

CURRICULUM VITAE

NAME

Bruemmer, Jason

ADDRESS

Animal Sciences
College of Agricultural Sciences

Animal Sciences

PHONE

(970) 491-8373

EDUCATION

1996 Ph D, New Mexico State University

1991 MS, Texas A&M University

1987 BS, Texas A&M University

ACADEMIC POSITIONS

1994 - 1996 Graduate Teaching Assistant, New Mexico State University.

OTHER POSITIONS

2013 - Present Associate Director, Colorado State University.

2010 - Present Professor, Colorado State University.

2006 - Present Affiliate Faculty, Texas A&M University.

2002 - 2010 Associate Professor, Colorado State University.

2004 - 2005 Visiting Scientist, Harvard School of Medicine.

1996 - 2002 Assistant Professor, Colorado State University.

1990 - 1993 Lectuer, Manager of Horse Center, Texas A&M University.

1988 - 1990 Assistant Manager of Horse Center, Texas A&M University.

PUBLISHED WORKS

Refereed Journal Articles

Miller, K.E., Whittier, J. C., Peel, R. K., Enns, R. M., Bruemmer, J. E., Umberger, W.J. Case Study: Comparison of Breeding and Marketing Systems for Red Angus Cattle Using an Integrated Computer-Based Spreadsheet. *The Professional Animal Scientist*, 20, 429-436.

da Costa Santos, H. F., Hess, T. M., Splan, R., Bruemmer, J. E. Possible role of microRNA in equine insulin

resistance. *Plos One*.

- Cleys, E., Halleran, J., McWhorter, E., Hergenreder, J., Enriquez, V., daSilveira, J., Bruemmer, J., Winger, Q. A., Bouma, G. J. (2014). Identification of microRNAs in exosomes isolated from serum and umbilical cord blood, as well as placentomes of gestational day 90 pregnant sheep. *Molecular Reproduction and Development*, 81(11), 983-993.
- (2012). Cryopreservation of Cooled Semen and Evaluation of Sperm Holding Media for Potential Use in Equine-Assisted Reproduction Procedures. *Journal of Equine Veterinary Science*, 32, 596-574.
- (2012). Fish eal supplementation increases bovine plasma and luteal tissue omega-3 fatty acid composition. *J Anim Sci*, 90, 771-778.
- (2012). Fish meal supplementation increases bovine plasma and luteal tissue omega-3 fatty acid composition. *J Anim Sci*, 90, 771-778.
- (2012). Kisspeptide in the estrous mare: is it an appropriate ovulation-inducing agent? *Theriogenology*, 78, 1987-1996.
- (2012). Passive transfer of maternal GnRH antibodies does not affect reproductive development in elk (*Cervus elaphus nelsoni*) calves. *Theriogenology*, 78, 830-841.
- (2012). Transcriptional profile of the day 18 endometria from pregnant and non-pregnant mares: Insight into maternal recognition of pregnancy. *Mol Reprod Dev*, 79, 777-796.
- (2011). Recombinant equine luteinizing hormone (reLH) stimulates production of progesterone from murine Leydig, ovine small luteal, and equine granulosa cells. *J Equine Vet Sci*, 31, 103-108.
- (2011). Response of stallions to primary immunization with modified live equine viral arteritis vaccine. *J Equine Vet Sci*, 31, 129-138.
- (2011). Temporal gene expression in equine corpora lutea based on serial biopsies in vivo. *J Anim Sci*, 89, 725-735.
- (2010). Cholesterol-loaded- cyclodextrins and fertility potential of stallions spermatozoa. *Anim Reprod Sci*, 118(4-Feb), 255-64.
- (2010). Progesterone inhibits oxytocin- and prostaglandin F2alpha- stimulated increases in intracellular calcium concentrations in small and large ovine luteal cells. *Biol Reprod*, 82(2), 282-8.
- (2010). Uterine vein infusion of interferon tau (IFNT) extends luteal life span in ewes. *Biol Reprod*, 82(4), 725-35.
- (2010). Zonadhesin D3-polypeptides vary among species but are similar in Equus species capable of interbreeding. *Biol Reprod*, 82(2), 413-21.
- (2009). Buccal mucosal urethroplasty for treatment of recurrent hemospermia in a stallion. *Javma-J Am Vet Med A*, 235, 1212-1215.
- (2008). Peripheral kisspeptide administration elicits an increase in serum FSH in the diestrous mare. *Biol Reprod*, 235, 220-220.
- (2008). Uterine vein infusion of interferon-tau acts systemically to induce ISG15 in the ovine corpus luteum. *Biol Reprod*, 235, 205-205.

- (2007). Distribution of kisspeptin and gnrh immunoreactive neuronal contacts in the preoptic area and hypothalamus of the mare. *Biol Reprod*, 235, 185-185.
- (2007). Progesterone alters membrane cholesterol content and oxytocin signaling in ovine small luteal. *Biol Reprod*, 235, 203-203.
- (2001). Ovarian superstimulatory response and embryo production in mares treated with equine pituitary extract twice daily. *Theriogenology*, 56, 879-887.

Refereed Proceedings or Transactions

- Magee, C., Bruemmer, J. E., Sharp, D., Nett, T. M., Squires, E., Clay, C. (2014). *Kisspeptin has a direct effect on equine gonadotropes*. *Journal of Equine Veterinary Science*.

Non-Refereed Journal Articles

- Householder, D. D., Bruemmer, J. E., Kobza, J. R., Lay, Jr., D. C., Friend, T. H. *Journal of Equine Veterinary Science*, 13(10), 599-602. [http://dx.doi.org/10.1016/S0737-0806\(06\)81534-0](http://dx.doi.org/10.1016/S0737-0806(06)81534-0)
- Demme, K., Lapinskas, S., Webster, M., Baker, D. W., Bruemmer, J. E., Hess, T. M. 113 Effects of collection method and season on fecal egg counts in feral horses. *Journal of Equine Veterinary Science*, 35(5), 431. <http://dx.doi.org/10.1016/j.jevs.2015.03.124>
- Klohonatz, K. M., Bouma, G. J., Bruemmer, J. E. 126 The presence of focal adhesion molecules in equine endometrium during maternal recognition of pregnancy. *Journal of Equine Veterinary Science*, 35(5), 437. <http://dx.doi.org/10.1016/j.jevs.2015.03.138>
- Twenter, H. M., Klohonatz, K. M., Belk, A. D., Bass, L. D., Bouma, G. J., Bruemmer, J. E. 133 Differential miRNA expression from sperm obtained in the different regions of the stallion epididymis. *Journal of Equine Veterinary Science*, 35(5), 440. <http://dx.doi.org/10.1016/j.jevs.2015.03.145>
- da Costa Santos, H. F., Mask, T., Splan, R. K., Hess, T. M., Bruemmer, J. E. 34 Differential circulating microRNA profile in insulin-sensitive vs. insulin-resistant mares. *Journal of Equine Veterinary Science*, 35(5), 398. <http://dx.doi.org/10.1016/j.jevs.2015.03.043>
- Klohonatz, K. M., Nulton, L. C., Bouma, G. J., Bruemmer, J. E. 81 The effects of a prostaglandin transport inhibitor (DIDS) on delaying diestrus in non-pregnant mares. *Journal of Equine Veterinary Science*, 35(5), 418-419. <http://dx.doi.org/10.1016/j.jevs.2015.03.092>
- Belk, A. D., Klohonatz, K. M., Bouma, G. J., Bruemmer, J. E. 9 An investigation into miRNAs in the equine epididymis as a potential regulator of spermatozoal maturation. *Journal of Equine Veterinary Science*, 35(5), 386. <http://dx.doi.org/10.1016/j.jevs.2015.03.016>
- Squires, E. L. All Good Things Must Come to an End. *Journal of Equine Veterinary Science*, 28(9), 498. <http://dx.doi.org/10.1016/j.jevs.2008.07.022>
- Brooks, R. M., Denniston, D. J., Bruemmer, J. E., Nett, T. M., McCue, P. M. Development of a direct (non-extracted) enzyme immunoassay for measurement of serum progesterone in mares. *Journal of Equine Veterinary Science*, 33(5), 371. <http://dx.doi.org/10.1016/j.jevs.2013.03.178>
- Denniston, D. J., Crabb, J. J., Bruemmer, J. E., Squires, E. L. Effects of a gonadotropin-releasing hormone antagonist and altrenogest on luteinizing hormone concentration and ovulation in the mare. *Journal of Equine Veterinary Science*, 26(3), 95-101. <http://dx.doi.org/10.1016/j.jevs.2006.01.004>
- Klohonatz, K. K., Bouma, G. J., Bruemmer, J. E. Equine endometrial gene expression during maternal

- recognition of pregnancy. *Journal of Equine Veterinary Science*, 33(5), 372. <http://dx.doi.org/10.1016/j.jevs.2013.03.116>
- Cameron, A., da Silveira, J. C., Bouma, G. J., Bruemmer, J. E. Evaluation of Exosomes Containing miRNA as an Indicator of Pregnancy Status in the Mare. *Journal of Equine Veterinary Science*, 31(5), 314-315. <http://dx.doi.org/10.1016/j.jevs.2011.03.148>
- Magee, C., Bruemmer, J. E., Sharp, D. C., Nett, T. M., Squires, E. L., Clay, C. Kisspeptin has a direct effect on equine gonadotropes. *Journal of Equine Veterinary Science*, 34(1), 111. <http://dx.doi.org/10.1016/j.jevs.2013.10.076>
- Bruemmer, J. E., Klohonatz, K. M., da Silveira, J. C., Cameron, A., Canovas, A., Medrano, J., Islas-Trejo, A., Bouma, G. J. Next-generation sequencing of small non-coding RNAs (ncRNA) in equine endometrial tissue during maternal recognition of pregnancy (MRP). *Journal of Equine Veterinary Science*, 34(1), 189. <http://dx.doi.org/10.1016/j.jevs.2013.10.139>
- Bott*, R. C., Schwanzenberger, S. M., Bruemmer, J. E., Arevalo, J. A. Arreguin, Niswender, G. D. Recombinant Equine Luteinizing Hormone (reLH) Stimulates Production of Progesterone from Murine Leydig, Equine Granulosa, and Ovine Small Luteal Cells. *Journal of Equine Veterinary Science*, 29(5), 343-344. <http://dx.doi.org/10.1016/j.jevs.2009.04.051>
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- Summers-Lawyer, K. A., Go, Y. Y., Lu, Z., Timoney, P. J., McCue, P. M., Zhang, J., Shuck, K. M., Bruemmer, J. E. Response of Stallions to Primary Immunization with a Modified Live Equine Viral Arteritis Vaccine. *Journal of Equine Veterinary Science*, 31(3), 129-138. <http://dx.doi.org/10.1016/j.jevs.2011.01.002>
- Table of contents. *Journal of Equine Veterinary Science*, 26(3), 81. [http://dx.doi.org/10.1016/S0737-0806\(06\)00087-6](http://dx.doi.org/10.1016/S0737-0806(06)00087-6)
- Gee*, E. K., Bruemmer, J. E., Siciliano, P. D., Morel, P. C. H., Engle, T. E., Squires, E. L. The Influence of Dietary Vitamin E on Serum Vitamin E and Fatty Acids, and Spermatozoa Fatty Acids in Stallions. *Journal of Equine Veterinary Science*, 29(5), 334-336. <http://dx.doi.org/10.1016/j.jevs.2009.04.043>
- Krull*, A. L., Bouma, G. J., Hansen, T., Bruemmer, J. E. Transcriptional profile of day 18 pregnant and non-pregnant equine endometria: Insight into maternal recognition of pregnancy. *Journal of Equine Veterinary Science*, 29(5), 325-326. <http://dx.doi.org/10.1016/j.jevs.2009.04.034>
- Romero, J. J., Antoniazzi, A. Q., Nett, T. M., Ashley, R. L., Webb, B. T., Smirnova, N. P., Bott, R. C., Bruemmer, J. E., Bazer, F. W., Anthony, R. V., Hansen, T. (2015). Temporal Release, Paracrine and Endocrine Actions of Ovine Conceptus-Derived Interferon-Tau During Early Pregnancy. *Biology of reproduction*, 93(6), 146.
- Mask, T., Schoenecker, K. A., Kane, A. J., Ransom, J. I., Bruemmer, J. E. (2015). Serum antibody immunoreactivity to equine zona protein after SpayVac vaccination. *Theriogenology*, 84(2), 261-7.
- Klohonatz, K. M., Hess, A. M., Hansen, T., Squires, E. L., Bouma, G. J., Bruemmer, J. E. (2015). Equine endometrial gene expression changes during and after maternal recognition of pregnancy. *Journal of animal science*, 93(7), 3364-76.
- Cleys, E. R., Halleran, J. L., Enriquez, V. A., da Silveira, J. C., West, R. C., Winger, Q. A., Anthony, R. V., Bruemmer, J. E., Clay, C., Bouma, G. J. (2015). Androgen receptor and histone lysine demethylases in ovine

placenta. *PloS one*, 10(2), e0117472.

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- Cleys, E. R., Halleran, J. L., McWhorter, E. S., Hergenreder, J. R., Enriquez, V. A., da Silveira, J. C., Bruemmer, J. E., Winger, Q. A., Bouma, G. J. (2014). Identification of microRNAs in exosomes isolated from serum and umbilical cord blood, as well as placentomes of gestational day 90 pregnant sheep. *Molecular reproduction and development*, 81(11), 983-93.
- Ransom, J. I., Hobbs, N. T., Bruemmer, J. E. (2013). Contraception can lead to trophic asynchrony between birth pulse and resources. *PloS one*, 8(1), e54972.
- Magee, C., Bruemmer, J. E., Nett, T. M., Squires, E. L., Clay, C. (2012). Kisspeptide in the estrous mare: is it an appropriate ovulation-inducing agent? *Theriogenology*, 78(9), 1987-96.
- Patterson, A. L., Squires, E. L., Hansen, T., Bouma, G. J., Bruemmer, J. E. (2012). Gene profiling of inflammatory genes in day 18 endometria from pregnant and non-pregnant mares. *Molecular reproduction and development*, 79(11), 777-84.
- Powers, J., Baker, D. L., Ackerman, M. G., Bruemmer, J. E., Spraker, T. R., Conner, M. M., Nett, T. M. (2012). Passive transfer of maternal GnRH antibodies does not affect reproductive development in elk (*Cervus elaphus nelsoni*) calves. *Theriogenology*, 78(4), 830-41.
- Powers, J., Baker, D. L., Ackerman, M. G., Bruemmer, J. E., Spraker, T. R., Conner, M. M., Nett, T. M. (2012). Passive transfer of maternal GnRH antibodies does not affect reproductive development in elk (*Cervus elaphus nelsoni*) calves. *Theriogenology*, 78(4), 830-41.
- White, N. R., Burns, P. D., Cheatham, R. D., Romero, R., Nozykowski, J. P., Bruemmer, J. E., Engle, T. E. (2012). Fish meal supplementation increases bovine plasma and luteal tissue omega-3 fatty acid composition. *Journal of animal science*, 90(3), 771-8.
- Slough, T. L., Rispoli, L. A., Carnevale, E., Niswender, G. D., Bruemmer, J. E. (2011). Temporal gene expression in equine corpora lutea based on serial biopsies in vivo. *Journal of animal science*, 89(2), 389-96.
- Spizziri, B. E., Fox, M. H., Bruemmer, J. E., Squires, E. L., Graham, J. K. (2010). Cholesterol-loaded-cyclodextrins and fertility potential of stallions spermatozoa. *Animal reproduction science*, 118(2-4), 255-64.
- Bott, R. C., Ashley, R. L., Henkes, L. E., Antoniazzi, A. Q., Bruemmer, J. E., Niswender, G. D., Bazer, F. W., Spencer, T. E., Smirnova, N. P., Anthony, R. V., Hansen, T. (2010). Uterine vein infusion of interferon tau (IFNT) extends luteal life span in ewes. *Biology of reproduction*, 82(4), 725-35.
- Davis, T. L., Bott, R. C., Slough, T. L., Bruemmer, J. E., Niswender, G. D. (2010). Progesterone inhibits oxytocin- and prostaglandin F₂α-stimulated increases in intracellular calcium concentrations in small and large ovine luteal cells. *Biology of reproduction*, 82(2), 282-8.
- Tardif, S., Brady, H. A., Breazeale, K. R., Bi, M., Thompson, L., Bruemmer, J. E., Bailey, L., Hardy, D. M. (2010). Zonadhesin D3-polypeptides vary among species but are similar in Equus species capable of interbreeding. *Biology of reproduction*, 82(2), 413-21.
- Hackett, E. S., Bruemmer, J. E., Hendrickson, D. A., McCue, P. M. (2009). Buccal mucosal urethroplasty for

- treatment of recurrent hemospermia in a stallion. *Journal of the American Veterinary Medical Association*, 235(10), 1212-5.
- Magee, C., Foradori, C. D., Bruemmer, J. E., Arreguin-Arevalo, J. A., McCue, P. M., Handa, R. J., Squires, E. L., Clay, C. (2009). Biological and anatomical evidence for kisspeptin regulation of the hypothalamic-pituitary-gonadal axis of estrous horse mares. *Endocrinology*, 150(6), 2813-21.
- Niswender, G. D., Davis, T. L., Griffith, R. J., Bogan, R. L., Monser, K., Bott, R. C., Bruemmer, J. E., Nett, T. M. (2007). Judge, jury and executioner: the auto-regulation of luteal function. *Society of Reproduction and Fertility supplement*, 64, 191-206.
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- Backman, T., Bruemmer, J. E., Graham, J. K., Squires, E. L. (2004). Pregnancy rates of mares inseminated with semen cooled for 18 hours and then frozen. *Journal of animal science*, 82(3), 690-4.
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- Lindsey, A. C., Bruemmer, J. E., Squires, E. L. (2001). Low dose insemination of mares using non-sorted and sex-sorted sperm. *Animal reproduction science*, 68(3-4), 279-89.
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- Oberstein, N., O'Donovan, M. K., Bruemmer, J. E., Seidel, Jr, G. E., Carnevale, E., Squires, E. L. (2001).

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Heeschen, C., Hamm, C. W., Bruemmer, J. E., Simoons, M. L. (2000). Predictive value of C-reactive protein and troponin T in patients with unstable angina: a comparative analysis. CAPTURE Investigators. Chimeric c7E3 AntiPlatelet Therapy in Unstable angina REfractory to standard treatment trial. *Journal of the American College of Cardiology*, 35(6), 1535-42.

Denniston, D. J., Squires, E. L., Bruemmer, J. E., Brinsko, S. P., McCue, P. M., Graham, J. K. (2000). Effect of antioxidants on the motility and viability of cooled stallion spermatozoa. *Journal of reproduction and fertility. Supplement*(56), 121-6.

Arrott, C., Macpherson, M., Blanchard, T., Varner, D., Thompson, J., Simpson, B., Bruemmer, J. E., Vogelsang, S., Fernandez, M., Fleet, T., Burns, P. J. (1994). Biodegradable estradiol microspheres do not affect uterine involution or characteristics of postpartum estrus in mares. *Theriogenology*, 42(2), 371-84.

Non-Refereed Proceedings or Transactions

Bruemmer, J. E., Klohonatz, K., daSilveira, J., Cameron, A., Canovas, A., Medrano, J., Islas-Trejo, A., Bouma, G. J. (2014). *Next-generation sequencing of small non-coding RNAs (cRNA) in equine endometrial tissue during maternal recognition of pregnancy (MRP)* (pp. 189). *Journal of Equine Veterinary Science*.

(2012). *Effects of prenatal androgenization on the sheep placentome*. Rocky Mountain Reproductive Sciences Symposium Loveland Co April 21.

(2012). *Equine endometrial gene expression during maternal recognition of pregnancy*. Rocky Mountain Reproductive Sciences Symposium Loveland CO April 21.

(2012). *Exosomal miRNAs as biological markers of pregnancy status in the mare*. Society for Study of Reproduction Annual Meeting, State College PA August 10-13.

(2012). *Exosomal miRNAs as biological markers of successful maternal recognition of pregnancy in the mare*. Rocky Mountain Reproductive Sciences Symposium Loveland Co April 21.

(2012). *Prenatal androgenization decreases global methylation in placental tissue and increases placental ESR2, DNMT3, DNMT3b and H19 mRNA in sheep*. Society for Study of Reproduction Annual Meeting, State College PA August 10-13.

(2012). *Serum exosome profile as related to early pregnancy status in the mare*. Amer Soc Anim Sci Annual Mtg Phoenix AZ July 16.

(2012). *Technologies for reproduction in stallions: which one is best for you*. Horse Breeders and Owners Conference Red Deer, Alberta Canada January 13-15.

(2011). *Cautionary Tales: The rigors and realities of Next-Generation sequencing*. Proceedings 2011 Rocky Mountain Reproductive Sciences Symposium Fort Collins, CO April 22.

(2011). *Evaluation of exosomes containing miRNA as an indicator of pregnancy status in the mare* (vol. 31, pp. 314-315). *J Equine Vet Sci: Proceedings Equine Science Society Murfreesboro TN June 2011*.

(2011). *Evaluation of exosomes containing miRNA as an indicator of pregnancy status in the mare*. Proceedings 2011 Rocky Mountain Reproductive Sciences Symposium Fort Collins, CO April 22.

(2011). *Serum exosome profile as related to early pregnancy status in the mare*. Proceedings Exosomes and

Microvesicles Orlando FL Oct 15-17.

- (2011). *Serum exosomes during early pregnancy in the mare*. Proceedings 2011 Rocky Mountain Reproductive Sciences Symposium Fort Collins, CO April 22.
- (2010). *Caspase 3 expression in equine granulosa cells and oocytes in young and old mares*. Society for the Study of Reproduction Milwaukee, WI.
- (2010). *Effect of fish meal supplementation on bovine plasma and luteal omega-3 fatty acid content*. Society for the Study of Reproduction Milwaukee, WI.
- (2010). *Effect of omega-3 fatty acids on prostaglandin F2a induced mitogen-activated kinase signaling in bovine luteal cells in vitro*. Society for the Study of Reproduction Milwaukee, WI.
- (2010). *Effect of omega-3 fatty acids on prostaglandin F2a induced cyclooxygenase-2 (Cox-2) gene expression in bovine luteal cells in vitro*. Society for the Study of Reproduction Milwaukee, WI.
- (2010). *Effects of pregnancy status on organic anion transporters and prostaglandin receptors in the equine endometrium: Insights into maternal recognition of pregnancy in the mare*. Society for the Study of Reproduction Milwaukee, WI.
- (2010). *Effects of repeated injection of equine kisspeptide in diestrous, estrous mares* (vol. S121, pp. 45-46). Animal Reprod Sci.
- (2010). *Effects on spermatozoa of dietary supplementation of vitamin E, omega-3 fatty acids in stallions with poor post-thaw motility* (vol. S121, pp. 206-207). Animal Reprod Sci.
- (2010). *Fundamental Soundness: A regular breeding soundness evaluation on your stallion is a wise investment* (pp. 52-55). The American Quarter Horse Journal December.
- (2010). *Gene expression in the equine endometrium during maternal recognition of pregnancy* (vol. 121S, pp. 286-287). Animal Reprod Sci.
- (2010). *Maternal passive transfer of GnRH antibodies does not change reproductive development in elk calves*. Society for the Study of Reproduction Milwaukee, WI.

Abstract

- Klohonatz, K. M., Canovas, A., Medrano, J. F., Hess, A. M., Coleman, S. J., Thomas, M., Bouma, G. J., Bruemmer, J. E. (2016). *RNA Sequencing of equine endometrium during maternal recognition of pregnancy* (vol. 2016). Plant and Animal Genome Conference XXIV.
- H. F., Mask, T., Hess, T. M., Bruemmer, J. E. (2015). *Differential circulating microRNA profile in insulin-sensitive vs. insulin-resistant mares* (vol. 35, pp. 398). Journal of Equine Veterinary Science.
- Demme, K., Lapinskas, S., Webster, M., Hess, T. M., Bruemmer, J. E. (2015). *Effects of collection method and season on fecal egg counts in feral horses* (vol. 35, pp. 431). Journal of Equine Veterinary Science.
- Cleys, E., Halleran, J., daSilveira, j., Enriquez, V., Winger, Q. A., Clay, C., Bruemmer, J. E., Bouma, G. J. (2014). *Androgen signaling in the sheep placenta involves androgen receptor interactions with histone demethylase* (pp. 101). Society for the Study of Reproduction.
- Mask, T., Bouma, G. J., Kane, A., Ransom, J., Roelle, J., Schoenecker, K., Bruemmer, J. E. (2014). *Immunoreactivity of Anti pZP antibodies from the serum of Spay Vac vaccinated mares to equine zone protein* (pp. 24). Rocky Mountain Reproductive Sciences.

Klohonatz, K., daSilviera, J., Cameron, A., Canovas, A., Medrano, J., Islas-Trejo, A., Bouma, G. J., Bruemmer, J. E. (2014). *Next-generation sequencing of small non-coding RNAs in equine endometrial tissue during maternal recognition of pregnancy* (pp. 28). Rocky Mountain Reproductive Sciences.

Burden, C., McCue, P. M., Bruemmer, J. E., Scoggin, C., Moffett, P., Ferris, R. A. (2014). *Spermiostasis in stallions: a retrospective study of clinical cases*. Rocky Mountain Reproductive Sciences.

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

October 27, 2014, "History of Horses in Society", Tom Lea Month, Tom Lea and El Paso Historical Society, (Presenter) Bruemmer, J. E., Suntuined Park Racetrack.

July 30, 2014, "New insight into Maternal Recognition of Pregnancy in the Mare", SBZ (Brazilian Animal Science Society), SBZ, (Presenter) Bruemmer, J. E., Aracaju, Brazil, peer-reviewed/refereed.

January 28, 2014, "Potential role of exosomes in embryo / maternal interaction", Internation Symposium on Equine Reproduction, Hamilton, New Zealand.

January 26, 2014, "Next-generation sequencing of small non-coding RNAs (ncRNAs) in equine endometrial tissue during maternal recognition of pregnancy (MRP)", Internation Symposium on Equine Reproduction, Hamilton, New Zealand, peer-reviewed/refereed.

January 11, 2014, "Station Update", Plant and Animal Genomics, San Diego, CA.

2012, "Bruemmer, JE. Technologies for reproduction in stallions: which one is best for you. 2012 Horse Breeders and Owners Conference. Red Deer, Alberta Canada January 13-15, 2012".

2012, "Cameron A, Hergenreder J, da Silveira J, Belk A, Klohanatz K, Veeramachaneni, Bouma GJ, Bruemmer JE. Exosomal miRNAs as biological markers of pregnancy status in the mare. 2012 Society for Study of Reproduction Annual Meeting, State College PA. August 10-13, 2012", peer-reviewed/refereed.

2012, "Hergenreder JR, da Silveira JC, Belk AD, Veeramachaneni DNR, Bouma JG, Bruemmer JE Serum exosome profile as related to early pregnancy staus in the mare. 2012 Amer Soc Anim Sci Anual Mtg Phoenix AZ July 16, 2012", peer-reviewed/refereed.

2011, "Newest understanding of maternal recognition of pregnancy in the mare. Animal and Biomedical Sciences – Invited speaker. Penn State University, State College, PA April 1, 2011".

2011, "Reproductive Techniques in Horses, University of Wyoming senior Reproduction Course, Fort Collins, CO April 27, 2011".

2011, "Reproductive technologies. Pre-Vet Day. College of

Veterinary Medicine and Biomedical Science. Fort Collins, CO October 8, 2011".

2011, "State of the Art and Science Gamete and Embryo Cryopreservation in Farm Animals. International Symposium on Genetic Resources. Leon, Guanajuato, Mexico. October 13, 2011", peer-reviewed/refereed.

2010, "Bruemmer, JE, Bouma , GJ, Hess, A, Hansen, TR, Squires, EL. Gene expression in the equine endometrium during maternal recognition of pregnancy. Tenth International Symposium on Equine Reproduction, Lexington KY July 26-30, 2010", peer-reviewed/refereed.

2010, "Bruemmer,JE. Postsecondary Equine Education, Kentucky International Equine Summit, Lexington , KY, April 16 -17, 2010".

2010, "Data Blitz, 7th Annual Biomedical Sciences Retreat October 23, 2010 Fort Collins, CO".

OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD

Nett, T. M., Brooks, R. M., McCue, P. M., Bruemmer, J. E., Denniston, D. J. "Direct Enzyme Immunoassay and Kit for Measurement of Serum Progesterone Levels." (Application: July 27, 2010, Approved: December 1, 2015).

"Patent Application

Direct enzyme immunoassay and kit for measurement of serum progesterone levels," Licensed to: Animal Reproduction Systems. (Submitted: 2010, Application: 2010, Approved: 2010, Licensed: 2010).

(2014). Workshop, "Student Mental Health Resource Training," Fort Collins, CO, United States.

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2016	Summer	ANEQ444 - Equine Business Management	2	9
2016	Summer	ANEQ441 - Integrated Equine Science	2	2
2016	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	20
2016	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	20
2016	Spring	ANEQ445 - Foaling Management	2	69
2016	Spring	ANEQ445 - Foaling Management - Lab	0	69
2016	Spring	ANEQ495 - Independent Study	18	13
2016	Spring	ANEQ441 - Integrated Equine Science	2	26
2016	Spring	ANEQ487B - Internship: Equine	6	21
2016	Spring	ANEQ792C - Seminar-Physiology	1	6
2016	Spring	ANEQ784 - Supervised College Teaching	18	31
2015	Fall	ANEQ344 - Principles of Equine Reproduction	4	67
2015	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	25
2015	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	29
2015	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	13

2015	Fall	ANEQ792C - Seminar-Physiology	1	3
2015	Fall	ANEQ784 - Supervised College Teaching	18	29
2015	Fall	ANEQ699 - Thesis	18	10
2015	Summer	ANEQ441 - Integrated Equine Science	2	2
2015	Summer	ANEQ487B - Internship: Equine	6	43
2015	Spring	ANEQ799 - Dissertation	18	7
2015	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	20
2015	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	20
2015	Spring	ANEQ445 - Foaling Management	2	63
2015	Spring	ANEQ445 - Foaling Management - Lab	0	63
2015	Spring	ANEQ495 - Independent Study	18	13
2015	Spring	ANEQ441 - Integrated Equine Science	2	14
2015	Spring	ANEQ487B - Internship: Equine	6	37
2015	Spring	ANEQ334 - Principles of Equine Genetics	3	78
2015	Spring	ANEQ792B - Seminar-Breeding/Genetics	1	12
2015	Spring	ANEQ792C - Seminar-Physiology	1	3
2015	Spring	ANEQ384 - Supervised College Teaching	5	18
2015	Spring	ANEQ784 - Supervised College Teaching	18	28
2015	Spring	ANEQ699 - Thesis	18	9
2014	Fall	ANEQ510 - Bovine Reproduction Management	4	43
2014	Fall	ANEQ510 - Bovine Reproduction Management-Lab	0	23
2014	Fall	ANEQ510 - Bovine Reproduction Management-Lab	0	20
2014	Fall	ANEQ799 - Dissertation	18	8
2014	Fall	ANEQ344 - Principles of Equine Reproduction	4	101
2014	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	25
2014	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	39
2014	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	37
2014	Fall	BMS640 - Reproductive Physiology and Endocrinology	4	16
2014	Fall	BMS642 - Research Techniques for Gametes and Embryos	1	12
2014	Fall	ANEQ792C - Seminar-Physiology	1	1
2014	Fall	ANEQ384 - Supervised College Teaching	5	26
2014	Fall	ANEQ784 - Supervised College Teaching	18	27
2014	Summer	ANEQ487B - Internship: Equine	6	48
2014	Spring	ANEQ799 - Dissertation	18	6
2014	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	21
2014	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	21
2014	Spring	ANEQ445 - Foaling Management	2	75
2014	Spring	ANEQ445 - Foaling Management - Lab	0	75
2014	Spring	ANEQ441 - Integrated Equine Science	2	7
2014	Spring	ANEQ487A - Internship: Animal	6	35
2014	Spring	ANEQ487B - Internship: Equine	6	39
2014	Spring	ANEQ334 - Principles of Equine Genetics	3	89
2014	Spring	ANEQ792C - Seminar-Physiology	1	1
2014	Spring	ANEQ784 - Supervised College Teaching	18	23
2014	Spring	ANEQ699 - Thesis	18	8
2013	Fall	ANEQ799 - Dissertation	18	7
2013	Fall	BMS796C - Group Study-Reproductive Physiology	18	4
2013	Fall	ANEQ495 - Independent Study	18	5
2013	Fall	ANEQ487B - Internship: Equine	6	14
2013	Fall	ANEQ344 - Principles of Equine Reproduction	4	93
2013	Fall	ANEQ344 - Principles of Equine Reproduction	4	93

2013	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	30
2013	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	38
2013	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	25
2013	Fall	ANEQ792C - Seminar-Physiology	1	0
2013	Fall	ANEQ384 - Supervised College Teaching	5	23
2013	Fall	ANEQ784 - Supervised College Teaching	18	21
2013	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	0
2013	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	0
2013	Summer	ANEQ441 - Integrated Equine Science	2	0
2013	Summer	ANEQ487 - Internship	18	32
2013	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	20
2013	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	20
2013	Spring	ANEQ445 - Foaling Management	2	83
2013	Spring	ANEQ445 - Foaling Management - Lab	0	83
2013	Spring	BMS796C - Group Study-Reproductive Physiology	18	2
2013	Spring	ANEQ495 - Independent Study	18	11
2013	Spring	ANEQ487 - Internship	18	22
2013	Spring	ANEQ487 - Internship	18	29
2013	Spring	ANEQ102 - Introduction to Equine Science	4	95
2013	Spring	ANEQ102 - Introduction to Equine Science - Lab	0	31
2013	Spring	ANEQ102 - Introduction to Equine Science - Lab	0	35
2013	Spring	ANEQ102 - Introduction to Equine Science - Lab	0	29
2013	Spring	BMS642 - Research Techniques for Gametes and Embryos	1	5
2013	Spring	ANEQ792C - Seminar-Physiology	1	3
2013	Spring	ANEQ784 - Supervised College Teaching	18	22
2013	Spring	ANEQ699 - Thesis	18	9
2012	Fall	BMS796C - Group Study-Reproductive Physiology	18	5
2012	Fall	ANEQ487 - Internship	18	9
2012	Fall	ANEQ344 - Principles of Equine Reproduction	4	100
2012	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	35
2012	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	36
2012	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	29
2012	Fall	BMS640 - Reproductive Physiology and Endocrinology	4	14
2012	Fall	ANEQ384 - Supervised College Teaching	5	16
2012	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	3
2012	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	3
2012	Summer	ANEQ487 - Internship	18	26
2012	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	0
2012	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	19
2012	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	19
2012	Spring	ANEQ445 - Foaling Management	2	78
2012	Spring	ANEQ445 - Foaling Management - Lab	0	78
2012	Spring	ANEQ487 - Internship	18	33
2012	Spring	VM786A - Junior Practicum	8	140
2012	Spring	ANEQ784 - Supervised College Teaching	18	18
2012	Spring	ANEQ699 - Thesis	18	10

2011	Fall	ANEQ487 - Internship	18	9
2011	Fall	VM786A - Junior Practicum	8	140
2011	Fall	ANEQ344 - Principles of Equine Reproduction	4	92
2011	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	21
2011	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	40
2011	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	31
2011	Fall	ANEQ384 - Supervised College Teaching	5	31
2011	Fall	ANEQ784 - Supervised College Teaching	18	22
2011	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	10
2011	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	10
2011	Summer	ANEQ487 - Internship	18	32
2011	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	21
2011	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	21
2011	Spring	ANEQ445 - Foaling Management	2	91
2011	Spring	ANEQ445 - Foaling Management - Lab	0	91
2011	Spring	ANEQ487 - Internship	18	16
2011	Spring	ANEQ487 - Internship	18	31
2011	Spring	ANEQ784 - Supervised College Teaching	18	23
2011	Spring	ANEQ699 - Thesis	18	8
2010	Fall	BMS796C - Group Study-Reproductive Physiology	18	5
2010	Fall	ANEQ795 - Independent Study	18	2
2010	Fall	ANEQ344 - Principles of Equine Reproduction	4	90
2010	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	30
2010	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	34
2010	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	26
2010	Fall	ANEQ384 - Supervised College Teaching	5	30
2010	Fall	ANEQ784 - Supervised College Teaching	18	27
2010	Fall	ANEQ699 - Thesis	18	14
2010	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	5
2010	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	5
2010	Summer	ANEQ487 - Internship	18	42
2010	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	10
2010	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	10
2010	Spring	ANEQ440 - Equine Production and Industry	3	40
2010	Spring	ANEQ445 - Foaling Management	2	85
2010	Spring	ANEQ445 - Foaling Management - Lab	0	85
2010	Spring	BMS796C - Group Study-Reproductive Physiology	18	5
2010	Spring	ANEQ487 - Internship	18	30
2010	Spring	ANEQ487 - Internship	18	31
2010	Spring	BMS642 - Research Techniques for Gametes and Embryos	1	13
2010	Spring	ANEQ384 - Supervised College Teaching	5	31
2010	Spring	ANEQ784 - Supervised College Teaching	18	23
2010	Spring	ANEQ699 - Thesis	18	15
2009	Fall	ANEQ440 - Equine Production and Industry	3	21
2009	Fall	ANEQ487 - Internship	18	7
2009	Fall	ANEQ344 - Principles of Equine Reproduction	4	75
2009	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	17

2009	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	36
2009	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	22
2009	Fall	ANEQ384 - Supervised College Teaching	5	18
2009	Fall	ANEQ784 - Supervised College Teaching	18	21
2009	Fall	ANEQ699 - Thesis	18	16
2009	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	11
2009	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	11
2009	Summer	ANEQ487 - Internship	18	17
2009	Summer	ANEQ487 - Internship	18	32
2009	Spring	ANEQ386C - Equine Practicum-Equine Farrier Management	1	23
2009	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	22
2009	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	22
2009	Spring	ANEQ445 - Foaling Management	2	112
2009	Spring	ANEQ445 - Foaling Management - Lab	0	112
2009	Spring	ANEQ495 - Independent Study	18	17
2009	Spring	ANEQ487 - Internship	18	24
2009	Spring	ANEQ384 - Supervised College Teaching	5	37
2009	Spring	ANEQ784 - Supervised College Teaching	18	20
2009	Spring	ANEQ699 - Thesis	18	14
2008	Fall	BMS796C - Group Study-Reproductive Physiology	18	9
2008	Fall	ANEQ495 - Independent Study	18	1
2008	Fall	ANEQ487 - Internship	18	12
2008	Fall	ANEQ344 - Principles of Equine Reproduction	4	99
2008	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	29
2008	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	37
2008	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	33
2008	Fall	ANEQ384 - Supervised College Teaching	5	31
2008	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	11
2008	Summer	ANEQ386B - Equine Practicum-Equine Reproductive Management - Lab	0	11
2008	Summer	ANEQ487 - Internship	18	22
2008	Spring	BMS799 - Dissertation.	18	4
2008	Spring	ANEQ386C - Equine Practicum-Equine Farrier Management	1	24
2008	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management	2	24
2008	Spring	ANEQ386B - Equine Practicum-Equine Reproductive Management-Laboratory	0	24
2008	Spring	ANEQ445 - Foaling Management	2	90
2008	Spring	ANEQ445 - Foaling Management-Laboratory	0	90
2008	Spring	ANEQ487 - Internship	18	31
2007	Fall	ANEQ346 - Equine Disease Management	3	122
2007	Fall	ANEQ487 - Internship	18	14
2007	Fall	ANEQ344 - Principles of Equine Reproduction	4	113
2007	Fall	ANEQ344 - Principles of Equine Reproduction - Honors	4	0
2007	Fall	ANEQ344 - Principles of Equine Reproduction - Honors Lab	0	0
2007	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	35
2007	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	41

2007	Fall	ANEQ344 - Principles of Equine Reproduction-Lab	0	34
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Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2015	Spring	ANEQ - Equine Behavior	2	Face to Face
2015	Spring	Integrated Resource Management		Face to Face
2014	Fall	ANEQ202 - Equine Safety and Handling	2	Face to Face
2014	Fall	ANEQ102 - Introduction Equine Science	7	
2014	Fall	ANEQ30 - Ultrasonography	1	Face to Face
2014	Spring	ANEQ - Equine Behavior	2	
2014	Spring	ANEQ292 - Equine Science	1	Face to Face

EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

Field Day

Equine Sciences. Youth. Total number of participants: 25. Percent Responsible: 100%. 1st Quarter 2015.

Equine Reproductive Techniques. Adult. Total number of participants: 30. Percent Responsible: 100%. 2nd Quarter 2015.

Tour

Equine Sciences. Youth. Total number of participants: 2. Percent Responsible: 100%. 2nd Quarter 2015.

Workshop

Reproductive Management of the Stallion and Mare. Adult. Total number of participants: 45. Percent Responsible: 100%. 1st Quarter 2015.

Frozen Semen Short Course. Adult. Total number of participants: 28. Percent Responsible: 100%. 2nd Quarter 2015.

Reproductive Management of the Stallion and Mare. Adult, Fort Collins, CO. Total number of participants: 40. Percent Responsible: 100%. 1st Quarter 2014.

Use of Frozen-Thawed Stallion Semen. Adult. Total number of participants: 28. Percent Responsible: 100%. 1st Quarter 2014.

COMMITTEES

Animal Users Committee, (2014 - Present).

Rocky Mountain Reproduction Symposium, (2009 - Present).

(2010).

Veterinary Admissions Committee, (2000 - Present).

Scholarship Committee, (1999 - 2014).

(2010).

Curriculum Committee, (2015 - Present).

Graduate Committee, (2015 - Present).

Healthy Baby Happy Mother - ARBL, (2013 - Present).

Healthy Baby Happy Mother - ARBL, (2013 - Present).

Integrated Clinical Endocrinology and Reproduction, (2013 - Present).

Core Staff - Foothills Campus, (2006 - Present).

Legends of Ranching Sale Committee, (2005 - Present).

Equine Science Curriculum Committee, (2000 - Present).

Beef/Dairy Systems Search, (2014 - 2015).

Equine Genetics Search, (2014 - 2015).

Breeding / Genetics, (2014).

Coordinating Committee, (2000 - 2014).

(2010).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

American Society of Animal Science. (2010 - Present).

AQHA. (2010 - Present).

Society for the Study of Reproduction. (2010 - Present).

USPA. (2010 - Present).

Equine Science Society. (2011 - 2013).

Equine Science Society. (2010 - 2011).

Reviewer, Grant Panel, AQHF. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Biology of Reproduction. (2012 - Present).

Cellular Reprogramming. (2012 - Present).

Officer, President/Elect/Past, Equine Science Society, CO. (2012 - Present).

Equine Veterinary Journal. (2012 - Present).

Journal of Animal Science. (2012 - Present).

Program Coordinator, NSRP-8, Colorado. (2012 - Present).

Program Coordinator, Polo Club Adviser60 + students25-30 horses. (2012 - Present).

Theriogenology. (2012 - Present).

2011 Rocky Mountain Reproductive Sciences Symposium. (2011 - Present).

Biology of Reproduction. (2011 - Present).

Equine Reproduction Management Short Course Jan 12 - 15, 2011, Fort Collins, CO. (2011 - Present).

Foaling Management Short Course Jan 9-10, 2011, Fort Collins, CO. (2011 - Present).

Journal of Animal Science. (2011 - Present).

Journal of Equine Veterinary Science. (2011 - Present).

Reproduction. (2011 - Present).

Reproductive Endocrinology. (2011 - Present).

Rocky Mountain Reproductive Sciences, Fort Collins, CO. (2011 - Present).

Theriogenology. (2011 - Present).

Use of cooled transported semen Short Course Jan 16, 2012, Fort Collins, CO. (2011 - Present).

Use of frozen stallion semen short course - Jan 17, 2011, Fort Collins, CO. (2011 - Present).

American Society of Animal Science, Denver, CO. (2010 - Present).

Member, American Society of Animal Science. (2010 - Present).

Member, AQHA. (2010 - Present).

Member, AQHF. (2010 - Present).

Member, Equine Sciences- Curriculum. (2010 - Present).

European Theriogenology. (2010 - Present).

International Symposium Equine Reproduction, Lexington, KY. (2010 - Present).

Member, Journal Of Animal Science. (2010 - Present).

Member, Journal of Animal Science. (2010 - Present).

Journal Of Endocrinology. (2010 - Present).

Journal of Equine Veterinary Science. (2010 - Present).

Member, Society for the Study of Reproduction. (2010 - Present).

Theriogenology. (2010 - Present).

Member, USDA. (2010 - Present).

Member, USPA. (2010 - Present).

Member, Foothills Campus Coordinating Committee. (2005 - Present).

Member, Department Coordination Committee. (2004 - Present).

Member, Academic Affairs. (2001 - Present).

Member, Student Affairs / Scholarship. (1998 - Present).

Equine Science Society. (2011 - 2013).

Officer, Vice President, Equine Science Society, Murfreesboro, TN. (2011 - 2013).

Committee Chair, Equine Instructor search. (2012).

Member, Alexander Chair, Search Committee. (2011 - 2012).

Member, Animal Sciences Department Head. (2010 - 2011).

Equine Science Society. (2010 - 2011).

Committee Chair, ERL Intern Selection. (2010 - 2011).

Member, ERL- Clinical Strategic Planning. (2010 - 2011).

Member, ERL-Research Strategic Planning. (2010 - 2011).

Member, Rouse Ranch Endowed Chair. (2009 - 2011).

Polo Club Adviser
60 + students
25-30 horses. (2010).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

Academic, University of Kentucky, Lexington, Kentucky, United States. (2014).

Lane's End. (2012).

Lane's End. (2011).

Lanes End. (2010).
