**Peer-reviewed publications authored by W3112 members during the report period:**

1. Goyal, D., S.W. Limesand, R. Goyal. 2019. Epigenetic responses and the developmental

origins of health and disease. Journal of Endocrinology, 242(1):T105-T119.

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3. Pendleton, A.L., L.R. Humphreys, M.A. Davis, L.E. Camacho, M.J. Anderson, S.W.

Limesand. 2019. Increased pyruvate dehydrogenase activity in skeletal muscle of growth

restricted ovine fetuses. American Journal of Physiology-Regulatory, Integrative and

Comparative Physiology 317(4):R513-R520.

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Endocrinology 160(9):2117-2118.

5. Beede, K.A., S.W. Limesand, J.L Petersen, D.T. Yates. 2019. Real supermodels wear wool: summarizing the impact of the pregnant sheep as an animal model for adaptive programming. Animal Frontiers, 9(3):34-43.

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14. Najafi A, Daghigh-Kia H, Mehdipour M, Shamsolahi M, Miller DJ. 2019. Does fennel extract ameliorate oxidative stress in frozen-thawed ram sperm? Cryobiology. 87:47-51.

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223:116-123.

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26. Cooke, R.F., R.C. Cardoso, R.L.A. Cerri, G.C. Lamb, K.G. Pohler, D.G. Riley and J.L.M. Vasconcelos. 2020. Board Invited Review - Cattle adapted to tropical and subtropical

environments (II): genetic and reproductive considerations. J. Animal Sci. 98:1-20.

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insemination in Brangus heifers. Journal of Animal Science. 98:6.

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placental explants. Theriogenology. 151:74-80.

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68. Madureira, A.M.L., R.K. Poole, T.A. Burnet, T.G. Guida, J.L. Edwards, J.L.M. Vasconcelos, R.L.A. Cerri, K.G. Pohler. Size and position of the reproductive tract impacts fertility outcomes and pregnancy losses in lactating cows. Theriogenology. 158:66-74.

69. Ali A, Swanepoel CM, Winger QA, Rozance PJ, Anthony RV. Chorionic somatomammotropin RNA interference alters fetal liver glucose utilization. J Endocrinol. 2020 Dec;247(3):251-262.

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71. Oliveira Filho RV, Cooke RF, de Mello GA, Pereira VM, Vasconcelos JLM, Pohler KG. 2020. The effect of clitoral stimulation post artificial insemination on pregnancy rates of multiparous Bos indicus beef cows submitted to estradiol/progesterone-based estrus synchronization protocol. J Anim Sci. 98(7):skaa195.

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74. Composition of the Lipid Droplets of the Bovine Corpus Luteum. 2020. Heather A. Talbott, Michele R. Plewes, Crystal Krause, Xiaoying Hou, Pan Zhang, William B. Rizzo, Jennifer R. Wood, Andrea S. Cupp, John S. Davis. doi: <https://doi.org/10.1101/2020.02.13.948117>. *Preprint.*

**Abstracts published/presented by W3112 members during the report period:**

1. Pendleton, A.L., M.A. Davis, A.C. Kelly, L.E. Camacho, M.J. Anderson, P.R. Langlais,

S.W. Limesand. Decreased Mitochondrial Complex I Activity in Skeletal Muscle of

Growth Restricted Ovine Fetuses with Placental Insufficiency. Society for Reproductive

Investigation 67th Annual Scientific Meeting. O-064

2. Tabsh, K.K., A.L. Pendleton, N.K. Barker, P.R. Langlais, S.W. Limesand, M.G. Hill.

Downregulation of Inflammatory Biomarkers from Maternal Plasma in Women with

Intrahepatic Cholestasis of Pregnancy. Society for Reproductive Investigation 67th

Annual Scientific Meeting. T-106.

3. Luna Ramirez, R.I., A.C. Kelly, C.A. Bidwell, M.J. Anderson, M.A. Davis, L.E. Camacho,

S.W. Limesand. Upregulation of PPAR Signaling in Adipose Tissue from Ovine Fetuses

Complicated with Placental Insufficiency. Society for Reproductive Investigation 67th

Annual Scientific Meeting. T-086.

4. Beltran-Gastelum J, Jauregui EJ, Craig ZR. (2019). “Environmentally Relevant Exposure

to Dibutyl Phthalate and Ovarian Gene Expression: Effects of Terminal Estrous Cycle

Stage”. Annual Meeting of the Society for the Study of Reproduction. San Jose, CA. July

18-21, 2019.

5. Nunez FM, Beltran-Gastelum J, Craig, ZR. (2019). “Effects of dibutyl phthalate (DBP)

exposure on the expression of transcription factors in the mouse ovary”. Annual Meeting

of the Society for the Study of Reproduction. San Jose, CA. July 18-21, 2019.

6. Jauregui EJ, Lock JL, Rasmussen LM, Craig, ZR. (2019) “Levels of Mono-n-butyl

Phthalate in the Tissues of Adult CD-1 Female Mice after Repeated Oral Administration

of Di-n-butyl Phthalate”. Submitted to the Annual Meeting of The Society of Toxicology.

Anaheim, CA. March 15-19, 2020.

7. Nunez FM, Beltran-Gastelum JG, Craig ZR. (2019) “The effects of oral dibutyl phthalate

(DBP) exposure on transcription factor activation in the mouse ovary”. Submitted to the

Annual Meeting of The Society of Toxicology. Anaheim, CA. March 15-19, 2020.

8. Beltran-Gastelum JG, Nunez FM, Jauregui EJ, Craig ZR. (2019) “Exploring reproductive

toxicological dosing schemes: effects of environmentally relevant dibutyl-phthalate

exposures on terminal estrous stage gene expression”. Submitted to the Annual Meeting

of The Society of Toxicology. Anaheim, CA. March 15-19, 2020.

9. Ali, A., R.V. Anthony, G.J. Bouma and Q.A. Winger. 2019. LIN28-Let-7 Axis

Regulates Gene Expression in Ovine Placenta In Vivo. 52nd Annual Society of the

Study of Reproduction meeting. Abstract P600.

10. Mansour, H.H., C.O. Lemely, R.V. Anthony, W. Keller, K.M. Carlin, A.T. Grazul-

Bilska and K.A. Vonnahme. 2019. Melatonin supplementation and restricted

nutrition do not affect chorionic somatomammotropin (CSH) protein expression in

ovine placenta from mid- to late-gestation. American Society of Animal Science

meeting. Abstract PSII-35.

11. Cilvik, S., S.R. Wesolowski, R.V. Anthony, L.D. Brown and P. Rozance. 2020. Late

Gestation Fetal Hyperglucagonemia Results in Lower Fetal Weight, Fetal

Hypoaminoacidemia, and Decreased Uteroplacental Nutrient Uptake. 67th Annual

Scientific Meeting, Society for Reproductive Investigation. Abstract O-125.

Reprod. Sci. 27 (Suppl. 1):107A. (Meeting Cancelled).

12. Vaughn, O.R., E. Silva, R.V. Anthony, T.L. Powell and T. Jansson. 2020.

Trophoblast-Specific Knockdown of the System A Amino Acid Transporter,

Slc38a2/SNAT2, Reduces Placental Weight in Mice. 67th Annual Scientific

Meeting, Society for Reproductive Investigation. Abstract T-122. Reprod. Sci. 27

(Suppl. 1):166A. (Meeting Cancelled).

13. Tanner A.R., A. Ali, Q.A. Winger, P.J. Rozance and R.V. Anthony. 2020. Impact of

Chorionic Somatomammotropin RNA Interference on Uterine Blood Flow and

Placental Glucose Uptake in the Absence of Intrauterine Growth Restriction.

American Society of Animal Science meeting. Abstract 152.

6. Ali, A. M. Howerton, Q.A. Winger, P.J. Rozance and R.V. Anthony. 2020.

Trophectoderm-specific RNA interference of chorionic somatomammotropin alters

glucose metabolism in sheep fetal liver. American Society of Animal Science

meeting. Abstract PSII-39.

14. Lynch C.S., A. Ali, V.C. Kennedy, A.R. Tanner, Q.A. Winger and R.V. Anthony.

2020. Placental GLUT3 (SLC2A3) RNA interference: Impact on fetal growth at midgestation.

American Society of Animal Science meeting. Abstract PSII-34.

15. Gonzalez-Berrios CL, Georges HM, Bishop JV, Van Campen H, Thomas MG,

Hansen TR. Peripheral transcriptome response to embryo mortality in Holstein

cows. International Embryo Technology Society 2020; 46th Annual Conference:

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16. Georges HM, Bishop J, Van Campen H, Barfield JP, Hansen TR. A delay in

maternal zygotic transition may lead to early embryonic loss in poor quality bovine

blastocysts. International Embryo Technology Society 2020; 46th Annual

Conference, New York, New York; January 16-19; Abstract 102; Page 123.

17. Georges HM, Van Campen H, Engle TE. BVDV infection during late pregnancy

may produce offspring prone to infection after birth. Conference of Research

Workers in Animal Disease 2019; 100th Annual Conference, Chicago IL:214.

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40. Keane, J, S Nafziger, MA Abedal-Majed, S Tenley, M Hart, JW Bergman, SG Kurz, JR Wood, AF Summers and AS Cupp. Early Reduced Growth Rates Predict Delayed or Altered Puberty and May Adversely Affect Reproductive Longevity in Beef Heifers. Society for the Study of Reproduction, San Jose, CA, 2019 Poster 100; Gil Greenwald Reproductive and Regenerative Medicine Symposia, Kansas City KS, Nov 2019.

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43. Kleditz, L., Habeeb, H. M. H., Kutzler M. A. Immunoexpression of follicle stimulating hormone receptor in reproductive and non-reproductive tissues in the female ewe. Society for Theriogenology (presented July 24, 2020).

44. Liu, W.-S., (2019) The enrichment of testis-specific genes on the mammalian X

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45. Liu, W.-S., (2019) Mammalian Sex Chromosome Structure, Gene Content and

Function in Male Fertility. July 24-28, 2019. SCBA International Symposium,

Kunming, China.

46. Liu, W.-S. (2019) What have we learned from the bovine Y-chromosome? ISAG

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47. Weber Feitosa, Chandlar Kern, Wan-sheng Liu (2019) Patterns of the PRAMEY

expression in the bovine testis and epididymis. SSR2019, July 18-21, San Jose,

CA.

48. Mingyao Yang, Weber Feitosa, Wan-sheng Liu (2019) Deletion of the mouse

Prame gene affects DDX4 expression in seminiferous tubules during the first

wave of spermatogenesis. SSR2019, July 18-21, San Jose, CA.

49. Chandlar Kern, Weber Feitosa, Wan-sheng Liu (2019) Subcellular localization of

PRAMEY during Bovine Sperm Maturation. SSR2019, July 18-21, San Jose, CA.

50. Franco, G.A.#, G. Dalmaso de Melo#, S.T. Reese#, and K.G Pohler\*. 2020. Measurement of interferon-tau stimulated gene expression in blood leukocytes for pregnancy diagnosis 15 days after insemination using ddPCR. Brazilian Embryo Transfer Society Annual Meeting.

51. Pohler, K.G,\*. Invited: The timing of pregnancy loss in beef cattle. American Society of Animal Science Annual Meeting.

52. Wesson, G.M. #, L. Fernandez#, R.K. Poole#, G.A. Franco#, S.T. Reese#, and K.G Pohler\*. 2020. Effects of various handling methods of plasma and serum samples on pregnancy associated glycoprotein concentrations. American Society of Animal Science Annual Meeting.

53. Oosthuizen, N., P.L. Fontes$, R.V. Oliveira Filho#, C.C. Dahlen, D.M. Grieger, J.B. Hall, S.L. Lake, C.R. Looney, V.R. Mercadante, B. Neville, G. Perry, J.G. Powell, L.D. Prezotto, G.E. Seidel, R.S. Walker, R.C. Cardoso, K.G. Pohler\*\*, and G.C. Lamb. Presynchronization and delayed fixed-time artificial insemination increases pregnancy rates with sex-sorted semen in replacement beef heifers.

54. Maia, T.S., H.R. Guimaraes, G.A. Franco#, K.G Pohler\*\*, R.C. Cardoso, and G.L. Williams. 2020. Do pre and postnatal nutrition interact to program reproductive phenotype in sexually mature heifers?. American Society of Animal Science Annual Meeting.

55. Reese, S.T. #, G.A. Franco#, R. Olivera Filho#, and K.G Pohler\*. 2020. Prostaglandin E2 is decreased in pregnant cows during active placentation. Society for the Study of Reproduction Annual Meeting.

56. Schmelzle, A.L., K.G Pohler\*\*, M.F. Smith, and J.A. Green. 2020. Effects of bovine pregnancy associated glycoproteins on gene transcription in bovine endometrial explants. Society for the Study of Reproduction Annual Meeting.

57. Peixoto, P.M., A.M. Hubner, L.L. Cunha, W.M. Coelho Jr., K.G Pohler\*\*, N.W. Dias, V.R.G. Mercadante, I.F. Canisso, F.S. Lima. 2020. Characterization of pregnancy associated

glycoproteins and progesterone in Holstein lactating cows diagnosed with high risk and twin

pregnancy. American Dairy Science Association Annual Meeting.

58. Poole, R.K.#, T.B. Ault#, P.R. Myer and K.G Pohler\*. 2020. Uterine and vaginal bacteria and cytokine profiles prior to artificial insemination between resulting pregnant and open postpartum beef cows. ASAS Southern Section Meeting.

59. DeShazo, E.K.#, S.T. Reese#, G.A. Franco#, D.A. Neuendorff, R.D. Randel and K.G Pohler\*. 2020. A comparison of breeding indictors for an effective AI program in Brahman cattle. ASAS Southern Section Meeting.

60. Melo, G.D.#, B.P. Mello, L.M.F. Pinto, A. Guimarães, C C. Rocha, I.G. Motta, E.H. Madureira, J.C. Silveira, K.G Pohler\*\*, and G. Pugliesi. 2020. Prediction of pregnancy and early embryo loss through OAS-1 expression, concentrations of pregnancy-associated glycoproteins, and Doppler ultrasonography in beef cattle. International Embryo Technology Society Annual Meeting.

61. Zwiefelhofer, E.M., M.L. Zwiefelhofer, J. Singh, M.G. Colazo, G.A. Franco#, S.T. Reese#, K.G Pohler\*\*, and G.P. Adams. 2020. Oestrus response, corpus luteum function, and pregnancy rates following aromatase inhibitor treatment in beef heifers. International Embryo Technology Society Annual Meeting.

62. Franco, G.A.#, G. Dalmaso de Melo#, S.T. Reese#, V.M. Negron-Perez, C.L. Timlin, K. Uh, K. Lee, V.R.G. Mercadante and K.G Pohler\*. 2019. Conceptus-derived products in circulation during early pregnancy in cattle receiving parthenogenetic vs normal embryos. Brazilian Embryo Transfer Society Annual Meeting.

63. Reese, S.T.#, G.A. Franco#, R. Olivera Filho#, L. Fernandez Montero#, G. Dalmaso de Melo#, A.B. Moraes#, D. Neuendorff, R. Randel, K.G. Pohler\*. 2019. Pulses of prostaglandin F2alpha metabolite during late embryonic development in Bos indicus cattle. Brazilian Embryo Transfer Society Annual Meeting.

64. Oliveira Filho, R.V.#, G. Azevedo de Mello, A. Pollock#, J.L.M. Vasconcelos. R. Cerri, and K.G Pohler\*. 2019. The effect of subclinical endometritis on reproductive performance in postpartum Bos indicus cattle. Brazilian Embryo Transfer Society Annual Meeting.

65. Boss, K. S., K. J. Austin, B. M. Alexander. 2020. Aflatoxin B1 influences expression of TRPM8 in SKOV, Ovarian Epithelial Cancer cells. American Society of Animal Science. Virtual Meeting.

66. Alexander, B. M. 2020. Reproductive Behavior—The basis of reproductive success. Invited oral presentation. Randel Symposium. Southern Section American Society of Animal Science. Chattanooga, TN.

67. Hall, J. B., J. E. Sprinkle, M. Ellison, S. A. Goddard, J. Bret Taylor, and J. B. Glaze, Jr. 2020. Comparison of range-based and irrigated cow-calf systems – Grazing season performance. Annual Meeting of ASAS-CSAS-WSASAS. July 23, 2020. PSXI-7.

68. Stevens, A. C., C. Meyers, J. B. Hall, and G. E. Chibisa. 2020. Interactions between the stage of maturity of Eragrostis tef hay and supplemental energy source on forage utilization in beef heifers. Annual Meeting of ASAS-CSAS-WSASAS. July 23, 2020. PSVIII-27.

**Proceedings papers and nonrefereed publications published during the period:**

1. Hall, J. B. 2019. Capturing the Value of Artificial Insemination in Commercial Herds.

Proceedings, The Range Beef Cow Symposium XXVI November 18, 19 and 20 2019,

Mitchell, Nebraska.

2. D.J. Patterson, J.M. Thomas, E.R. Knickmeyer, J.W.C. Locke, R.C. Bonacker, and M.F. Smith. Control of estrus and ovulation in beef heifers. Proceedings, Applied Reproductive Strategies in Beef Cattle; August 20-21, 2019; Knoxville, TN.

3. S.E. Moorey, C.C. Read , G.A. Perry , K.G. Pohler , M.K. McLean , L.A. Ciernia , J.N. Ketchum , M.F. Smith , and D.J. Patterson. Physiology of the estrous cycle. Proceedings, Applied Reproductive Strategies In Beef Cattle; August 20-21, 2019; Knoxville, TN.

**Book chapters authored by W3112 members during the report period:**

Fernandez, L#., R.K. Poole#, S.T. Reese#, G.A. Franco#, and K.G. Pohler\*. 2020. Managing the problem donor. Bovine Reproduction. Pending Publication.