall In-Service for Extension Field Staff Members, Iowa State University, Fall 2008

- Invited to speak about book, Eating Safe With Ace and Mace, and the importance of early education as it relates to food safety

RIBS (Refining Individual Barbeque Skills) for Kids Program, Iowa Barbeque Society, Fall 2006

- Presented lecture to children in the Des Moines area on the topic of food safety

Reciprocal Meat Conference (RMC) Undergraduate Quiz Bowl Team, Iowa State University, March – May 2007

- Served as an assistant coach to prepare students for the competition

Invited Presentations

Midwest Area Biosafety Network Conference, Iowa State University, August 2011

- Title of presentation: Novel Aseptic Processing and Packaging of Ready-To-Eat Frankfurters

Processed Meats (Animal Science 460), Iowa State University, Spring 2008

- Title of lecture: “Foodborne Illnesses: The Uninvited Guests”

Working with Animals (Animal Science 101), Iowa State University, Fall 2004 – present

- Title of lecture: “So Microorganisms in Food Really Matter?”

Symposium Planning

Organized and submitted proposal for 2011 International Association for Food Protection Conference, Milwaukee, WI (Symposium Title: “The Safety of Natural, Organic and Uncured Processed Meat Products; Proposal accepted Feb. 2011); Responsible for fully developing symposium idea, inviting speakers, scheduling phone conference for confirmed speakers, securing funding (from companies in industry that produce natural ingredients) for speaker travel support. Symposium sponsors: Kerry Ingredients and Flavors, Danisco USA, IAFP Foundation

Speakers and titles of presentations for symposium:

- The History of Natural and Organic Products and the Current Status of the Labeling (**Armitra Jackson-Davis, Ph.D., Iowa State University**)
- Ingredients for Natural, Organic and Uncured Meat Products (Jim Bacus, Ph.D., Technical Ingredient Solutions, LLC)
- Use of Natural Ingredients to Inhibit Growth of Gram-positive Pathogens (Kathy Glass, Ph.D., University of Wisconsin-Madison)
- Organic and Natural Foodstuffs as Seen by Europeans (Facts and Trends) (Ralf Neidhardt, Chr. Hansen Company-Germany)

International Experience

Iowa State University Agriculture Study Abroad, Morocco, Africa, March 2005

- Examined diverse food production systems in Morocco
- Interacted with students at the local university while experiencing Moroccan culture
- Toured harvesting facilities and historical sites

Iowa State University Agriculture Study Abroad, Ghent, Belgium, Jan. 2005

- Attended two-week conference, “Safety in the Agro-Food Chain”, University of Ghent
- Interacted with other European students with a food safety interest

Pine Bluff High School Exchange Program, Saratov, Moscow, Russia, Oct. 1997

- Resided with host family while experiencing Russian culture and lifestyle
- Studied general coursework at local high school
- Reciprocated Russian student visit to United States the following semester

Work Experience Outside Research Area

Iowa State University, Office of Multicultural Student Affairs, Spring 2010

- Served on the first committee to organize a recognition program for students of color (program later named Multicultural Student Affairs Recognition Ceremony)
- Worked with a graphic designer on the development of a permanent logo for the Multicultural Student Affairs Recognition Ceremony
- Assisted with the planning and securing of motivational speaker for students

Awards/Honors and Fellowships

- Department of Animal Science Teaching Award, Iowa State University, 2009
- Iowa State University Teaching Excellence Award, Iowa State University, 2006 – 2007
- National Science Foundation: Alliances for Graduate Education and the Professoriate (AGEP) Fellowship, August 2006 – May 2010
- Outstanding Agriculture Student Award, University of Arkansas - Pine Bluff, 2001 – 2002
- Agriculture Faculty Incentive Award, University of Arkansas - Pine Bluff, 2000 – 2001

Managerial Responsibilities

Iowa State University, Food Safety Research Laboratory, Aug. 2006 – Dec. 2009

Managed undergraduate hourly workers (~7 undergraduate students)

- Interviewed students for hourly student positions in the Food Safety Research Laboratory
- Initially met with students to discuss expectations of laboratory position
- Assisted students with training (e.g. lab techniques) to work in the Food Safety Research Laboratory
- Provided regular follow-up with students
- Provided an environment where students could learn and ask questions freely
- Served as a mentor to students (e.g. advice on helpful classes to take, graduate education and other career choices)

Visiting international graduate students

María Josefa Sánchez Iglesias (Spain) (Jan. 2009 – April 2009)

Yuan, Xi (China) (Aug. 2008 – Sept. 2010)

- Acclimated visiting students to the Food Safety Research Laboratory at Iowa State University and assisting them with their experiments
- Served as a mentor

Professional Affiliations

- International Association for Food Protection
- American Meat Science Association

Professional Development

- Annual Institute for Teaching and Mentoring, Atlanta, GA, Fall 2011
- McKeachie's Teaching Tips Seminar Series, Iowa State University, Ames, IA, Fall 2011
- Responsible Conduct of Research Seminar Series, Iowa State University, Ames, IA, Fall 2011
- Annual International Association for Food Protection Conference, Milwaukee, WI, August 2011
- Annual International Association for Food Protection Conference, Anaheim, CA, Aug. 2010
- Food Safety Education Conference. Atlanta, GA. March 23-26, 2010.

- Food Safe Schools Action Guide Workshop (Presented by the United States Department of Agriculture Food and Nutrition Service, National Coalition for Food Safe Schools), Atlanta, GA. March 23, 2010
- “Writing Winning Grants” and “Writing Winning Revisions” presented by Dr. David Morrison, Iowa State University, Ames, IA. Spring 2010.
- Project Directors’ Meeting for the National Integrated Food Safety Initiative, Grapevine, TX. July 2009
- Annual International Association for Food Protection Conference, Grapevine, TX. July 2009
- Meat Science Summit, Kraft Foods, Madison, WI. Aug. 2007
- Annual Biomedical Research Conference for Minority Students, Orlando, FL. Nov. 2006
- Annual Institute on Teaching and Mentoring Conference, Miami, FL. Oct. 2006
- Annual International Association for Food Protection Conference, Calgary, Alberta, Canada, Aug. 2006
- Annual International Association for Food Protection Conference, Baltimore, MD. Aug. 2005
- Annual International Association for Food Protection Conference, Phoenix, AZ. Aug. 2004
- Institute for Food Safety and Security Symposium, Iowa State University, Ames, IA. April 2004
- Developing and Implementing HACCP in Meat and Egg Production Plants Workshop, Iowa State University, Ames, IA. Nov. 2003

Committee Appointments – Iowa State University

- Alliances for Graduate Education and the Professoriate (AGEP) Workshop Planning Committee (Fall 2009 – Spring 2010)
- Graduate Minority Assistantship Program Research (GMAP) 2nd, 3rd and 4th Annual Research Symposium (Summer 2008 – Summer 2010)
- Minorities in Agriculture Natural Resources and Related Science (MANRRS) Region V Workshop Planning Committee (Fall 2008)
- Honoring Our Graduates Multicultural Ceremony Committee (Fall 2008 – Spring 2010)
- People of Nia Celebration (Chair and Co-Chair) (Fall 2005 – May 2010)

Service

Assisted middle school science teacher and two students with a science fair project in the Food Safety Research Laboratory (Spring 2012)

Hosted Science Bound students in the Food Safety Research Laboratory, Iowa State University (Fall 2011)

- Planned and facilitated microbiology laboratory activities for 20 middle school and high school students in the Food Safety Research Laboratory at Iowa State University

Responsible for supervising peer mentors in the Peer Mentoring Program in the Department of Animal Science, Iowa State University (Fall 2010-present)

- Assisted in the delivery of expectations and guidelines to the peer mentors
- Conducted meetings twice per month to ensure mentees needs were being met
- Ensured that the goals and objectives of the Peer Mentoring Program were being met (via evaluations to peer mentors and mentees).

Served on panel to discuss the importance of education with girls in middle and high school (Fall 2009)

The University of Arkansas - Pine Bluff Career Day and Teacher Education Fair, Pine Bluff, AR (Spring 2009-Fall 2010)

- Communicated with college students interested in graduate school

- Spoke to Career Development class and Animal Science class about the importance of higher education.

Mentored George Washington Carver Interns, Iowa State University (Summer 2008-Summer 2009)

- Presented presentation entitled “Poster Presentations 101” for interns.

Volunteered at the Beloit Residential Treatment Center for Children, Ames, IA (Dec. 2006 - June 2008)

- Mentored 11-year old girl who was removed from custody of mother
- Mentored 12-year old girl who was removed from custody of parents

Volunteered with the Big Brothers Big Sisters Volunteer Program at Jack Robey Junior High School, Pine Bluff, AR (Feb. 2001-Dec. 2003)

- Mentored middle school children and assisted children with homework

Organizations

- ISU Gamma Sigma Delta Agriculture Honor Society (2007-present)
- ISU Meat Science Club (past vice president and social chairperson) (2006-2010)
- ISU Minorities in Agriculture, Natural Resources and Related Sciences (2006-2009)
- ISU Black Graduate Student Association, secretary (2006-2010)
- Southern Regional Honors Council, vice president (2002-2003)
- Alpha Kappa Mu Honor Society (2002-2003)
- University of Arkansas - Pine Bluff Honor Student Association, president (2001-2002)

REFERENCES

James S. Dickson, Ph.D.

Professor of Animal Science
Iowa State University
215F Meat Laboratory
Ames, IA 50011-3150
(515) 294-4733
jdickson@iastate.edu

Joseph G. Sebranek, Ph.D.

University Professor of Animal Science
Iowa State University
215C Meat Laboratory
Ames, IA 50011-3150
(515) 294-1091
sebranek@iastate.edu

Brad R. Skaar, Ph.D.

Associate Professor of Animal Science
Iowa State University
119 Kildee Hall
Ames, IA 50011-3150
(515) 294-2242
skaar@iastate.edu
