

***Peer-reviewed journal articles published in 2016 reporting research from this project***

Fu L, Zhang M, Mastrantoni K, Perfetto M, Wei S, Yao J. 2016. Bovine Lhx8, a germ cell-specific nuclear factor, interacts with Figla. PLoS ONE 11(10): e0164671. doi:10.1371/journal.pone.0164671.

Madden, J.A., Thomas P.Q., Keating, A.F. 2016. Phosphoramidate mustard induces autophagy markers and mTOR inhibition prevents follicle loss due to phosphoramidate mustard exposure. Reproductive Toxicology. 67:65-78.

Ganesan, S., Keating, A.F. 2016. Bisphenol A-induced ovotoxicity involves DNA damage induction to which the ovary mounts a protective response indicated by increased expression of proteins involved in DNA repair and xenobiotic biotransformation. Toxicological Sciences. 52(1):169-80.

Navarrete FA, Alvau A, Lee HC, Levin LR, Buck J, Leon PM, Santi CM, Krapf D, Mager J, Fissore RA, Salicioni AM, Darszon A, Visconti PE. Transient exposure to calcium ionophore enables *in vitro* fertilization in sterile mouse models. Sci Rep. 2016 Sep 15;6:33589.

Ganesan, S., Keating, A.F. 2016. The ovarian DNA damage repair response is induced prior to phosphoramidate mustard-induced follicle depletion, and ataxia telangiectasia mutated inhibition prevents PM-induced follicle depletion. Toxicology and Applied Pharmacology. 292:65-74.

Wang W, Lee, S.J., Scott, P.A., Lu, X., Emery, D., Liu Y, Ezashi T., Roberts, M.R., Ross J.W., Kaplan, H.J., Dean, D.C. 2016. Two-Step reactivation of dormant cones in retinitis pigmentosa. Cell Reports. 15(2):372-85.

Boddicker, R.L., Koltes, J.E., Fritz-Waters, E.R., Koesterke, L., Weeks, N., Yin, T., Mani, V., Nettleton, D., Reecy, J.M., Baumgard, L.H., Spencer, J.D., Gabler, N.K., Ross, J.W. 2016 Genome-Wide Methylation Profile Following Prenatal and Postnatal Dietary n-3 Fatty Acid Supplementation in Pigs. Animal Genetics. 47(6):658-671.

Selsby, J.T., Ballmann, C.G., Spaulding, H.R., Ross, J.W., Quindry, J.C. 2016. Oral quercetin administration transiently protects respiratory function in dystrophin deficient mice. Journal of Physiology. 594(20):6037-6053.

Wright, E.C., Hale, B.J., Yang, C.X., Njoka, J.G., Ross, J.W. 2016 MicroRNA-21 and PDCD4 expression during *in vitro* oocyte maturation in pigs. Reproductive Biology and Endocrinology. 14:21.

Cerny, K.L., R.A.C. Ribeiro, M. Jeoung, C. Ko and P.J. Bridges. 2016. Estrogen receptor alpha (ESR1)-dependent regulation of the mouse oviductal transcriptome. PLoS One. 11(1):e0147685.

Cerny, K.L., S. Garbacik, C. Skees, W.R. Burris, J.C. Matthews and P.J. Bridges. 2016. Gestational form of selenium in free-choice mineral mixes affects transcriptome profiles of the neonatal calf testis, including those of steroidogenic and spermatogenic pathways. *Biological Trace Element Research*. 169:56-68.

Allen, J.J., S.L. Herrick, and J.E. Fortune, 2016. Regulation of steroidogenesis in fetal bovine ovaries: differential effects of LH and FSH. *Journal of Molecular Endocrinology* 57:275-286.

Ehrhardt, R. A., Foskolos, A., Giesy, S. L., Wesolowski, S. R., Krumm, C. S., Butler, W. R., Quirk, S. M., Waldron, M. R., Boisclair, Y. R. (2016). Increased plasma leptin attenuates adaptive metabolism in early lactating dairy cows. *Journal of Endocrinology*, 229 (2), 145-157.

R. Wijma, M. L. Stangaferro, M. M. Kamat, S. V., T. L. Ott, and J. O. Giordano. 2016. Embryo Mortality around the Period of Maintenance of the Corpus Luteum Causes Alterations to the Ovarian Function of Lactating Dairy Cows. *Biology of Reproduction*. 95(5):112.

Destro FC, Martin I, Landim-Alvarenga FDC, Ferreira JCP, Pate JL. 2016. Effects of concanavalin A on the progesterone production by bovine steroidogenic luteal cells in vitro. *Reprod Dom Anim* 51:848-852

Kamat MM, Vasudevan S, Maalouf SA, Townson DH, Pate JL, Ott TL. 2016. Changes in myeloid lineage cells in the uterus and peripheral blood of dairy heifers during early pregnancy. *Biol Reprod* 95(3)68, 1-12.

Kin K, Mazairz J, Chavan AR, Kamat M, Vasudevan S, Birt A, Emera D, Lynch V, Ott TL, Pavlicev M, and Wagner G. 2016. The transcriptomic evolution of mammalian pregnancy: gene expression innovations in endometrial stromal fibroblasts. *Genome Biol. Evol* Aug 25;8(8):2459-73.

Tian X, Anthony K and Diaz FJ. 2016. Transition metal chelator induces progesterone production in mouse cumulus-oocyte complexes and corpora lutea. *Biological Trace Mineral Research*. doi:10.1007/s12011-016-0841-x.

Wijma, R, Stangaferro, ML, Kamat, MM, Vasudevan, S, Ott, TL and Giordano, JO. 2016. Embryo Mortality around the Period of Maintenance of the Corpus Luteum Causes Alterations to the Ovarian Function of Lactating Dairy Cows. *Biol Reprod*. Nov;95(5):112.

Trisdale SK, Schwab NM, Hou X, Davis JS, Townson DH 2016 Molecular manipulation of keratin 8/18 intermediate filaments: Modulators of FAS-mediated death signaling in human ovarian granulosa tumor cells. *Journal of Ovarian Research* 9:8

Al Naib, A., Tucker, H.L., Xie, G., Keisler, D.H., Bartol, F.F., Rhoads, R.P., Akers, R.M., Rhoads, M.L. (2016). Prepubertal tamoxifen treatment affects development of heifer reproductive tissues and related signaling pathways. *J. Dairy Sci*. 99:5780-5792.

Badinga, L., Gulay, M.S. and Ealy, A.D. 2016. CLA and EPA inhibit LPS-induced prostaglandin release from bovine endometrial cells through an NF- $\kappa$ B-dependent signaling mechanism. *Turkish J. Vet. Anim. Sci.* 40:382-388.

Brown, B.M., Stallings, J.W., Clay, J.S. and Rhoads, M.L. (2016). Periconceptional heat stress of Holstein dams is associated with differences in daughter milk production and composition during multiple lactations. *PLoS One* 11:e0150049

Brown, B.M., Stallings, J.W., Clay, J.S. and Rhoads, M.L. (2016). Periconceptional heat stress of Holstein dams is associated with differences in daughter milk production during their first lactation. *PLoS One* 11:e0148234

Cerny, K.L., L. Anderson, W.R. Burris, M. Rhoads, J.C. Matthews and P.J. Bridges. (2016). Form of supplemental selenium fed to cycling cows affects systemic concentrations of progesterone but not those of estradiol. *Theriogenology* 85(5):800-806. doi: 10.1016/j.theriogenology.2015.10.022.

Forde, N., Maillo, V., Ó Gaora, P., Simintiras, C.A., Sturmey, R.G., Ealy, A.D., Spencer, T.E., Gutierrez-Adan, A., Rizos, D., Lonergan, P. 2016. Sexually dimorphic gene expression in bovine conceptuses at the initiation of implantation. *Biol. Reprod.* 95:92.

Mercadante, P.M., Ribeiro, E.S., Risco, C. and Ealy, A.D. (2016). Associations between pregnancy-associated glycoproteins and pregnancy outcomes, milk yield, parity, and clinical diseases in high-producing dairy cows. *J. Dairy Sci.* 99:3031-3040.

Mercadante, V.R., Fontes, P.L., Ciriaco, F.M., Henry, D.D., Moriel, P., Ealy, A.D., Johnson, S.E., DiLorenzo, N. and Lamb, G.C. 2016. Effects of recombinant bovine somatotropin administration at breeding on cow, conceptus, and subsequent offspring performance of beef cattle. *J. Anim. Sci.* 94:2128-2138.

Ribeiro, E.S., Monteiro, A.P., Bisinotto, R.S., Lima, F.S., Greco, L.F., Ealy, A.D., Thatcher, W.W. and Santos, J.E. 2016. Conceptus development and transcriptome at preimplantation stages in lactating dairy cows of distinct genetic groups and estrous cyclic statuses. *J. Dairy Sci.* 99:4761-4777.

Baez G.M., Barletta R.V., Guenther J.N., Gaska J.M. & Wiltbank M.C. 2016. Effect of uterine size on fertility of lactating dairy cows. *Theriogenology* 85:1357-66.

Batista E.O.S., Vieira L.M., Sa M.F., Carvalho P.D., Rivera H., Cabrera V., Wiltbank M.C., Baruselli P.S. & Souza A.H. 2016. Short communication: Field fertility in Holstein bulls: Can type of breeding strategy (artificial insemination following estrus versus timed artificial insemination) alter service sire fertility? *Journal of Dairy Science* 99:2010-5.

Gandra J.R., Barletta R.V., Mingoti R.D., Verdurico L.C., Freitas J.E., Oliveira L.J., Takiya C.S., Kfoury J.R., Wiltbank M.C. & Renno F.P. 2016. Effects of whole flaxseed, raw soybeans, and

calcium salts of fatty acids on measures of cellular immune function of transition dairy cows. *Journal of Dairy Science* 99:4590-606.

Melo L.F., Monteiro P.L.J., Surjus R.S., Drum J.N., Wiltbank M.C. & Sartori R. 2016, Progesterone-based fixed-time artificial insemination protocols for dairy cows: Gonadotropinreleasing hormone versus estradiol benzoate at initiation and estradiol cypionate versus estradiol benzoate at the end. *Journal of Dairy Science* 99:9227-37.

Oliveira L.H., Nascimento A.B., Monteiro P.L.J., Guardieiro M.M., Wiltbank M.C. & Sartori R. 2016. Development of insulin resistance in dairy cows by 150 days of lactation does not alter oocyte quality in smaller follicles. *Journal of Dairy Science* 99:9174-83.

Oliveira L.H., Sanches C.P., Seddon A.S., Veras M.B., Lima F.A., Monteiro P.L.J., Wiltbank M.C. & Sartori R. 2016. Short communication: Follicle superstimulation before ovum pick-up for in vitro embryo production in Holstein cows. *Journal of Dairy Science* 99:9307-12.

Pereira M.H.C., Wiltbank M.C. & Vasconcelos J.L.M. 2016. Expression of estrus improves fertility and decreases pregnancy losses in lactating dairy cows that receive artificial insemination or embryo transfer. *Journal of Dairy Science* 99:2237-47.

Santos J.E.P., Wiltbank M.C., Ribeiro E.S., Bisinotto R.S., 2016. Aspects and mechanisms of low fertility in anovulatory dairy cows. *Animal Reproduction* 13:290-299.

Sartori R., Monteiro Junior, P.L.J., Wiltbank M.C., 2016. Endocrine and metabolic differences between *Bos taurus* and *Bos indicus* cows and implications for reproductive management. *Animal Reproduction* 13:168-181.

Wiltbank M.C., Baez G.M., Garcia-Guerra A., Toledo M.Z., Monteiro P.L.J., Melo L.F., Ochoa J.C., Santos J.E.P. & Sartori R. 2016. Pivotal periods for pregnancy loss during the first trimester of gestation in lactating dairy cows. *Theriogenology* 86:239-53.

Wiltbank M.C., Median R., Ochoa J., Baez, G. M., Giordano J.O., Ferreira J.C.P., Sartori R., 2016. Maintenance or Regression of the Corpus Luteum during Multiple Decisive Periods of Bovine Pregnancy. *Animal Reproduction* 13:217-233.

Tucker, H.L., Parsons, C.L., Ellis, S., Rhoads, M.L. and Akers, R.M. (2016). Tamoxifen impairs prepubertal mammary development and alters expression of estrogen receptor alpha (ESR1) and progesterone receptors (PGR). *Domest. Anim. Endocrinol.* 54:95-105.

Xie, G., Cole, L.C., Zhao, L.D., Skrzypek, M.V., Sanders, S.R., Rhoads, M.L., Baumgard, L.H. and Rhoads RP. (2016). Skeletal muscle and hepatic insulin signaling is maintained in heat-stressed lactating Holstein cows. *J. Dairy Sci.* 99:4032-4042.

Yang, Q.E., Ozawa, M., Zhang, K., Johnson, S.E., and Ealy, A.D. (2016) The requirement for protein kinase C delta (PRKCD) during preimplantation bovine embryo development. *Repro. Fertil. Devel.* 28:482-490.

Xie F, Anderson CL, Timme KR, Kurz SG, Fernando SC, and Wood JR. (2016) Obesity-dependent increases in oocyte-specific mRNAs are associated with increases in pro-inflammatory signaling and gut microbial abundance of *Lachnospiraceae* in Female Mice, *Endocrinol* 157(4): 1630-1643, PMID: PMC4816731

Romereim SM, Summers AF, Pohlmeier WE, Zhang P, Hou X, Talbott HA, Cushman RA, Wood JR, Davis JS, and Cupp AS (2016) Gene expression profiling of bovine ovarian follicular and luteal cells provides insight into cellular identities and functions, *Mol Cell Endocrinol* 439:379-394 PMID: 27693538

Romereim SM, Summers AF, Pohlmeier WE, Zhang P, Hou X, Talbott HA, Cushman RA, Wood JR, Davis JS, and Cupp AS (2016) Transcriptomes of bovine ovarian follicular and luteal cells, *Data in Brief* 10:335-339

### ***Conference papers and abstracts/presentations:***

Allen, J.J. and J.E. Fortune, 2016. Nuclear estrogen receptors mediate the effects of exogenous and endogenous estradiol on follicle formation and activation in fetal bovine ovarian cortex in vitro. *Biology of Reproduction, Supplement, Proc. of the 49th annual meeting of the Soc. for the Study of Reproduction, San Diego, CA.*

Wang J and Yao J. Identification of long non-coding RNAs (lncRNAs) in bovine oocytes using RNA sequencing. 49th Annual Meeting Society for the Study of Reproduction, San Diego, CA. July 16–20, 2016 (Abstract).

Hadfield J, Bowdridge E, Holaskova I, Dailey R. Characterization of LPS-induced immune responses between two sheep breeds during early pregnancy. 49th Annual Meeting Society for the Study of Reproduction, San Diego, CA. July 16–20, 2016 (Abstract).

Ardestani G., He, C., Carvacho I., Fissore R. Expression and function of Transient Receptor Potential channels in mouse GV oocytes. Annual Retreat VAS department. Leveret. MA. June 2016.

R. Wijma, M.L. Stangaferro, and J.O. Giordano. 2016. Reproductive Performance and Culling Dynamics of Lactating Dairy Cows with Detected Pregnancy Loss. *J. Dairy Sci.* Volume 99, ESupplement 2.

J.O. Giordano. Reproductive Management Strategies to Optimize Reproductive Performance of Modern Dairy Operations. SIVAR, Societa Italiana Veterinari per Animali da Reddito. Cremona, Italy. May 13th, 2016.

J.O. Giordano. Insemination of cows at a detected estrus versus systematic synchronization of ovulation: ¿are these strategies incompatible? ANEMBE (National Association of Spanish Bovine Practitioners). May 12th, 2016. Santiago de Compostela, Spain.

J.O. Giordano. Reproductive Management of Cows Based on Ovarian Status. European College of Bovine Health Management. Webinar (~50 attendees plus recorded viewership). December 6th, 2016.

J.O. Giordano. Navigating the (New and Improved) Sea of Reproductive Management Strategies. Boehringer Ingelheim Cow Belles Conference, Verona, NY. December 1st, 2016. n = ~50 attendees (female dairy veterinarians and BI technical services personnel).

J.O. Giordano. Reproductive Physiology and Management of Dairy Cattle. Alta Genetics Dairy Manager School. Alta Genetics. Watertown, WI. November 17th, 2016. n = ~15 attendees (dairy managers, dairy producers, veterinarians, and reproductive consultants).

J.O. Giordano. Synchronization and Hormonal Therapy in Dairy Cattle Management: Present & Future. Italian Embryo Transfer Society Annual Conference. September 6-7th, 2016. n = ~80 attendees (dairy veterinarians and scientists).

J.O. Giordano. Reproductive Physiology and Management of Dairy Cattle. 17 Alta Genetics. Watertown, WI. July 27th, 2016. n = ~15 attendees (dairy managers, dairy producers, veterinarians, and reproductive consultants).

J.O. Giordano. Reproductive Management Strategies to Improve the Reproductive Performance of Dairy Herds. Dairy Cattle Reproduction Council Webinars. n = ~150 attendees (Spanish speaking US and Latin America dairy managers, dairy producers, consultants, veterinarians). June 24th, 2016.

J.O. Giordano. Reproductive Management Programs for Lactating Dairy Cows. Vetoquinol, ARC Regionals. 3 Locations (Quebec City, Montreal, and Ontario, Canada). June 9th-11th, 2016. n = ~100 attendees (dairy veterinarians and reproductive consultants).

J.O. Giordano. Management Strategies to Optimize Reproductive Performance of Lactating Dairy Cows. SIVAR, Societa Italiana Veterinari per Animali da Reddito. May 13th, 2016. n = ~120 attendees (dairy veterinarians and reproductive consultants).

J.O. Giordano, M.L. Stangaferro. Reproductive Management – Opportunities & Economic Decision Making. Rapp Nutrition Consultants Producer Meeting. Cortland, NY. March 15th, 2016. n = ~120 attendees (dairy producers, veterinarians, and extension personnel from Central and Eastern New York).

Baumgard, L.H., Seibert, J.T., Kvidera, S.K. Kvidera, Ross, J.W. Keating, A.F., R.P. Rhoads. 2016. Production, Biological, and Genetic Responses to Heat Stress in Ruminants and Pigs. J. Anim. Sci. 94 (E-Suppl. 5):401.

Bidne, K.L., Dickson, M.J., Kvidera, S.K., Baumgard, L.H., Ross, L.H., Keating, A.F. 2016. Lipopolysaccharide exposure in swine alters ovarian toll-like receptor 4 expression. J. Anim. Sci. 94(E-Suppl. 5):1090.

Dickson, M.J., Bidne, K.L., Hale, B.J., Hager, C.L., Baumgard, L.H., Ross, J.W., Keating, A.F. 2016. Impact of heat stress and metabolic endotoxemia on porcine ovarian function. *J. Anim. Sci.* 94(E-Suppl. 5):1043.

Bidne, K.L., Nteeba, J, Rector, R.S., Perfield II, J.W., Stahl, C.H., Keating, A.F. 2016. Obesity induces hyperinsulinemia and metabolic endotoxemia and alters ovarian phosphatidylinositol-3 kinase and steroidogenesis signaling in a porcine model. Society for the Study of Reproduction annual meeting.

Dickson, M.J., Nteeba, J., Hale, B.J., Kvidera, S., Baumgard, L.H., Ross, J.W., Keating, A.F. 2016. Alterations in porcine ovarian signaling induced by metabolic endotoxemia. Society for the Study of Reproduction annual meeting.

Hale, B.J., Hager, C.L., Baumgard, L.H., Keating, A.F., Ross, J.W. 2016. Heat Stress Induces Anti-Apoptotic Signaling in the Ovary through BCL-2 Family Proteins. Society for the Study of Reproduction annual meeting.

Thomas, P.Q., Keating, A.F. 2016. Regulation of ovarian multidrug resistance protein 1 and p-glycoprotein by phosphatidylinositol-3 kinase signaling. Society of Toxicology annual meeting.

Al-Shaibi, A., Hale, B.J., Hager, C.J., Ross, J.W., Baumgard, L.H., Keating, A.F. 2016. Impact of cyclical heat stress during follicular development on ovarian TLR4, PI3K and steroidogenic proteins in synchronized post-pubertal gilts. Midwest American Society of Animal Science meeting.

Hale, B.J., Hager, C.L., Al-Shaibi, A., Baumgard, L.H., Keating, A.F., Ross, J.W. 2016. Heat stress induces autophagy in pig ovaries during follicular development. Midwest American Society of Animal Science meeting.

Hines, E. A., Seibert, J.T., Stoakes, S., Graves, K., Hale, B., Abuajamieh, M., Hager, C., Rademacher, C., Keating, A.F., Baumgard, L.H, and Ross, J.W. 2016. Evaluation of physiological indicators of heat stress and their association with seasonal infertility in first parity sows. Midwest American Society of Animal Science meeting.

S.K. Kvidera, E.A. Horst, E.J. Mayorga, J.T. Seibert, M.A. Al-Qaisi, J.W. Ross, R.P. Rhoads, and L.H. Baumgard. 2016. Effect of supplemental citrulline on thermal and production parameters during heat stress in growing pigs. *J. Anim. Sci.* 94(E-Suppl. 5):995.

M. Abuajamieh, S.K. Kvidera, E.A. Horst, E.J. Mayorga, J.T. Seibert, J.S. Johnson, J.W. Ross, M.A. Al-Qaisi, P.J. Gorden, J. DeFrain, R.P. Rhoads, and L.H. Baumgard. 2016. The effects of zinc amino acid complex on biomarkers of gut integrity and metabolism in heat-stressed steers. *J. Dairy Sci.* 99(E-Suppl. 1):1175.

E.A. Horst, S.K. Kvidera, M. Abuajamieh, E.J. Mayorga, M.A. Al-Qaisi, H.B. Green, K.M. Schoenberg, W.E. Trout, and L.H. Baumgard. 2016. The effects of ketosis, feed restriction, and an endotoxin challenge on circulating serotonin (5-HT) in lactating dairy cows. *J. Dairy Sci.* 99(E-Suppl. 1):1103.

Hester J, Hanna-Rose W, Diaz FJ. *Caenorhabditis elegans*: a new model for impaired fertility resulting from zinc deficiency. 2016. Proceedings of the 49th Annual Meeting of the Society for the Study of Reproduction, San Diego, CA.

Hughes CK, Maalouf S, Liu W-S, Pate J. 2016. Pathway analysis of differentially expressed mRNA and miRNA in the bovine corpus luteum during maternal recognition of pregnancy reveals functions involved in luteal rescue. Society for the Study of Reproduction.

Hughes CK, Walusimbi SS, Pate JL. 2016. T cells form physical interactions with luteal steroidogenic cells and luteal endothelial cells using cell surface costimulatory molecules. American Society of Reproductive Immunology.

Pate JL, Maalouf S, Hughes CH, Liu W. 2016. Micromanaging the CL: Regulation of transitional states in the corpus luteum by microRNA, Society for the Study of Reproduction.

Vasudevan S, Kamat MM, Pate JL, Ott TL. 2016. Changes in uterine immune regulatory factors and effects of pregnancy associated glycoproteins on uterine immune cells during early pregnancy in dairy heifers. Society for the Study of Reproduction.

Wetzel LM and Pate JL. 2016. Bovine luteal macrophage protein expression changes throughout the luteal phase and luteolysis. American Society of Reproductive Immunology.

MacGhee, M.E., McCoski, S.R., Geiger, A.J., Akers, R.M., Johnson, S.E. and Ealy, A.D. (2016). Early Postnatal Nutrition and Estrogen Administration Impacts Uterine Gland Gene Expression in Dairy Calves. Society for the Study of Reproduction Annual Conference, San Diego, CA.

McCoski, S. R., Poole, R., Vailes, M.T. and Ealy, A.D. (2016). Maternal Obesity Alters Gene Expression During Peri-Implantation Ovine Conceptus Development Society for the Study of Reproduction Annual Conference, San Diego, CA.

Poole, R., V. McCracken, M. Rhoads and K. Lee. 2016. Maturation of oocytes with follicular fluid from gilts consuming high fat and fructose affects subsequent embryo development. *Reprod. Fertil. Dev.* 28(1-2):237.

Garcia Guerra, L. F. Melo, R. V. Sala, J. C. L. Motta, L. Leffers, J. F. Moreno, R. Sartori, M. C. Wiltbank, 2016. Pregnancy loss in IVP-ET recipient heifers: embryo/fetal death or CL regression? ICAR 2016.



Milo C. Wiltbank, Gulnaz Yilmazbas-Mecitoglu, Osman Athi, Ahmet Gumen, 2016. Relationships among interferon-stimulated gene expression, endometrial thickness, and ovarian structures as potential predictors of non-pregnancy in dairy cows on day 21 after AI. ICAR 2016.

Gulnaz Yilmazbas-Mecitoglu, Ahmet Gumen, Ender Uزابaci, Jerry N. Guenther, Milo C. Wiltbank, 2016. Using ultrasonographic evaluation of endometrial thickness to predict non-pregnant dairy cows at day 21 after AI. ICAR 2016.

Garcia Guerra, R. V. Sala, G. M. Baez, M. Fosado, L. F. Melo, J. C. L. Motta, L. Leffers, J. F. Moreno, M. C. Wiltbank, 2016. Treatment with GnRH on day 5 reduces pregnancy loss in heifers receiving in vitro produced expanded blastocysts. IETS 2016.

R. V. Sala, L.C. Carrenho-Sala, M. Fosado, L. C. C. Tosta, R. D. Tosta, M. Stoll, B. M. Monteiro, P. S. Baruselli, A. Garcia-Guerra, M. C. Wiltbank, 2016. Comparison of methods for synchronizing recipients of in vitro produced embryos. IETS 2016.

L. C. Carrenho-Sala, R. V. Sala, M. Fosado, D. C. Pereira, S. Garcia, A. Lopez, J. Moreno, A. GarciaGuerra, M. C. Wiltbank, 2016. Factors that influence fertility in an IVF embryo transfer program in dairy heifers. IETS 2016.

Melo LFE, Nascimento AB, Drum JN, Spies C, Monteiro Junior PLJ, Prata AB, Wiltbank MC, Sartori R, 2016. Circulating progesterone, follicular dynamics, and fertility in Holstein cows during reuse of intravaginal progesterone devices for fixed-time AI. *Animal Reproduction* 13:433.

Ochoa JC, Baez G, Melo L, Motta J, Fenagaricano F, Garcia-Guerra A, Pinheiro J, Sartori R, Wiltbank MC, 2016. Gene expression in the corpus luteum following intrauterine pulses of low doses of prostaglandin E1 and F2alpha in cattle. *Animal Reproduction* 13: 627.

Xie F, Krisher RL, and Wood JR (2016) Oxidative stress during oocyte in vitro maturation increases the abundances of Dppa3 and Pou5f1 maternal effect gene transcripts in matured oocytes and 2-cell embryos, indicative of altered post-transcriptional regulation of maternal mRNAs. *Rocky Mountain Reproductive Sciences Symposium*, Loveland, CO

Xie F, Krisher RL, and Wood JR (2016) Oxidative stress during oocyte in vitro maturation increases the abundances of Dppa3 and Pou5f1 maternal effect gene transcripts in matured oocytes and 2-cell embryos, indicative of altered post-transcriptional regulation of maternal mRNAs. *Society for the Study of Reproduction*, San Diego, CA

Abedal-Majed MA, Magamage M, Vinton R, Kurz S, McNeel AK, Freetly HC, Cushman RA, Wood JR, and Cupp AS (2016) Effect of Diet on Ability of Vascular Endothelial Growth Factor A (VEGFA) isoforms to alter Follicular Progression in Bovine Ovarian Cortical Cultures. *Society for the Study of Reproduction*, San Diego, CA

Romereim SM, Wood JR, Hou X, Talbott H, Cushman RA, Davis JS, and Cupp AS (2016) A Comparison of Ovarian Follicular and Luteal Cell Gene Expression Profiles Provides Insight into Cellular Identities and Functions. *Society for the Study of Reproduction*, San Diego, CA

Tenley S, Summers AF, Spuri-Gomes R, Abedal-Majed MA, Bergman J, Kurz S, Wood JR, Cushman RA, and Cupp AS (2016) A portion of heifers attaining “Early Puberty” do not display estrus, are anovulatory, and have altered Sex Hormone Binding Globulin concentrations. *Society for the Study of Reproduction*, San Diego, CA

Timme KR, Xie F, and Wood JR (2016) Inflammation and Oxidative Stress Regulation of mRNA Abundance in Growing and Mature Oocytes Impact Protein Expression in Pre-Implantation Embryos. *13<sup>th</sup> Annual Gilbert Greenwald Symposium on Reproduction*, Kansas City, KS

McCain AR, Beede KA, Yates DT, and Wood JR (2016) Maternal Obesity is Correlated with Altered Muscle Progenitor Differentiation in Mid-Gestation Embryos and Neonatal Offspring. *13<sup>th</sup> Annual Gilbert Greenwald Symposium on Reproduction*, Kansas City, KS

***Theses/Dissertations:***

Changes in phenotype and function of myeloid lineage cells during early pregnancy in dairy heifers. Manasi M. Kamat, Doctoral Dissertation in Immunology and Infectious Disease. TL Ott – Committee Chair. Pennsylvania State University

Effects of pregnancy and pregnancy-specific protein B on lymphoid lineage cells in dairy heifers. Sreelakshmi Vasudevan, Doctoral Dissertation in Immunology and Infectious Disease. TL Ott – Committee Chair. Pennsylvania State University

Rebecca Poole (2016). Fat and Fructose Consumption Affects Pre-pubertal Development of Gilt Reproductive Tissues and Early Embryogenesis. (MS Thesis). Virginia Polytechnic Institute and State University

Xie, F. Transcriptional and Post-Transcriptional Regulation of Oocyte and Embryo Messenger RNA in Mouse Models of Diet-Induced Obesity. PhD Dissertation. University of Nebraska-Lincoln. August 2016

***Active collaboration within the group:***

Butler, Pate, Ott, Townson, Tsang, Dailey, Keating, Rhoads, Ealy - DNA and SNP Analysis for Fertility in Dairy Cattle (NE-1227 collaborative project)

Inskeep and Pate - 1. macrophages in the corpus luteum; 2. Extracellular vesicles as mediators of communication between luteal cells and immune cells

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