

08/ 2015

Kerrie L. McDaniel, Ph.D.
Pedagogical Assistant Professor
Department of Biology
Western Kentucky University

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Education:

Ph.D. in Plant Biology (1997) Southern Illinois University-Carbondale, Carbondale, Illinois
Dissertation title: *Cytokinin Modulation of Gene-specific mRNA Abundance: The Effects of Different Cytokinins in Phaseolus vulgaris L. and Glycine max (L.) Merr.*

M.S. in Biology (1990) Western Kentucky University, Bowling Green, Kentucky
Thesis title: *Short-term Effects of Manganese-toxicity on ribulose 1,5 biphosphate carboxylase in tobacco.*

B.S. in Biology/Chemistry (summa cum laude- 1988) Western Kentucky University, Bowling Green, Kentucky

Academic Positions:

Assistant Professor (Pedagogy Position), Department of Biology, Western Kentucky University (July 2013-present)

Instructor, Department of Biology, Western Kentucky University (2002 to July 2013)

Instructor, Navitas at WKU (2011-2013)

Adjunct, part-time Faculty, Department of Biology, Western Kentucky University (1994-2002)

High School Science Teacher, Leeton, Missouri (1990-1991)

Current Teaching:

- Biology 113 General Biology for non-majors (winter 2014, winter 2015)
- Biology 114 General Biology Lab for non-majors (winter 2014, winter 2015)
- Biology 131 Human Anatomy and Physiology lecture (spring 2015)
- Biology 131 Human Anatomy and Physiology Lab (fall 2013, spring 2014, fall 2014, spring 2015)
- Biology 231 Advanced Human Anatomy and Physiology (lecture and lab) (Fall 2013, spring 2014 fall 2014, spring 2015)
- Biology 303 Life Science for Middle School Teachers (Fall 2014)
- Biology 420 Introduction to Toxicology (summer 2015)

Awards:

- **Hats Off to Women Award**, Office of Institutional Diversity and Inclusion, March 28, 2014.

University Service/Committees:

- **Search Committee (Instructor Position)**, Department of Biology, Fall 2014/Spring 2015)
- **Search Committee (Assistant Professor in Microbiology)**, Department of Biology, Spring 2015.
- **Coordinated data collection of Colonnade courses**, Department of Biology, May 2015.
- **Faculty representative for SACS accreditation visit**, Ogden College, WKU April 8, 2015.
- **Search Committee (Instructor Position)**, Department of Biology, Spring/Summer 2014.
- **Professional Education Council**, University Committee Member, WKU (2008-present)
- **Curriculum Committee**, Department of Biology, WKU (2013-2015).
- **Pre-Physical Therapy Club**, WKU, Advisor (2013-2015).
- **Advisor, Medical Technology Program**, Department of Biology, (2002-2015).
- **Biology Advising Super Sessions (BASS)**, Department of Biology, (203-2015)
- **University Admission and Retention Subcommittee of the Professional Educational Council**, Committee Member, WKU. (Sept. 2008-present).
- **Ogden College Science Outreach Advisory Committee**, Ogden College, (Spring 2014).
- **Professional Education Annual Report**, WKU, preparer. (2012, 2013, 2014).
- **Noyce Seminar Series**, Fall 2012-Spring 2013/ Fall 2013-Spring 2014, Fall 2014-Spring 2015.
- **Master's Degree Committee Member**, Department of Biology (See Student Engagement List).
- **National Science Teacher Association Student Chapter (NSTA)**, Co-Advisors: Kerrie McDaniel and Martha Day. (Aug. 2005-2014).
- **Women in Science and Engineering (WISE)**, WKU. (2013-2014).
- **Regional Noyce Conference**, Lake Cumberland, KY (June 18-19, 2013).
- **Girls in Science, Western Kentucky University**. October 13, 2012.
- **SACS Accreditation, Biology 113, Department of Biology**. Fall of 2012.
- **Search Committee, Food Microbiologist, Department of Biology**. Fall 2011-Spring 2012.
- **Search Committee, Science Education Specialist, SKyTEACH**. Fall 2011-Spring 2012.
- **Search Committee, 5 Master Teachers, SKyTEACH**. Spring-Sumer 2012.
- **Medical Technology Club**, Advisor. (Aug. 2002-2012).
- **Western Kentucky University Committee to Address the Common Core Standards**, 2011-2012.
- **Middle School Science Education Program Redesign Committee**. 2010-2012.
- **WKU Project A.I.M.S. (Activating Interest in Minority Students)**, enrichment leader. (Feb. 2011).
- **Steering Committee Member, WKU's Professional Education Programs**, WKU. (2008-2010).
- **Biology Departmental Folio for Teach Education**, Co-authors Kerrie McDaniel and Heather Johnson (Nov. 2008-Feb. 2009).
- **Search Committee for Lab Technician**, Committee Member, WKU for Lab Technician (Dr. Rodney King laboratory), (Sept. 2008-Nov. 2008).
- **Teacher Leader Master's Planned Fifth Year Program Committee**, Committee Member, Department of Education, WKU. (2007-2008).
- **Search Committee**, Science Education Specialist, Department of Education, WKU (2007-2008).
- **Search Committee**, Biology Instructor Glasgow Campus, WKU (2008).
- **Strike Force** for writing Critical Performances for SKyTeach program (2007-2008).
- **Science Olympiad** (April 2008).
- **Coaching and Observation Strategies Workshop (August 27-28, 2007)**, New Teacher Center, Memphis TN.
- **Teacher Education Model Program (TEMP) Task Force** (2004- 2008).
- **2006 Teacher Quality Summit: Teaching Above the Gathering Storm: Preparing STEM and World Language Teachers for a Global Economy**. (Oct. 23-24, 2006). Louisville, KY.

- **National Boards Workshops for Elementary Teachers** (2005).
- **FACET Workshops for Western Kentucky University Faculty**, (August 2006).
- **Kentucky Internship Program (KTIP)** (2002-2008).
- **Science Alliance Task Force**, Ogden College of Science and Engineering, Western Kentucky University (2002 to 2012).
- **FACET Workshop for Western Kentucky University Faculty**, Workshop Presenter (2004).
- **FACET Workshop for Western Kentucky University Faculty**, Workshop Presenter (2005).

Community/Professional Service

- **Kentucky Academy of Science**, Executive Committee Member, Social Sciences. Elected position.
- **Green River Education Cooperative (GRREC)**, Workshop, Presenter, June 2-5, 2015.
- **Owensboro Medical Health System Advisory Board for the School of Medical Technology**, Advisory Board Member (2007-present). Met with NAACLS accrediting committee (Oct. 21, 2014).
- **Potter Gray Science Days**, September 30, 2014.
- **Verbally and Mathematically Precocious Youths (VAMPY)**, Guest Speaker for Biology session, Western Kentucky University, July 10, 2014.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, June 9, 13, 2014.
- **Science Olympiad**, Coordinator of Anatomy and Physiology Session, Western Kentucky University, April 12, 2014.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, November 5, 2013.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, January 10, 2014.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, June 28th and July 15th, 2013.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, June 4-7, 2013.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, February 20, 2013.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, November 18, 2012.
- **Educational Professional Standards Board (EPSB)**, Program Reviewer, August 2012-June 2013.
- **McGraw-Hill Publishing Company LabSmart Symposium**, Test group member, November 8-10, 2012.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, June 13-14, 2012.
- **Writing Under the Microscope Workshop for High School Teachers**. Workshop Presenter, June 13, 2-2012.
- **Green River Education Cooperative (GRREC)**, Workshop Presenter, July 2011, October 2011, January 2012, June 2012.
- **Green River Educational Cooperative (GRREC)**, Workshop Presenter, May 25-26, 2011, Oct. 2011.
- **Green River Educational Cooperative (GRREC)**, Workshop presenter, (July 12, 2011).
- **Green River Educational Cooperative (GRREC)**, Workshop educator (summer 2010).
- **Kentucky Department of Education, Professional Standards Board**, Content Reviewer (2005-present).
- **Oxford Press**, Reviewer (Feb. 2010-Mar. 2010). Reviewed Chapters 1,2, 6, 19, 20 and Table of Contents for non-majors textbook entitled "Biology for the informed Citizen".
- **Green River Regional Educational Cooperative (GRREC)**, Workshop Leader for ASK-IT I, ASK-IT II, and ASK-IT III grants (July 2009, March 2010).
- **Potter Gray Elementary School**, Session Leader for Science Days (Feb. 2010).
- **WH Freeman Company**, Reviewer (Nov. 2009-Dec. 2009). Reviewed "What is Life? A Guide to Biology" and "What is Life? A Guide to Biology with Physiology".
- **Green River Regional Education Cooperative**, Committee Member, (Oct. 2009-Nov. 2009).
- **Kentucky Internship Program (KTIP)**, University Educator (Sept. 2008-2009).
- **ACT (College Preparation Readiness Exam)**, Reviewer of Topics (Jan. 2009-Feb. 2009).

- **W.R. McNeill Elementary Science Lab**, Developer, (2001-2009).

Internal Grant Proposals:

- **DELO Online Learning Research Office Grant: Evaluation of E-Learning Resources and Flipped Classrooms on Student Learning Outcomes and Faculty Pedagogy in 100 and 200 Level Biology Courses (Fall 2013-2015).** PIs: Kerrie McDaniel and Jerry Daday. \$41,740 Funded.
- **Ogden College of Science and Engineering Action Agenda Grant** (2005, 2006, 2007). *Workshop Support for High School Biology Teachers Teaching Physical Science.* Kerrie McDaniel and Heather Johnson. \$4724 Funded.
- **Ogden College of Science and Engineering Action Agenda Grant** (2005). *Support for the Western Chapter of the National Science Teacher Association.* Kerrie McDaniel and Heather Johnson. \$3000 Funded.

External Grant Proposals:

- **Council on Post-Secondary Education Grant: Parallel Curriculum and Program Planning for NGSS & KCAS/ELA for Science and Technical Subjects. (2014-2015).** PIs: Martha Day, Les Pesterfield, Pam Petty, Daniel Super, and Kerrie McDaniel (submitted September 2013- Not funded).
- **NSF Western Kentucky University's Targeted Partnership: STEM-TEACH- NSF 1319246 (2012-2017).** PIs: Martha Day, Kerrie McDaniel, Les Pesterfield, Stacy Wilson, and Kyle Cassidy. (\$7,564,004.00 submitted December 14, 2012-Not funded).
- **CPE (Council for Post-secondary Education): Writing Under the Microscope: Content Area Writing for the Sciences 293776-2 (2011-2012).** PIs: David Lee, Dean Potter College of Arts and Letters, Chris Ervin and Kerrie McDaniel. \$25,000 Funded.
- **NSF Western Kentucky University's Targeted Partnership: STEM-TEACH 1238039 (2012-2017).** PIs: Martha Day, Kerrie McDaniel, Vivian Moody and Bruce Kessler. (\$6,694,975.00 Not funded).
- **NSF (National Science Foundation) Robert Noyce Teacher Scholarship Program NSF 09-532: WKU Science and Mathematics Alliance for Recruitment and Retention of Teachers (2009-2015).** PIs Hope Marchionda, Kerrie McDaniel, Janet Tassell, Vicky Metzger. \$898,791 Funded.
- **NSF Discovery Research (DRK-12): The Science Lab Model: Providing significant STEM education for all students in the elementary school classroom while increasing teacher confidence and ability to teach science.** PI: Kerrie McDaniel. (submitted Jan. 2010/denied April 2010).
- **NSF(National Science Foundation) MSP Start Grant, Western Kentucky Math/Science Partnership (2008-2010).** PIs Heather Johnson and Rico Tyler. Key Personnel: Kerrie McDaniel and Roger Pankratz \$257,000 Funded.
- **KDE (Kentucky Department of Education) Grant, Learning Capacity Advancement of Middle School Science and Mathematics (EXPLORE grant).** PI: Roger Pankratz. Supporting Personnel: Janet Tassell, Rico Tyler, Hope Marchionda and Kerrie McDaniel. This grant provided training and mentoring for middle school science teachers to improve Explore scores. \$140,000 Funded.

- **STEP Grant (TNE Learning Network, Academy for Educational Development): Engaging Arts and Science Faculty in the Redesign of Key Academic Courses Required for Elementary Education Teacher Candidates.(2007-2008)** Roger Pankratz and Kerrie McDaniel. \$10,000 Funded.
- **Carnegie New Teacher Center Learning Network Grant: Train Teacher Educators, Arts and Science Faculty, and School Practitioners in Processes and Skills of Mentoring New Teachers.** (2007-2008). Roger Pankratz, Kerrie McDaniel, Rico Tyler. \$10,000 Funded.
- **STEP Grant (TNE Learning Network, Academy for Educational Development): A Standards-based Assessment Program to Further Develop Western Kentucky University's Performance Accountability System with the Purpose of Linking Teacher Preparation Processes, Teacher Content Knowledge and Instructional Performance to P-12 Student Learning of State/National Content_** (2005-2008). Worked with Roger Pankratz, Wanda Weidemann, Sam Evans and Toby Daniel Funded
- **Improving Educator Quality State Grant Program: Kentucky Council of Postsecondary Education: East-West Collaborative to Increase the quality of Physical Science Teachers in High-need Middle Schools (SEXTANT).** (2006-2008). Rico Tyler, Kerrie McDaniel, Roger Pankratz and Middle School Teachers. Funded
- **Carnegie Grant: Mentoring Program for Second Year Elementary-school Teachers.** (2006-2007). Roger Pankratz, Kerrie McDaniel and Wanda Weidemann. Funded

Publications:

Tyler, R., McDaniel, K. Evans, S., and M. Day. (in press) Next Generation Science Standards (NGGSC), General Education and Teacher Preparation.in *Meet Me in the Commons: A Field Guide to Common Core Standards in Higher Education* edited by Dorie Combs.

Tassell, Janet, McDaniel, Kerrie, Johnson, Heather, Pankratz, Roger, Norman, Tony, Tyler, Rico (2012). EXPLORE Performance in Mathematics and Science: Why are Middle School Students Unprepared for Success in Mathematics and Science? *International Journal of Innovations in Science and Math Education* (20)-1, p. 1-23.

Van Der Meer, B.W., Alletto, J.J., Bryant, D., Carini, M., Elliott, L., Gelderman, R., Mason, W., McDaniel, K., McGruder, C.H., Rinehart, C., Tyler, R., Walker, L., (2000). Astrobiology as a tool for getting high school students interested in science. In R.B. Hoover Editor. *Instruments, Methods, and Missions for Astrobiology III* (pp. 106-112). Bellingham, Washington, The International Society for Optical Engineering.

McDaniel, Kerrie; Lightfoot, David. (1997). Accumulation of a gene specific mRNA in response to Cytokinin treatment of leaves in *Phaseolus vulgaris*. *Plant Physiology and Biochemistry*, 35, (5).

Lightfoot, David; McDaniel, Kerrie; Ellis, J.; Hammerton, R.; Nicander N. (1997). Methods for the analysis of cytokinin content, metabolism, and response. In W. V. Dashek Editor. *Methods in Plant Biochemistry and Molecular Biology* (pp.133-152). Boca Raton: CRC Press.

McDaniel, Kerrie; Toman, Frank (1994). The Short-term effects of manganese toxicity on ribulose 1,5 bisphosphate carboxylase in tobacco chloroplasts. *Journal of Plant Nutrition*, 17, 523-536.

McDaniel, Kerrie; Lightfoot, David (1994). Cytokinin responsive genes in *Phaseolus vulgaris* L. and *Glycine max* (L.) Merr. *Plant Physiology*., 105, 68.

Presentations (* denotes student presenter):

McDaniel, Kerrie (submitted for March 30-April 3, 2016). What Spiders Can Teach You About NGSS. National Science Teachers Association (NSTA), Nashville, TN.

Novack, Elena, McDaniel, Kerrie & Daday, Jerry (Nov. 3-7, 2015). Undergraduate Biology Students' Use and Attitude Towards Digital Textbooks. Association for Educational Communications and Technology (AECT), Indianapolis, IN.

Garrison, Rebecca*, McDaniel, Kerrie & Jerry Daday (submitted for November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. National Association of Biology Teachers (NABT), Providence, RI.

McDaniel, Kerrie, Johnson, Heather & Crystal Ingle (Dec. 6-9 2014). Reduce DWFIs in Your High DWFI Courses Now Without Lowering Standards.: Approaches From Two Institutions in STEM Disciplines. Southern Association of Colleges and Schools Commission on Colleges Annual Meeting. Nashville, TN.

McDaniel, Kerrie, DaDay, Jerry & Thomas Patterson* (Oct. 29-31 2014). Assessing the Impact E-text, Flipped Classroom and iPad Usage in an Anatomy and Physiology Course. Twentieth Annual Online Learning Consortium International Conference on Online Learning (formerly Sloan-C). Lake Buena Vista, FL.

McDaniel, Kerrie and Noyce Scholars* (April 12, 2013). The Foundations of Living Things: Cells for Elementary Students. National Science Teacher Association National Conference, San Antonio, TX.

McDaniel, Kerrie and Noyce Scholars* (October 20, 2012). Standards and Content and Inquiry, Oh my! Creative Strategies to Integrate the Three. Regional National Science Teacher Association (NSTA) Conference, Louisville, KY.

McDaniel, Kerrie and Noyce Scholars* (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.

McDaniel, Kerrie; Crawford, Kathryn*; Spinks, Joye Beth*, (March 12, 2011). Photosynthesis Strategies: Foundations of Ecological Food Webs. National Science Teacher Association (NSTA) National Conference, San Francisco, CA.

McDaniel, Kerrie; Marchionda, Hope; Tassell, Janet. (March 11, 2011). Western Kentucky University Science and Mathematics Alliance for Recruitment and Retention of Teachers (WKU SMARRT): Recruiting, Preparing and Retaining Math and Science Teachers for High Needs Areas, The Society for College Science Teaching, San Francisco, CA.

McDaniel, Kerrie; Crawford, Kathryn*; Spinks, Joye Beth*, (Dec. 3, 2010). It's Alive! Promoting Critical Thinking on the First Day of Biology Class. National Science Teacher Association (NSTA) Area Conference on Science Education, Nashville, TN.

McDaniel, Kerrie; Marchionda, Hope; Tassell, Janet; Metzgar, Vicky. (Nov. 13, 2010), Year One Success and Frustrations: Robert Noyce Scholarship Program to Recruit, Prepare and Retain STEM Teachers for High Needs Areas. Kentucky Academy of Science, Western Kentucky University, Bowling Green, KY.

Marchionda, Hope; McDaniel, Kerrie; Tassell, Janet; Metzgar, Vicky. (July 8, 2010), invited presentation. Western Kentucky University Science and Mathematics Alliance for the Recruiting and Retention of Teachers. NSF (National Science Foundation) Robert Noyce Scholarship Program Conference: Building Excellence in STEM Teaching, Washington, D.C.

Johnson, Heather; McDaniel, Kerrie. (Jan. 25, 2010). Western Kentucky Math Science Partnership. Math/Science Partnership Learning Network Conference, National Science Foundation, Washington, D.C.

McDaniel, Kerrie (presenter); Weidemann, Wanda; Pankratz, Roger; Johnson, Heather. (March 2008). Using Content Area Assessment Data in Math and Science to Impact Course Development and Program Changes for the Preparation of Elementary Teachers. NSTA Conference, Boston, MA (Seaport Hotel).

Johnson, Heather; McDaniel, Kerrie (March 2008). Bringing STEM (Science, Technology, Engineering and Mathematics) Role Models to Every Classroom in Kentucky. NSTA Conference, Boston, MA (Convention Center).

Pankratz, Roger; McDaniel, Kerrie (presenters); Evans, Sam; Kessler, Bruce; Lee, David; Murley, Tim; (Discussants) (February 2008). An Education Partnership With Science and Engineering, Arts and Humanities, and Two School Districts That Prepare Teachers to Impact P-12 Learning. Symposia at AACTE (American Association of Colleges for Teacher Education), New Orleans, LA.

Kessler, Bruce; Weidemann, Wanda; McDaniel, Kerrie; Pankratz, Roger; Evans, Sam. (2007). A (Successful) Example of How Data on Student Learning Can Impact Program Change in Context Areas Unit: AACTE (American Association of Colleges for Teacher Education) session, New York Hilton (Sutton Complex) Feb. 25 3:15-4:30

McDaniel, Kerrie; Weidemann, Wanda; Pankratz, Roger; Evans, Sam; Kessler, Bruce. (2007). Connecting Candidate Assessment to Measure of Student Learning (Preconference-session: Participants are charged a fee to attend), AACTE (American Association of Colleges for Teacher Education), Sat., Feb. 24 9:00-12:00. Hilton, New York (Sutton Complex), New York. (I was the main speaker representing WKU on this project).

Johnson, Heather; McDaniel, Kerrie. (2007). Standards-based Assessment-aligned Microtube Experiments. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (March 29- Apr. 1, 2007).

McDaniel, Kerrie; Johnson, Heather (2007). Content Standards and Inquiry: A Formula for Incorporating Inquiry into any Standards-based lesson. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (Mar. 29- Apr. 1).

McDaniel, Kerrie (Sept.. 2006). Presented data to the AACTE STEP-committee on our data from our STEP grant. AACTE meeting, Chicago, IL.

McDaniel, Kerrie; Johnson, Heather; Ayers, Robin; Weidemann, Wanda. (2005). Teacher Education Model Program (TEMP): A Standards-based Master's Degree Program in Elementary Education. Kentucky Academy of Science, November 2005, Richmond, KY.

Johnson, Heather; McDaniel, Kerrie (2005). Partnering Home school Science Students with University Resources. Kentucky Academy of Science, November 2005, Richmond, KY.

McDaniel, Kerrie; Elliott, Larry; Clauson, John Mark (2004). Use of Standard Surface Motility Plates for Demonstration of Motility in Introductory Micro Teaching Laboratories. American Society for Microbiology Branch Meeting, October 2005, Bowling Green, KY.

McDaniel, Kerrie; Meier, Oeida. (2003). Impacting Elementary Science Education Through Hands-on Science Labs. Kentucky Academy of Science, November 2003, Bowling Green, KY.

Professional Development

- **The Impact of Senate Bill (2009) on Assessment and Accountability**, tutorial, Feb. 19, 2015.
- **The Next Generation Science Standards Crossing Divides and Cutting into the Future**, webinar, February 8, 2015.
- **Title IX Training for Sexual Harrassment**, WKU online training, Jan. 2015.
- **Southern Association of Colleges and Schools (SACS)**, Nashville, TN, December 6-9, 2014.
- **Online Learning Consortium International Conference on Online Learning**, Lake Buena Vista, FL, Oct. 29-31, 2014.
- **Human Anatomy and Physiology Annual Conference (HAPS)**, Jacksonville, FL (May 24-29, 2014).
- **McGraw-Hill Symposium on Human Anatomy and Physiology**, Laguna Beach, CA (March 6-9, 2014).
- **McGraw-Hill Training**, Bowling Green, KY (November 11, 2013).
- **Institutional Technology Training (IT)**, WKU, Bowling Green, KY (July 1, 2013).
- **McGraw-Hill Training** (July 29, 2013: August 20 and 22).
- **Anatomy in Clay Workshop, Denver, CO** (June 19-23).
- **McGraw-Hill Training**, Bowling Green, KY (May 8, 2013).
- **National Science Teacher Association Conference on Science Education**, San Antonio, TX (April 10-13, 2013).
- **National Science Teacher Association Conference on Science Education**, Louisville, KY (Nov. 18-20, 2012).
- **Collaborative Institutional Training Initiative (CITI) training: Social/Behavioral Research Refresher Course** (August 21, 2012).
- **National Science Teacher Association National Conference on Science Education**, Indianapolis, IN (March 28-31, 2012).
- **Architecture for Implementing the Core Standards: Strategies, Partnerships and Progress Council for Post-Secondary Education**, Louisville, KY (Feb. 27-29, 2012).
- **Literacy Design Collaborative Training for the Kentucky Department of Education Workshop**, Lexington, KY (August 8-10, 2011).
- **National Science Teacher Association National Conference on Science Education**, San Francisco, CA (March 10-13).
- **The Society for College Science Teaching (SCST) annual meeting**, San Francisco, CA (March 10-13, 2011).
- **National Science Teacher Association Area Conference on Science Education**, Nashville, TN (Dec. 2-4, 2010).
- **Kentucky Academy of Science Annual meeting**, Bowling Green, KY (Nov. 12-13, 2010).
- **NSF Robert Noyce Teacher Scholarship Program Conference: Building Excellence in STEM teaching**, Washington D.C. (July 7-9, 2010).
- **MSP Learning Network conference, National Science Foundation**, Washington D.C. (Jan. 23, 2010-Jan. 26, 2010).
- **Tutorial "Online Research Ethics Course", Practical Ethics Center, University of Montana, Montana, USA**, (Dec. 1, 2009-Dec. 2, 2009).
- **Tutorial "Social/Behavioral Research Course, Basic Course"**, Collaborative Institutional Training Initiative, (Nov. 14, 2009-Nov. 15, 2009).

- **Tutorial “Social and Behavioral Responsible Conduct of Research Basic Course 1”**, Collaborative Institutional Training Initiative Program, (Nov. 13, 2009-Nov. 14, 2009).
- **Workshop “Identifying Students and Scholarships for Deserving Students”**, Office of Sponsored Programs/Ogden Dean Office, WKU (Aug. 26, 2009).
- **Workshop “Nuts and Bolts of Advising”**, Academic Advising and Retention Center/Office of Dean, Ogden College, WKU (Aug. 26, 2009).
- **Workshop “Curricular Implications of the President’s Task Force Report on Access and Quality”**, Office of the Provost, WKU (Aug. 21, 2009).
- **Workshop “Engaging Their Spirits and Helping Students Connect: What the Core and Liberal Education Curriculum Can and Must Do”**, Office of the Provost, WKU (Aug. 21, 2009).
- **Tutorial “IT-Blackboard Grade Center Training (for new upgrade)**, Institutional Technology (IT), WKU, (Aug. 21, 2009).
- **Seminar, “The Impact of Mathematics Teaching Environment Through Establishing Developing and Maintaining and Sustaining Professional Learning Communities”**, Teachers Assisting Students to Excel in Math-MSP, National Science Foundation, Washington D.C. (Jan. 27, 2009).
- **MSP Learning Network conference, National Science Foundation**, Washington D.C. (Jan. 24-27, 2009).
- **Seminar “Five Realities of Math/Science Today” by Arthur Levine**, National Science Foundation, Washington D.C. (Jan. 26, 2009).
- **Seminar “Supporting and Evaluating Professional Collaboration Among Secondary Mathematics and Science Teachers”**, Project Pathways-MSP, National Science Foundation, Washington D.C. (Jan. 26, 2009)

Professional Memberships:

- Human Anatomy and Physiology Society (HAPS)
- National Science Teacher Association (NSTA)
- The Society for College Science Teaching (SCST)
- Kentucky Academy of Science (KAS)
- American Society for Microbiology/KY-TN branch

Student Engagement/ Mentoring/Supervision:

- Pamela Tackett, Internship in Medical Technology, Owensboro Medical Health Healthpark, Owensboro, KY May 19-June 5, 2015.
- Kathryn Thompson, Dental School Committee, Western Kentucky University. (May-June 2015)
- Rebecca Garrison, Honor’s Thesis Advisor. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology Courses”. Defended May 1, 2015 (passed).
- Rebecca Garrison, Western Kentucky Student Research Conference, poster presentation. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology courses. March 29, 2015.
- Tim Maniere, Biology 369 Teaching Project. Teaching Assistant in Human Anatomy and Physiology. Spring 2015.
- Supervised Anatomy and Physiology Lab Instruction:
 - Fall 2013: Five undergraduate students, two graduate Teaching Assistants (TAs), and two Instructors

- Spring 2014: Three graduate Teaching Assistants (TAs), four Instructors and four undergraduate students.
 - Fall 2014: Three undergraduate TAs, three graduate TAs, and three instructors.
 - Spring 2015: Three undergraduate TAs, three graduate TAs, and three instructors
- Ka Wang Li, Second Reader Honor's Thesis. Title: Quality Change and Thermal Inactivation of *Escherchia coli O157:H7* in Nonintact Beef and Veal Patties by Double Pan Broiling. Defense: Nov. 19, 2014 (passed).
 - April West, (2013-2016). Master's non-thesis advisor in Biology. Project title: Motivation of Low Achieving High School Biology Students to Learn Science.
 - Ruth Ann Boyd (2013-2016). Master's non-thesis advisor in Biology.
 - Graduate Committee member for Roliera West (Spring/Summer 2014).
 - Stephanie Burba, Amanda Keith & Shelby Overstreet (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.
 - Joye Beth Spinks, Noyce Scholar, Robert Noyce Scholarship Program. Attended regional Noyce Scholarship meeting in Indianapolis and presented a poster, "Promoting Professionalism in Pre-service teachers", (April 2011).
 - Kathryn Crawford and Joy Beth Spinks, Noyce Scholars, Robert Noyce Scholarship Program. National Science Teacher Association, Nashville, TN, "It's Alive! Promoting Critical Thinking on the First Day of Biology Class" (Dec. 3, 2010).
 - Shoap, D., Undergraduate research supervisor, Interdisciplinary Studies Department, "Factors Affecting Teacher Attrition Rates", In-progress (Jan. 28, 2010-May 2010).
 - Ritter, N., Undergraduate Research Supervisor, College of Education and Behavioral Science Department, "Research in Middle Grades Education", Completed (Aug. 26, 2008-March 2009).

My Advisees Accepted into Medical Technology School and Completed Internships

- Thirty-six students have been accepted into Medical Technology School and earned a degree in Medical Technology. Two students were accepted this year.
- Twenty-one students have done internships on Medical Technology at rural hospitals. Host hospitals include: Hardin Memorial Hospital, Elizabethtown, KY, Columbia Logan Memorial Hospital, Russellville, KY, Owensboro Health System, Owensboro, KY, and T.J. Sampson Hospital, Glasgow, KY.