

Kevin Matthew Sargent

Curriculum Vitae

December 2023

Work:

Attn: 103 Rhodes Hall
1 University Plaza
Cape Girardeau, MO 63701
(573) 651-2795
E-mail: ksargent@semo.edu

EDUCATION

Ph.D. Animal Science (Reproductive Physiology)
University of Nebraska-Lincoln; 2016

Dissertation: Divergent vascular endothelial growth factor A (VEGFA) isoform signaling determines spermatogonial stem cell fate.

M.Sc. Animal Science (Reproductive Physiology)
University of Nebraska-Lincoln; 2012

Thesis: Treatment with or Elimination of Vascular Endothelial Growth Factor A (VEGFA) Results in Altered mRNA Abundance of Undifferentiated Spermatogonia Niche, Renewal and Differentiation Factors

B.Sc. Animal Science
University of Missouri-Columbia; 2009

EMPLOYMENT

Southeast Missouri State University (SEMO) – Assistant Professor (Agriculture/Animal Science; 2022 – Present)
Teaching Focus: Agriculture/Animal Sciences/Agribusiness

College of the Ozarks – Assistant Professor of Agriculture (2017 – 2022)
Teaching Focus: Animal Science

COURSES TAUGHT (SEMO)

Animal Science Experiences (20 students). Lab Course. Fall 2022.
Agribusiness Data Analysis (10-20 students). Fall 2022 – Present.
Animal Handling (15 students). Lab Course. Spring 2023.
Animal Immunology (15 students). Fall 2022 – Present. Hybrid, Fall 2022.
Meat Science (15 students). Spring 2023.
Livestock Behavior & Management (20 students). Fall 2022.
Agribusiness Sales (25-30 students). Fall 2022 – Spring 2023.
Agriculture Seminar (30 students). Fall 2023. 50% Blended
Communicating in Agriculture (30 students). Fall 2023. Web.
Companion Animals (20 students). Fall 2023.
Form and Function of Livestock Animals (10 students). Fall 2023. Lab.
Agriculture Internship (25 students). Summer 2023. Web/Facilitator

COURSES TAUGHT (COLLEGE OF THE OZARKS)

Animal Science (30 - 40 students). Fall/Spring (2018 – 2022). Hybrid (including labs) Spring 2020

Anatomy and Physiology of Domestic Livestock (10 - 20 students). Spring (2018 – 2022). Hybrid (including labs) Spring 2020

Animal Health (20 - 30 students). Spring (2018 – 2022). Hybrid Spring 2020

Applied Animal Nutrition (5-10 students). Fall (2018 – 2021). Offered as Independent Study Fall 2019 and 2021.

Principles of Animal Nutrition (formerly Feeds and Feeding) (20 - 25 students). Fall (2017 – 2021)

Animal Breeding (15-30 students). Fall Odd (2017 – 2021)

Monogastric Livestock Management (20 - 25 students). Spring Odd (2019 – 2021). Offered as Independent Study Spring 2022 (2 students)

Reproductive Physiology (20 students). Fall (2021 Male Reproductive Anatomy/Spermatogenesis unit and lab)

Meats (10-15 students). Fall Odd (2017)

Genetics of Animals and Plants (15 - 20 students). Fall (2017 – 2021)

Ruminant Livestock Management (20 - 25 students). Spring Even (2020 – 2022). Hybrid Spring 2020

INTERNSHIP/SPECIAL PROBLEMS CLASSES (COLLEGE OF THE OZARKS)

Small-Scale Homestead Internship (1 student). Spring 2022

Equine Management Internship (2 students). Summer 2021

Plant Genetics Laboratory (1 student). Spring 2021

Companion Animals (2 students). Fall 2020

Lodge Management Internship (1 student). Summer 2020

Horticultural Internship (1 student). Summer 2020

Biotechnology in Agriculture (1 student). Spring 2020

Mixed Practice Veterinary Internship (1 student). Summer 2019

Animal Science Lab Curriculum and Instruction (1 student). Spring 2019

TEACHING EXPERIENCE (Graduate School)

Endocrinology (approx. 20 students)

Graduate Teaching Assistant (TA). University of Nebraska-Lincoln (UNL) 2012 – 2014.

Animal Physiology I (approx. 30 students)

Lab TA. UNL, 2011. Guest lecturer. 2014.

Animal Physiology II (approx. 30 students)

Lab TA. UNL, 2011.

Anatomy and Physiology (approx. 30 students)

Lab TA. UNL, 2010.

Physiology and Management of Reproduction (approx. 30 students)

Lab Assistant. UNL, 2009 – 2013.

Horse Production (approx. 20 students)

Lab TA. University of Missouri-Columbia, 2009.

Freshman Interest Group Proseminar (approx. 15 students)

Peer Advisor Instructor. University of Missouri-Columbia, Agriculture 2006; Pre-Vet 2007 – 2008.

RESEARCH EXPERIENCE

Manager. Animal Science Laboratory. Agriculture Department, College of the Ozarks; Point Lookout, MO. Designed and/or supported teaching-based research opportunities across

multiple courses: feed processing and *in vitro/in situ* digestibility trials, soil microbe cultures, hydroponics, extraction of nucleic acids from animal and plant samples, and others.

Technician. Reproductive Physiology Laboratory, Department of Animal Science, University of Nebraska-Lincoln; Lincoln, NE. Employer: Dr. Andrea S. Cupp. Emphasis on biology of fertility/infertility and spermatogonial stem cell maintenance in murine testes; maintenance of mouse colony. 2017 – 2017.

Graduate Research Assistant. Reproductive Physiology Laboratory, Department of Animal Science, University of Nebraska-Lincoln; Lincoln, NE. Graduate Assistant Mentor: Dr. Andrea S. Cupp. Emphasis on biology of fertility/infertility and spermatogonial stem cell maintenance in murine testes. 2009 – 2016.

Undergraduate Research Assistant. Department of Animal Science, University of Missouri-Columbia; Columbia, MO. Undergraduate Assistant Mentor: Dr. Donald E. Spiers. Monitored romosinuano steers under heat stress conditions and maintenance of rat colony. 2008 – 2009.

Undergraduate Research Assistant. Department of Animal Science, University of Missouri-Columbia. Undergraduate Assistant Mentor: Dr. James E. Williams. Collected ambient, core and surface temperatures of Holstein cows; monitored intake of dried distillers grains with Tasco feed additive in total mixed ration; managed schedules; assessed body condition score. 2008.

Undergraduate Research Assistant. College of Veterinary Medicine, University of Missouri-Columbia. Undergraduate Assistant Mentor: Dr. Munashe Chigerwe, DVM. Assisted with dairy cows and calves to monitor calving, lactation, and blood counts. 2006.

PUBLICATIONS

1. **KM Sargent**, N Lu, WE Pohlmeier, AF Summers, ML Bremer, AS Cupp. Transient treatment of vascular endothelial growth factor A (VEGFA) isoforms *in vivo* alters mRNA abundance of genes that regulate undifferentiated spermatogonia and reduces ID4-positive spermatogonia in male rats. (In Preparation for *PLoS One*)
2. **KM Sargent**, JR Essink, ML Bremer, WE Pohlmeier, AS Cupp. Neuropilin-1 (NRP-1) loss in mouse testes reduces fertility and alters expression of genes necessary spermatogonial stem cell (SSC) maintenance and cell survival. (In preparation for *Endocrinology*)
3. Mohamed A. Abedal-Majed, Mohannad Abuajamieh, Mohmmad Al-Qaisi, Anas Abdelqader, **Kevin M. Sargent**, Hosam H. Titi, Mufeed A. Alnimer, Ahmad I. Shamoun, and Andrea, S. Cupp. Sheep with Ovarian Androgen Excess have Fibrosis and Follicular Arrest with Increased mRNA Abundance for Steroidogenic Enzymes and Gonadotropin Receptors. *J. An. Sci.* 2023. 101. PMID: 37061806
4. MA Abedal-Majed, SG Kurz, SA Springman, AK McNeel, HC Freetly, V Largen, M Magamage, **KM Sargent**, JR Wood, RA Cushman, AS Cupp. Vascular endothelial growth factor A isoforms modulate follicle development independent of diet in peripubertal heifers through diverse signal transduction pathways. *Biol. Reprod.* 2020. 102(3):680-692. PMID: 31723977
5. **KM Sargent**, DT Clopton, N Lu, WE Pohlmeier and AS Cupp. VEGFA Splicing: Divergent Isoforms Regulate Spermatogonial Stem Cell Maintenance. *Cell Tissue Res.* 2016. 363(1):31-35. PMID: 26553653
6. **KM Sargent**, RM McFee, R Spuri Gomes and AS Cupp. VEGFA: Just one of multiple mechanisms for sex-specific vascular development within the testis? *J Endocrinol.* 2015. 227(2):31-50. PMID: 26562337
7. **KM Sargent**, N Lu, DT Clopton, WE Pohlmeier, VM Brauer, N Ferrara, DW Silversides, AS Cupp. Loss of vascular endothelial growth factor A (VEGFA) isoforms in granulosa cells

using *pDmrt-1-Cre* or *Amhr2-Cre* reduces fertility by arresting follicular development and by reducing litter size in female mice. *PLoS One*. 2015. 10(2):e0116332. PMID: 25658474

8. AF Summers, WE Pohlmeier, **KM Sargent**, BD Cole, RJ Vinton, SG Kurz, RM McFee, RA Cushman, AS Cupp, JR Wood. Altered theca gene expression and ovarian follicular development in cows with follicular fluid androgen excess. *PLoS One*. 2014. 9(10): e110683. PMID: 25330369
9. N Lu, **KM Sargent**, DT Clopton, WE Pohlmeier, VM Brauer, RM McFee, JS Weber, N Ferrara, DW Silversides, AS Cupp. Loss of vascular endothelial growth factor A (VEGFA) isoforms in the testes of male mice causes subfertility, reduces sperm numbers and alters expression of genes that regulate undifferentiated spermatogonia. *Endocrinology*. 2013. 154(12):4790-802. PMID: 24169552
10. LB Pompeu, JE Williams, DE Spiers, RL Weaver, MR Ellersieck, **KM Sargent**, NP Feyerabend, HL Vellios, and F Evans. Effect of *Ascophyllum nodosum* on alleviation of heat stress in dairy cows. *Prof An Sci*. 2011. 27:181-189.

DEPARTMENTAL PUBLICATIONS

1. Michael Aide, Samantha Siemers Indi Braden, Sven Svenson, Shakirah Nakasagga, **Kevin Sargent**, Miriam Snider, and Marissa Wilson. Managing Prior Converted Hydric Soils to Support Agriculture Production and Maintain Ecosystem Services: A Dedicated Outreach to the Agriculture Community. *Wetlands - New Perspectives* (submitted book chapter).
2. Michael Aide, Indi Braden, Shakirah Nakasagga, **Kevin Sargent**, Samantha Siemers, Miriam Snider, Marissa Wilson. Selenium Concentrations in Southeastern Missouri Soils and Its Impact on Livestock Nutrition. *Agri Sci*. 2022. 13: 1363-1378.
3. AF Summers, WE Pohlmeier, **KM Sargent**, RM McFee, SG Kurz, RA Cushman, JR Wood, AS Cupp. Androgen Excess in Beef Cows Results in Altered Theca Cell Gene Expression and Fertility. Nebraska Beef Report 2014.
4. N Lu, JE Smith, VM Brauer, AF Summers, WE Pohlmeier, KA Beavers, RM McFee, **KM Sargent**, JG Kerl, RA Cushman, AS Cupp, JR Wood. Oocyte mRNA and Follicle Androgen Levels Associated with Fertility. Nebraska Beef Report 2012.
5. AS Cupp, JR Wood, RM McFee, RG Slattery, KA Beavers, WE Pohlmeier, **KM Sargent**, Ningxia Lu, JE Smith, JG Kerl, VM Brauer, AF Summers, SP Weber, RA Cushman. Granulosa Cell Gene Expression is Altered in Follicles from Cows with Differing Reproductive Longevity. Nebraska Beef Report 2011.

GRANTS AND AWARDS (Internal; Total from College of the Ozarks: \$138,750)

1. **Faculty-Mentored Student Research and Creative Activity Grant (Comparison of Soil Sensor Data to Soil Nutrient and Microorganism Data)**
Requested \$844.83. Fall 2023.
2. **Faculty-Mentored Student Research and Creative Activity Grant (Comparison of Soil Microbe Populations in a Riparian Buffer and Cropland Systems)**
Requested \$793. Fall 2023.
3. **Southeast Missouri State University Funding for Results (FFR) – Implementation Grant (Cross-Disciplinary Genetics and Systems Collaboration in Agriculture and Life Sciences)**
Requested \$44,973 for equipment and supplies to apply genetic principles to the findings from nutrition equipment and to collaborate between disciplines within the Agriculture Department as well as between departments. Not funded. Has generated discussion. Fall 2023.
4. **Southeast Missouri State University Funding for Results (FFR) – Implementation Grant (Crop Processing and Animal Nutrition: From Lab-to-Farm)**

Requested \$40,000 for equipment and supplies for processing feeds and forages, measuring their digestibility and utilizing digestive (rumen) fluid from cattle. Not funded. Fall 2022.

5. **College of the Ozarks Academic Capital Request**
Awarded \$29,875 for IMV ExaPad Mini Ultrasound plus three probes- linear/transrectal, transabdominal, and ovum pickup (OPU)- in collaboration with colleague Matthew Shekels and Direct-Q 3 UV Water System by Millipore. Fall 2021.
6. **College of the Ozarks Academic Capital Request**
Awarded \$9,175 for tissue tearor and fiber analyzer plus supplies. Ultrasound for multiple species was not funded. Spring 2021.
7. **College of the Ozarks Academic Capital Request**
Awarded \$17,000 for biosafety cabinet, -80°C Freezer, and stools for the biosafety cabinet. Fall 2020
8. **College of the Ozarks Academic Capital Request**
Awarded \$3,400 for corrosives and flammables cabinets as well as new lab coats and safety glasses. Spring 2020.
9. **College of the Ozarks Academic Capital Request**
Awarded \$27,300 for a vacuum aspiration system, six new upright microscopes, one inverted microscope, one upright scope with a camera and tablet screen, nanodrop spectrophotometer, and small benchtop refrigerator and -20°C freezer. Fall 2019.
10. **College of the Ozarks Associates Grant**
Proposed \$4100 for six new stereo microscopes, one microscope with attached camera and tablet for demonstration, and an inverted microscope for observing cellular health. Not funded. August 2019.
11. **College of the Ozarks Associates Grant**
Proposed \$8200 for a NanoDrop Spectrophotometer for quantification of DNA and RNA for the Animal Science Lab. Not funded. August 2019.
12. **College of the Ozarks Work College Consortium Grant**
Proposed \$2800 wireless ultrasound probe for use in diagnosing pregnancy in hogs. Not funded. Lead PI. Co-authored with Hog Farm Manager. August 2019.
13. **College of the Ozarks Academic Capital Request**
Awarded \$11,900 for an autoclave, new glassware, Pipet-Aid and serological pipets for cell culture and two small centrifuges for use in the Animal Science Lab and to collaborate with the Crops and Horticulture Labs. Spring 2019.
14. **College of the Ozarks Academic Capital Request**
Awarded \$15,000 for Bio-Rad CFX and supplies for genetic analysis in Animal Science Lab, Crops and Horticulture Labs. Fall 2018.
15. **College of the Ozarks Academic Capital Request**
Awarded \$13,500 for proposals for Ankom Daisy II feed incubator, drying oven and accessories; Rainin pipetors; gel electrophoresis and imaging kit; and electronic balance for primary use in Animal Science Lab and shared with Crops and Horticulture Labs. Spring 2018.
16. **College of the Ozarks Academic Capital Request**
Awarded almost \$11,600 for proposals for fetal pigs, dissecting pans and kits, electrocardiograph and equipment, spirometry equipment, water bath and cell culture incubator for Animal Science Lab. Fall 2017.

EXTERNAL GRANTS AND AWARDS

1. **Nebraska Department of Health and Human Services (NDHHS)**

Mechanisms of VEGFA isoforms on germ stem cells (July 1, 2015-June 30, 2016). Lead PI – AS Cupp (authored primarily by **KM Sargent**). \$87,400 (this grant paid my stipend from July 2015- June 2016). *5 of 10 were funded.*

2. **Nebraska Department of Health and Human Services (NDHHS)**

Purification and proliferation of mouse spermatogonial stem cells (July 1, 2016-June 20, 2017) Lead PI – AS Cupp (contributions made by **KM Sargent**); collaborating PI – Yuguo Lei. \$110,000 (this grant paid my stipend until graduation in 2016). *4 of 11 were funded.*

AWARDS AND HONORS

Representative from IDEXX Laboratories in Columbia, MO, presented new lab mastitis tests to my students in Spring 2022 and commented how they were the best trained Animal Science students he had encountered at College of the Ozarks “Best Teacher Award”- a faux Oscar statuette given to me by my Fall 2021 introductory Animal Science class

Referenced in the article [Cows, Kombucha, and Data Collection: Taking College Chemistry Labs to the Next Level](#) published by Dr. Jerry Easdon (Organic Chemistry/Biochemistry, emeritus) in collaboration with Vernier, 2021

2020 AR-CURE (Arkansas Course-Based Undergraduate Research Experience) Hosted by Ouachita Baptist University, Summer 2020. Web.

Molecular Mechanisms of Disease Annual Retreat Poster Competition Winner; UNL Department of Biochemistry, 2017.

2016 Gamma Sigma Delta International Foundation Graduate Scholarship Recipient (nominated following Outstanding Graduate Student Award and judged against all other chapters, \$500).

Larry Ewing Memorial Trainee Travel Fund award (\$120). Society for the Study of Reproduction (SSR) Annual Meeting; San Diego, CA 2016.

Young Scholar Award. American Society of Animal Science (ASAS) Midwest Section, 2016.

Outstanding Graduate Student. *Gamma Sigma Delta*, Nebraska Chapter, 2015.

Larry Ewing Memorial Trainee Travel Fund award (\$200). SSR; San Juan, Puerto Rico, 2015.

Graduate Student Conference Travel Grant (\$1500). University of Nebraska-Lincoln (UNL), Department of Animal Science; Lincoln, NE, 2014.

Larry Ewing Memorial Trainee Travel Fund award (\$250). SSR; Grand Rapids, MI, 2014.

Larry Ewing Memorial Trainee Travel Fund award (\$230). SSR; Montreal, Quebec, Canada, 2013.

Larry Ewing Memorial Trainee Travel Fund award (\$230). SSR; State College, PA, 2012.

Widaman Trust Distinguished Graduate Assistant Award (\$500). UNL Department of Animal Science; 2012.

Distinguished Thesis Award Nominee. UNL Department of Animal Science; 2012.

Arthaud Memorial Travel Scholarship. UNL, Department of Animal Science; 2011.

Whitmore Memorial Travel Fellowship. UNL, Department of Animal Science; 2011.

Top 10 Senior. University of Missouri-Columbia, Department of Animal Science; 2009.

Wurdack Scholarship. University of Missouri-Columbia; 2005-2007.

Curator’s Award. University of Missouri-Columbia; 2005-2007.

Bright Flight Scholar. State of Missouri, 2005-2009.

INVITED TALKS

Kevin M. Sargent. Signaling of divergent vascular endothelial growth factor A (VEGFA) isoforms may determine spermatogonial stem cell fate. University of Central Missouri Biology Seminar, February 28th, 2020 (Warrensburg, MO).

PLATFORM PRESENTATIONS

1. **Kevin M. Sargent**, Renata Spuri Gomes, John R. Essink, Scott G. Kurz, William E. Pohlmeier, Napoleone Ferrara, Gerrit J. Bouma, Derek J. McLean, and Andrea S. Cupp. Sertoli cell-specific elimination of *Vegfa* impairs spermatogonial stem cell (SSC) maintenance and reduces fertility in male mice. The 13th Annual Gilbert S. Greenwald Symposium on Reproduction, September 23rd, 2016 (Kansas City, KS).
2. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, Scott G. Kurz, and Andrea S. Cupp. Divergent VEGFA signaling determines spermatogonial stem cell fate. ASAS Midwestern Section Meeting, March 2016 (Des Moines, IA).
3. **Kevin M. Sargent**, Ningxia Lu, Debra T. Clopton, William E. Pohlmeier, Napoleone Ferrara, David W. Silversides, and Andrea S. Cupp. Cell-specific elimination of *Vegfa* in mouse ovaries reduces follicle development and fertility. UNL Molecular Mechanisms of Disease Works in Progress, September 2014.
4. **Kevin M. Sargent**, Ningxia Lu, Debra T. Clopton, William E. Pohlmeier, Napoleone Ferrara, David W. Silversides, and Andrea S. Cupp. Loss of vascular endothelial growth factor A (VEGFA) isoforms in granulosa cells using *pDmrt-1-Cre* reduces fertility by arresting follicular development and by reducing ovulation rate and litter size in female mice. UNL Molecular Mechanisms of Disease Retreat, August 2014.
5. **Kevin M Sargent**, Ningxia Lu, William E Pohlmeier, Meredith L Bremer, Adam F Summers and Andrea S Cupp. Transient treatment of VEGFA isoforms *in vivo* affects testis composition and mRNA abundance of genes that regulate self-renewal of undifferentiated spermatogonia and survival in perinatal rat testes. SSR Annual Meeting, 2014 (Grand Rapids, MI)- Male Reproductive System: Function & Dysfunction session (abstract #87).
6. **Kevin M. Sargent**, Meredith L. Bremer, William E. Pohlmeier, Vanessa M. Brauer, Andrea S. Cupp. Neuropilin-1 (NRP-1) loss in Sertoli cells reduces male fertility and alters expression of genes necessary for undifferentiated spermatogonia self-renewal, differentiation and cell survival. UNL Molecular Mechanisms of Disease Retreat, 2013.
7. **Kevin M Sargent**, Meredith L Bremer, William E Pohlmeier, Vanessa M Brauer, Andrea S Cupp. Neuropilin-1 (NRP-1) loss in Sertoli cells increases testis weight and alters expression of genes necessary for undifferentiated spermatogonia self-renewal, differentiation and cell survival. SSR Annual Meeting, 2012 (State College, PA)- Dynamics of Testicular Function module: Spermatogonial Stem Cell Niche session (abstract #92).
8. **Kevin M Sargent**, Ningxia Lu, William E Pohlmeier, Vanessa M Brauer, Napoleon Ferrara, David Silversides and Andrea S Cupp. Vascular Endothelial Growth Factor A (VEGFA) loss using *pDMRT-1-Cre* and Neuropillin-1 (NRP-1) loss in granulosa cells and female reproductive tract reduces ovarian size, antral follicle numbers and estrogen concentrations. 3rd Annual Rocky Mountain Reproductive Sciences Symposium, 2010 (Fort Collins, CO).

ABSTRACTS (CONFERENCE TALKS AND POSTERS)

1. Kerri A. Bochantin, Adam F. Summers, William E. Pohlmeier, **Kevin M. Sargent**, Scott G. Kurz, Sarah M. Romereim, Oluremi Daudu, Renee M. McFee, Robert A. Cushman, John S. Davis, Andrea S. Cupp, and Jennifer R. Wood. Microarray Analysis Predicts Differentially Expressed Genes in Theca Cells From Cows with High Intrafollicular Androstenedione are Regulated by ESR1 and VEGFA Signaling and Increased Mrna Stability. SSR Annual Meeting, 2018 (New Orleans, LA) (abstract #104), poster.

2. S. A. Springman, M. A. Abedal-Majed, M. L. Hart, V. Largen, M. P. S. Magamage, S. G. Kurz, **K. M. Sargent**, J. Bergman, R. M. McFee, R. A. Cushman, J. S. Davis, J. R. Wood, and A. S. Cupp. Ovarian Cortex from High A4 Cows Secrete Excess Steroid Hormones Contributing to Arrested Follicle Development, Increased Oxidative Stress and Fibrosis Which can be Rescued by Angiogenic VEGFA165. SSR Annual Meeting, 2018 (New Orleans, LA) (abstract #506), poster.
3. Mohamed A. Abedal-Majed, Mariah L. Hart, Valerie Largen, Manjula P.S. Magamage, Scott G. Kurz, **Kevin M. Sargent**, Jeffrey Bergman, Renee M. McFee, Robert A. Cushman, John S. Davis, Jennifer R Wood, Andrea S. Cupp. Ovarian Cortex from High A4 Cows Secretes Excess A4, and Exhibits Increased Oxidative Stress, Macrophage Markers and Arrested Follicle Development Which can be Partially Rescued by Angiogenic VEGFA. SSR Annual Meeting, 2017 (Washington, D.C.) (abstract #385), poster.
4. **Kevin M. Sargent**, John R. Essink, Meredith L. Cable, William E. Pohlmeier, and Andrea S. Cupp. Loss of neuropilin-1 impairs VEGFA angiogenic signaling and may regulate spermatogonial stem cell fate. UNL Molecular Mechanisms of Disease Retreat, April 2017, poster.
5. **Kevin M. Sargent**, Renata Spuri Gomes, John R. Essink, Scott G. Kurz, William E. Pohlmeier, Napoleone Ferrara, Gerrit J. Bouma, Derek J. McLean, and Andrea S. Cupp. Sertoli cell-specific elimination of *Vegfa* impairs spermatogonial stem cell (SSC) maintenance and reduces fertility in male mice. The 13th Annual Gilbert S. Greenwald Symposium on Reproduction, September 23rd, 2016 (Kansas City, KS) (abstract #26)- poster.
6. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, Scott G. Kurz, and Andrea S. Cupp. Loss of neuropilin-1 impairs VEGFA angiogenic signaling and alters the expression of spermatogonial stem cell maintenance markers. SSR Annual Meeting, 2016 (San Diego, CA) (abstract #417/447), poster.
7. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, and Andrea S. Cupp. Loss of neuropilin-1 impairs VEGFA angiogenic signaling and alters the expression of spermatogonial stem cell maintenance markers. University of Nebraska Regenerative Medicine Symposium, April 2016, poster.
8. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, Scott G. Kurz and Andrea S. Cupp. Loss of neuropilin-1 impairs VEGFA angiogenic signaling and alters the expression of spermatogonial stem cell maintenance markers. UNL Research Fair, April 2016, poster.
9. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, and Andrea S. Cupp. Loss of neuropilin-1 impairs VEGFA angiogenic signaling and alters the expression of spermatogonial stem cell maintenance markers. UNL Molecular Mechanisms of Disease Retreat, April 2016, poster.
10. **Kevin M. Sargent**, John R. Essink, Meredith L. Bremer, William E. Pohlmeier, Melissa M. Laughlin, and Andrea S. Cupp. Divergent VEGFA signaling determines spermatogonial stem cell fate. 12th Annual Gilbert S. Greenwald Symposium on Reproduction, 2015 (Kansas City, KS), poster.
11. **Kevin M. Sargent**, Renata Spuri Gomes, John R. Essink, Scott G. Kurz, William E. Pohlmeier, Napoleone Ferrara, Gerrit J. Bouma, Derek J. McLean, and Andrea S. Cupp. Sertoli cell-specific elimination of VEGFA impairs spermatogonial stem cell (SSC) maintenance and reduces fertility in male mice. SSR Annual Meeting, 2015 (San Juan, PR) (abstract #669), poster.
12. **Kevin M. Sargent**, Renata Spuri Gomes, John R. Essink, Scott G. Kurz, William E. Pohlmeier, Napoleone Ferrara, Gerrit J. Bouma, Derek J. McLean, and Andrea S. Cupp. Sertoli cell-specific elimination of VEGFA impairs spermatogonial stem cell (SSC) maintenance and reduces fertility in male mice. UNL Molecular Mechanisms of Disease Retreat, 2015, poster.

13. The effect of neuropilin-1 (NRP-1) loss on spermatogonial stem cell homeostasis. Yueling Ouyang (Lynn), **Kevin M. Sargent**, Scott G. Kurz, Derek J. McLean and Andrea S. Cupp. UNL/NWAFU REU Student Experience, 2014, poster.
14. Adam F Summers, William E Pohlmeier, **Kevin M Sargent**, Scott G Kurz, Renee M McFee, Anthony K McNeel, Robert A Cushman, Jennifer R Wood, Andrea S Cupp. Granulosa Cell Gene Expression Profiling in Cows with Divergent Follicular Fluid Concentrations of Androgens. SSR Annual Meeting, 2014 (Grand Rapids, MI)- Ovary: Follicle Development & Selection Session (abstract #22), platform presentation.
15. **Kevin M. Sargent**, Meredith L. Bremer, William E. Pohlmeier, Vanessa M. Brauer, Andrea S. Cupp. Neuropilin-1 (NRP-1) loss in Sertoli cells reduces male fertility and alters expression of genes necessary for undifferentiated spermatogonia self-renewal, differentiation and cell survival. UNL Molecular Mechanisms of Disease Retreat, 2013, poster.
16. Adam F. Summers, William E. Pohlmeier, **Kevin M. Sargent**, Scott G. Kurz, Renee M. McFee, Robert A. Cushman, Jennifer R. Wood, and Andrea S. Cupp. A Bovine Model for Polycystic Ovary Syndrome. 10th Annual Gilbert S. Greenwald Symposium on Reproduction, 2013 (Kansas City, KS), poster.
17. Adam F Summers, William E Pohlmeier, **Kevin M Sargent**, Scott G Kurz, Renee M McFee, Robert A Cushman, Jennifer R Wood, and Andrea S Cupp. A bovine model for polycystic ovary syndrome. UNL Molecular Mechanisms of Disease Retreat, 2013, poster.
18. Zhe Zhang (Alice), **Kevin M. Sargent**, Renata Spuri Gomes, Scott G. Kurz, and Andrea S. Cupp. The Importance of Histology in Conducting Research on Vascular Endothelial Growth Factor A Effects On Spermatogonial Stem Cell Homeostasis in the Testis. UNL/NWAFU REU Student Experience, 2013, poster.
19. **Kevin M. Sargent**, Ningxia Lu, Debra T. Clopton, William E. Pohlmeier, Vanessa M. Brauer, Renee M. McFee, Napoleone Ferrara, David W. Silversides, and Andrea S. Cupp. Vascular Endothelial Growth Factor A (VEGFA) isoform loss in Granulosa cells using pDMRT-1-Cre arrested follicular development and reduced the number of follicles ovulated and litter size. SSR Annual Meeting, 2013 (Montreal, Quebec, Canada), poster (abstract #601).
20. Adam F Summers, William E Pohlmeier, **Kevin M Sargent**, Scott G Kurz, Renee M McFee, Robert A Cushman, Jennifer R Wood, Andrea S Cupp. A bovine model for polycystic ovary syndrome. SSR Annual Meeting, 2013 (Montreal, Quebec, Canada)- platform presentation- Gonads Module Session I. Ovarian Causes of Female Infertility (abstract #67).
21. Melissa M. Laughlin, **Kevin M. Sargent**, William E. Pohlmeier, Scott G. Kurz, Andrea S. Cupp. Testis morphology after elimination of Neuropilin-1 in Sertoli cells. UNL Research Fair, 2013, UCARE project poster.
22. Adam F Summers, William E Pohlmeier, Vanessa M Brauer, **Kevin M Sargent**, Renee M McFee, Robert A Cushman, Jennifer R Wood, Andrea S Cupp. Bovine females with thecal cell androgen excess result in altered oocyte maternal effect gene abundance. ASAS Midwestern Section Meeting, 2013 (Des Moines, IA)- platform presentation.
23. **Kevin M. Sargent**, Ningxia Lu, William E. Pohlmeier, Shantille G. Kruse, Meredith L. Bremer, and Andrea S. Cupp. Altering the balance of Vascular Endothelial Growth Factor A (VEGFA) isoforms *in vivo* affects mRNA abundance of genes that regulate the self-renewal of undifferentiated spermatogonia and survival, testis morphogenesis, and germ cell numbers in perinatal rat testes. 9th Annual Gilbert S. Greenwald Symposium on Reproduction, 2012 (Kansas City, KS)- poster.
24. **Kevin M Sargent**, Meredith L Bremer, William E Pohlmeier, Vanessa M Brauer, Andrea S Cupp . Neuropilin-1 (NRP-1) loss in Sertoli cells reduces male fertility and alters expression of genes necessary for undifferentiated spermatogonia self-renewal, differentiation and cell survival. UNL Life Sciences Fair, 2012, poster.

25. Molly D Wolfe, Renee M McFee, **Kevin Sargent**, Rachel Slattery, and Andrea S Cupp. Effects of Vascular Endothelial Growth Factor A (VEGFA) isoform treatments on follicle progression in rats. UNL Research Fair, 2012, UCARE project poster.
26. **Kevin M Sargent**, Meredith L Bremer, William E Pohlmeier, Vanessa M Brauer, and Andrea S Cupp. Neuropilin-1 (NRP-1) loss in Sertoli cells reduces expression of genes necessary for undifferentiated spermatogonia niche establishment. 8th Annual Gilbert S. Greenwald Symposium on Reproduction, 2011 (Kansas City, KS), poster.
27. Adam F Summers, Robert A Cushman, Jacqueline E Smith, Bailey Lammers, Renee M McFee, William E Pohlmeier, Vanessa M Brauer, **Kevin M Sargent**, Ningxia Lu, Andrea S Cupp, Jennifer R Wood. Cows with reduced fertility and granulosa cell efficiency have excess androstenedione in follicular fluid, altered theca gene expression and increased maternal effect gene mRNA levels in cumulus-oocyte complexes. Greenwald Symposium on Reproduction, 2011(Kansas City, KS), poster.
28. **Kevin Sargent**, Ningxia Lu, William Pohlmeier, Vanessa Brauer, Renee McFee, Napoleone Ferrara, David Silversides, and Andrea S Cupp. Sertoli and Germ cell Vascular Endothelial Growth Factor A (VEGFA) loss using pDMRT-1 Cre affects testis size and reduces spermatogenesis potentially through altering genes regulating the spermatogonial stem cell niche. SSR Annual Meeting, 2011 (Portland, OR), poster (abstract #567).
29. William E Pohlmeier, **Kevin M Sargent**, Molly Wolfe, Vanessa M Brauer, David O Bates, and Andrea S. Cupp. hVEGFA165b Over-expression Leads to Reduced Ovarian Size and Primordial Follicle Number in Mice. SSR Annual Meeting, 2011(Portland, OR), poster (abstract #669).
30. Adam Summers, Robert Cushman, Jacqueline E Smith, Bailey Lammers, Renee McFee, William Pohlmeier, Vanessa Brauer, **Kevin Sargent**, Ningxia Lu, Andrea S Cupp, and Jennifer R Wood. Females with reduced fertility have excess androstenedione in follicular fluid, altered theca gene expression and increased VEGFA164b, maternal effect, and microRNA processing mRNA levels in cumulus-oocyte complexes. SSR Annual Meeting, 2011 (Portland, OR), poster (abstract #667).
31. Meredith L Bremer, **Kevin M Sargent**, Vanessa M Brauer, William E Pohlmeier, and Andrea S Cupp. The effects of Neuropilin-1 conditional mouse knockouts in male and female reproduction. UNL Research Fair, 2011, UCARE project poster.
32. Bailey Lammers, Adam Summers, **Kevin Sargent**, William Pohlmeier, Jill Kerl, Vanessa Brauer, Robert Cushman, and Andrea Cupp. Altered gene expression in ovarian tissue of females with low fertility suggests that ovarian environment and increased androstenedione affect pregnancy success. UNL Research Fair, 2011, UCARE project poster.
33. **Kevin M Sargent**, Ningxia Lu, William E Pohlmeier, Vanessa M Brauer, Renee McFee, Napoleone Ferrara, David Silversides, and Andrea S Cupp. Sertoli and Germ cell Vascular Endothelial Growth Factor A (VEGFA) loss using pDMRT-1 Cre affects testis size and reduces spermatogenesis potentially through altering genes regulating the spermatogonial stem cell niche. UNL Research Fair, 2011, graduate poster.
34. **Kevin M Sargent**, Ningxia Lu, William E Pohlmeier, Vanessa M Brauer, and Andrea S Cupp. Neuropilin-1 (NRP-1) loss in granulosa cells and female reproductive tract reduces number of antral follicles and alters ovarian morphogenesis. Annual Nebraska Gateway for Nutrigenomics Retreat, 2011, poster.
35. **Kevin M Sargent**, Vanessa M Brauer, Ningxia Lu, William E Pohlmeier, and Andrea S Cupp. Neuropilin-1 (NRP-1) and Vascular Endothelial Growth Factor A (VEGFA) loss in granulosa cells and female reproductive tract reduces ovarian weight, estrogen concentrations and alters ovarian morphology. 7th Annual Gilbert S. Greenwald Symposium on Reproduction, 2010 (Kansas City, KS), poster #23.
36. **Kevin M Sargent**, Ningxia Lu, William E. Pohlmeier, Vanessa M Brauer, and Andrea S Cupp. Neuropillin-1 (NRP-1) loss in granulosa cells and female reproductive tract reduces

ovarian and uterine weight and number of antral follicles. 17th Annual Ovarian Workshop, 2010 (Milwaukee, WI), poster #26.

37. LB Pompeu, JE Williams, DE Spiers, RL Weaver, MR Ellersieck, **KM Sargent**, NP Feyerabend, HL Vellios, F Evans. Effect of Tasco on core body temperature of dairy cows exposed to heat stress. ADSA-CSAS-ASAS Joint Annual Meeting, 2010 (Denver, CO).
38. LB Pompeu, JE Williams, DE Spiers, RL Weaver, MR Ellersieck, **KM Sargent**, NP Feyerabend, HL Vellios, F Evans. Tasco alleviation of heat stress in dairy cows. ADSA-CSAS-ASAS Joint Annual Meeting, 2009 (Montreal, Quebec, Canada).

PROFESSIONAL MEMBERSHIP

Society for the Study of Reproduction

American Society of Animal Science

Gamma Sigma Delta, 2011-Present, *University of Nebraska-Lincoln*; Lincoln, NE.

PROFESSIONAL SERVICE

Journal Reviewer- *Cell and Tissue Research*; 2023

Journal Reviewer- *Theriogenology*; 2022-2023

Journal Reviewer- *Agricultural Science*, 2022

Journal Reviewer- *Frontiers in Oncology*; 2022

Journal Reviewer- *Frontiers in Surgery*; 2022

Journal Reviewer- *Journal of Visual Experimentation (JoVE)*; 2019

Journal Reviewer- *Reproduction*; 2019

Journal Reviewer- *Journal of Endocrinology*; 2016

Journal Reviewer- *Animal Reproduction Science*; 2015

Co-chair- Testis and Male Reproductive Tract 2 platform session, August 2011. Society for the Study of Reproduction; Portland, OR.

DEPARTMENTAL/CAMPUS SERVICE

Academic Distinction Committee Chair – student-focused research regarding forages, rumen physiology, and nutrition

Southeast Missouri State University, 2023 – Present

FFA Field Day – Cannulated Heifer Booth Host/Educator

Southeast Missouri State University, 2023

Faculty Sponsor: Pre-Vet Club

Southeast Missouri State University, 2023 – Present

Graduate Faculty – Southeast Missouri State University (2022-Present)

Giving Day Ambassador (David M. Barton Farm & Research Center)

Southeast Missouri State University, 2023

Assistant Professor of Agriculture Tenure Track Faculty Application Review Committee

Southeast Missouri State University, 2023

Master Advisor Training

Southeast Missouri State University, 2022

Academic Assessment Committee for College of STEM (Agriculture Department Rep.)

Southeast Missouri State University, 2022 – Present

Strategic Action Planning Committee for College of STEM (Agriculture Department Rep.)

Southeast Missouri State University, 2022 – Present

Faculty Senate (Alternate Agriculture Department Representative)

Southeast Missouri State University, 2022 – Present

Faculty Sponsor: Block and Bridle Club

Southeast Missouri State University, 2022 – Present

Supervisor: Agriculture Department Main Office/Laboratories

College of the Ozarks, 2020 – 2022.
Academic Assessment Committee
College of the Ozarks Divisional Representative as well as lead within Agriculture Department, 2018 – 2022.
FFA Workshop
College of the Ozarks Agriculture Department, 2018 – 2020, 2022.
Animal Science Laboratory Manager/Contact
College of the Ozarks, 2017 – Present.
Faculty Advisor for Pre-Veterinary Medicine Club
College of the Ozarks, 2017 – 2022.
Junior STEM Fellows
Led and helped teach a one-day course for 7th and 8th grade students about male and female reproduction (The DNA of Fertility), UNL, 2014.
Junior STEM Fellows
Led and helped teach a one-day course for 7th and 8th grade students about male and female reproduction (The DNA of Fertility), UNL, 2013.
Nebraska Youth Beef Leadership Symposium
Led activities to educate high school students about animal reproduction), UNL Department of Animal Science. 2009, 2010, 2012, 2014.
Leadershape Catalyst Participant, University of Missouri-Columbia; 2008.
Equine Facility Volunteer
University of Missouri-Columbia Department of Animal Science; Spring 2008-Spring 2009.
Training Leader Coordinator
Designed and implemented training curriculum and modules for Student Staff
University of Missouri-Columbia Department of Residential Life; Fall 2008-Spring 2009.
Training Leader
Trained Residential Life Student Staff
University of Missouri-Columbia Department of Residential Life; Fall 2007-Spring 2009.
Peer Advisor
Known as Resident Assistant (RA) elsewhere but involved teaching component
University of Missouri-Columbia Department of Residential Life; Spring 2006-Spring 2009.

STUDENT MENTEES

Yueling Ouyang (Lynn) – North West Agriculture and Forestry University (NWAUFU, China) student in one-month Research Exchange for Undergraduates (REU) in University of Nebraska-Lincoln, Department of Animal Science. The effect of neuropilin-1 (NRP-1) loss on spermatogonial stem cell homeostasis (poster presentation), Summer 2014.
John Essink – student worker - BS Animal Science, expected graduation – May 2017 - University of Nebraska-Lincoln, Department of Animal Science. The effect of Sertoli cell-specific NRP-1- and VEGFA loss on SSC homeostasis, Fall 2013-present.
Zhe Zhang (Alice) – NWAUFU student in REU at University of Nebraska-Lincoln, Department of Animal Science. The Importance of Histology in Conducting Research on Vascular Endothelial Growth Factor A Effects On Spermatogonial Stem Cell Homeostasis in the Testis (poster presentation), Summer 2013.
Melissa (Laughlin) Lusk – volunteer and UCARE student- BS Animal Science May 2015 - University of Nebraska-Lincoln, Department of Animal Science. Testis morphology after elimination of Neuropilin-1 in Sertoli cells (poster presentation), Fall 2011-spring 2013.
Meredith (Bremer) Cable – UCARE Student - BS Animal Science May 2012 - University of Nebraska-Lincoln, Department of Animal Science. The effects of Neuropilin-1 conditional

mouse knockouts in male and female reproduction (poster presentation), Fall 2010-Spring 2012.

COMMUNITY INVOLVEMENT

Membership at Connection Point Church, 2022 – Present

Hosted Petting Zoo with CofO Pre-Vet Club for Homecoming (large and small animals) – Fall 2018 – 2019, 2021

Home Group – 2019 – 2022

Marriage 911 Counseling Course – 2019

Membership at Woodland Hills Family Church, 2018 – 2022

YoungLife Committee; Reeds Spring, MO, 2018

Substitute Pastor (1 Sunday), University of Lutheran Chapel; Lincoln, NE, 2014.

Co-founder of Couples' Small Group, University of Lutheran Chapel; Lincoln, NE, 2011-2015.

Joplin, MO Disaster Relief, Capitol City Christian Church Young Adults Small Group; Lincoln, NE, 2011.

Vacation Bible School Planning Committee/Children's Worship Leader (vocals/choreography), Antelope Park Church of the Brethren; Lincoln, NE, 2011.

Fathers and Families Children's Ministry Events Coordinator, Capitol City Christian Church; Lincoln, NE, 2010.

Food Distribution at First Presbyterian Church, Jacob's Well outreach ministry; Lincoln, NE, 2010 – 2014.

Sunday School Teacher (4- and 5-year-old), Capitol City Christian Church; Lincoln, NE, 2010 – 2011.

Praise Team (clarinet player), Capitol City Christian Church; Lincoln, NE, 2010 – 2011.

Project: Serve Volunteer; Lincoln, NE, 2009.

Early Childhood Children's Ministry Intern, The Crossing Church; Columbia, MO, 2009.

Round Table Discussion Facilitator, Veritas Campus Ministry; Columbia, MO, 2008 – 2009.

Cedar Rapids, IA Flood Relief Volunteer, Veritas Campus Ministry; Columbia, MO, 2008.

Kids Club Team Leader (second graders), The Crossing Church; Columbia, MO, 2008.

Crossing Kids Volunteer (4- and 5-year-olds), The Crossing Church; Columbia, MO, 2008 – 2009.