

Ryan L. Ashley, Ph.D.

Curriculum Vitae

Address: New Mexico State University
Department of Animal and Range Sciences
College of Agricultural, Consumer and Environmental Sciences
PO Box 30003, MSC 3I
Las Cruces, NM 88003
office: 575-646-4135; email: ryashley@nmsu.edu

Education

Doctor of Philosophy, Spring 2007

Colorado State University – Fort Collins, Colorado

Major: Biomedical Sciences *Emphasis:* Reproductive Physiology, GPA = 4.0/4.0

Dissertation Title: Identification and characterization of two ovine membrane progesterone receptors.

Advisor: Dr. Terry Nett

Master of Science, Spring 2002

New Mexico State University – Las Cruces, New Mexico

Major: Animal Science *Minor:* Toxicology, GPA = 4.0/4.0

Thesis Title: Precision-Cut Liver Slice Methodology for Study of Snakeweed Toxicity.

Advisor: Dr. James Strickland

Co-advisor: Dr. Dean Hawkins

Bachelor of Science, Spring 1999

New Mexico State University – Las Cruces, New Mexico

Major: Animal Science, GPA = 4.0/4.0

Experience

Associate Professor: July 2016 to present. ANRS Department, New Mexico State University

Associate Director: May 2017 to present. New Mexico IDeA Network for Biomedical Excellence
(NM-INBRE)

Assistant Professor: September 2010 to July 2016. ANRS Department, New Mexico State University

Post-doctoral Fellow: January 2007 to September 2010. Department of Biomedical Sciences, Colorado State University. Animal Reproduction and Biotechnology Laboratory (ARBL).
Mentor: Dr. Thomas Hansen

Graduate Research Assistant / NIH Fellowship Trainee: January 2002 to 2007.
Department of Biomedical Sciences, Colorado State University
Animal Reproduction and Biotechnology Laboratory (ARBL)

Graduate Research/Teaching Assistant: June 1999 to December 2001.
Department of Animal and Range Sciences, New Mexico State University

Laboratory Proficiencies

- Cell culture
- Ovine pituitary and corpora lutea collection and primary cell isolation
- Murine decidual collection and primary cell isolation
- PCR, Reverse Transcription (RT)-PCR, Quantitative Real-Time PCR (qPCR)
- Cell Transfections/Infections
- SDS/PAGE and Immunoblotting
- DNA/RNA purification
- Northern Blots
- Molecular cloning
- Electrophoresis (DNA/RNA)
- Fusion Protein Generation
- Confocal Microscopy
- Immunohistochemistry
- Immunocytochemistry
- Flow Cytometry
- Hormone Radio-labeling (¹²⁵I)
- Colorimetric-based assays
- Radio-immunoassays
- ELISA-based assays
- Surgical
 - Ovine ovariectomies
 - Ovine uterine lumen or vein cannulation for osmotic pump treatment delivery
 - Ovine jugular cannulations
 - Assisted in bovine Cesarean sections
 - Assisted in bovine ovariectomies
 - Assisted in ovine hepatic, portal, mesenteric vein & artery cannulation
 - Post-mortem tissue collection in mice, rats, and sheep
 - Assisted in artificial insemination in cattle and pigs
 - Assisted in ultrasound for pregnancy detection and fetal development
 - Assisted in intracardiac perfusions in rabbits

Teaching Responsibilities

New Mexico State University (September 2010 to present)

- Physiology of Reproduction (ANSC 421)
- Advanced Reproductive Physiology (ANSC 602)
- Molecular Techniques in Reproductive Physiology (ANSC 602L)
- Hypothalamo-Hypophyseal-Pineal Endocrinology (ANSC 604)
- Gonadal and Uterine Endocrinology (ANSC 605)
- Endocrinology of Pregnancy, Parturition, and Lactation (ANSC 606)

Colorado State University (2003 to 2007)

- Sexuality and Health (BS 124): Primary lecturer for approximately 10% of material. 2003 - 2007
- Animal Reproduction (AN 310): Primary lecturer for approximately 25% of material, aided in development of curriculum and course organization. 2004
- Animal Anatomy and Physiology (PS/AY 230): Graduate teaching assistant. 2004
- Attended "Becoming a Teacher" Workshop. 2003

New Mexico State University (1999 to 2001)

- Guest lecturer for Ag Animals of the World (ANSC 351)
- Graduate teaching assistant for:
 - Physiology of Reproduction (ANSC 421)
 - Introduction to Animal Science (ANSC 100)
 - Anatomy and Physiology of Farm Animals (ANSC 370)
 - Livestock, Meat, and Wool Evaluation (ANSC 303)
 - Swine Production (ANSC 314)
 - Horse Breaking and Training (currently, ANSC 288)

Publications

Refereed Journal Articles

- DeAtley, K., M. Colgrave, A. Canovas, G. Wijffels, **R.L. Ashley**, G. Silver, G. Rincon, Gonzalo; J. Medrano, A. Islas-Trejo, M. Fortes, A. Reverter, L. Porto-Neto, S. Lehnert, and M. Thomas. 2018. Neuropeptidome of the hypothalamus and pituitary gland of indicine x taurine heifers: evidence of differential neuropeptide processing in the pituitary gland before and after puberty. *Journal of Proteome Research*. In Press.
- Sanchez, N.S., K.E. Quinn, A.K. Ashley, and **R.L. Ashley**. 2018. In the ovine pituitary, CXCR4 is localized in gonadotropes and somatotropes and increases with elevated serum progesterone. *Domestic Animal Endocrinology*. (62):88–97. PMID: 29157995
- Quinn, K.E., S.Z Prosser, K.K. Kane, and **R.L. Ashley**. 2017. Inhibition of chemokine (C-X-C motif) receptor four (CXCR4) at the fetal-maternal interface during early gestation in sheep: alterations in expression of chemokines, angiogenic factors and their receptors. *J. Anim. Sci.* 95(3):1144-1153. PMID: 28380526
- Young, C.H., H.M. Rothfuss, P.F. Gard, A. Muth, P.R. Thompson, **R.L. Ashley**, and B.D. Cherrington. 2017. Citrullination regulates the expression of insulin-like growth factor-binding protein 1 (IGFBP1) in ovine uterine luminal epithelial cells. *Reproduction*. Jan;153(1):1-10. PMID: 29565015; PMCID: [PMC5868962](https://pubmed.ncbi.nlm.nih.gov/29565015/)
- Salazar, M.S., A. Lerma-Ortiz, G. M. Hooks, A. Alire, A. K. Ashley and **R. L. Ashley**. 2016. Progesterin-mediated activation of MAPK and AKT in nuclear progesterone receptor negative breast epithelial cells: the role of membrane progesterone receptors. *Gene*. 591(1):6-13. PMCID: [PMC4992424](https://pubmed.ncbi.nlm.nih.gov/29565015/)
- Quinn, K.E., L.P. Reynolds, A.T. Grazul-Bilska, P.P. Borowicz, and **R.L. Ashley**. 2016. Placental development during early pregnancy: Effects of embryo origin on expression of chemokine ligand twelve (CXCL12). *Placenta*. 43. 77-80. PMID: 27324103
- Bairagi, S., K.E. Quinn, A.R. Crane, **R.L. Ashley**, P.P. Borowicz, J.S. Caton, R.R. Redden, A.T. Grazul-Bilska, L.P. Reynolds. 2016. Maternal environment and placental vascularization in small ruminants. *Theriogenology*. 86(1). 288-305. PubMed PMID: [27173956](https://pubmed.ncbi.nlm.nih.gov/27173956/).
- Romero, J.J., A.Q. Antoniazzi, T.M. Nett, **R.L. Ashley**, B.T. Webb, N.P. Smirnova, R.C. Bott, J.E. Bruemmer, F.W. Bazer, R.V. Anthony, and T.R. Hansen. 2015. Temporal release, paracrine and endocrine actions of ovine conceptus-derived interferon-tau during early pregnancy. *Biology of Reproduction*. Dec;93(6):146. PMID: 26559679.
- Reynolds, L.P., J.S. Haring, M.L. Johnson, **R.L. Ashley**, D.A. Redmer, P.P. Borowicz, and A.T. Grazul-Bilska. 2015. Placental development during early pregnancy in sheep: estrogen and progesterone receptor messenger RNA expression in pregnancies derived from in vivo-produced and in vitro-produced embryos. *Domestic Animal Endocrinology*. Oct; 53:60-9. PMID: 26119037.
- Coleson, M.P.T., N.S. Sanchez, A.K. Ashley, T.T. Ross, and **R.L. Ashley**. 2015. Human chorionic gonadotropin increases serum progesterone, number of corpora lutea, and angiogenic factors in pregnant sheep. *Reproduction*. Jul;150(1):43-52. PMID: 25861798.

- Henkes, L.E., J.K. Pru, **R.L. Ashley**, R.V. Anthony, D.N. Veeramachaneni, K.C. Gates, and T.R. Hansen. 2015. Embryo Mortality in *Isg15*^{-/-} Mice Is Exacerbated by Environmental Stress. *Biology of Reproduction*. 92(2):36. PMID: 25505199.
- Canovas, A. Reverter, A., DeAtley, K.L., **Ashley, R.L.**, Colgrave, M.L., Fortes, M. R., Islas-Trejo, A., Lehnert, S., Porto-Neto, L., Rincon, G., Silver, G.A., Snelling, W.M., Medrano, J.F., Thomas, M.G. 2014. Multi-Tissue Omics Analyses Reveal Molecular Regulatory Networks for Puberty in Composite Beef Cattle. *PLoS One*. Jul 21;9(7):e102551. PMID: 25048735.
- Quinn, K.E., A.K. Ashley, L.P. Reynolds, A.T. Grazul-Bilska, **R.L. Ashley**. 2014. Activation of the CXCL12/CXCR4 signaling axis may drive vascularization of the ovine placenta. *Domestic Animal Endocrinology*. 47:11-21. PMID: 24486002.
- Hansen, T.R., J.J. Romero, A.Q. Antoniazzi, R.C. Bott, **R.L. Ashley**, B.T. Webb, L.E. Henkes, N.P. Smirnova. 2013. Endocrine conceptus signaling in ruminants. *Animal Reproduction*. (3):311-321.
- Antoniuzzi, A.Q., B.T. Webb, J.J. Romero, **R.L. Ashley**, N.P. Smirnova, L.E. Henkes, R.C. Bott, J.F. Oliveira, G.D. Niswender, F.W. Bazer, and T.R. Hansen. 2013. Endocrine delivery of interferon-tau protects the corpus luteum from prostaglandin F2 alpha-induced luteolysis in ewes. *Biology of Reproduction*. 88(6):144.
- Ashley, R.L.**, A.Q. Antoniazzi, R.V. Anthony, and T.R. Hansen. 2011. The chemokine receptor CXCR4 and its ligand CXCL12 are activated during implantation and placentation in sheep. *Reproductive Biology and Endocrinology*. 9:148. PMID: 22053725.
- Hansen, T.R., L.E. Henkes, **R.L. Ashley**, R.C. Bott, A.Q. Antoniazzi, and H. Han. 2010. Endocrine actions of interferon-tau in ruminants. *Reproduction in Domestic Ruminants. Journal of Reproductive Fertility*.7:1-22.
- Ashley, R.L.**, L.E. Henkes, G.J. Bouma, J.K. Pru, and T.R. Hansen. 2010. Deletion of the *Isg15* gene results in up-regulation of decidual cell survival genes and down-regulation of adhesion genes: Implication for regulation by interleukin-1 beta. *Endocrinology*. Sep, 151(9): 4527-36.
- Arreguin-Arevalo J.A., **Ashley R.L.**, Wagenmaker E.R., Oakley A.E., Karsch F.J., Nett T.M. 2010. Membrane-initiated actions of estradiol (E2) in the regulation of LH secretion in ovariectomized (OVX) ewes. *Reproductive Biology and Endocrinology*. 8(1):40 (10 May 2010).
- Bott, R.C., **R.L. Ashley**, L.E. Henkes, A.Q. Antoniazzi, J.E. Bruemmer, G.D. Niswender, F.W. Bazer, T.E. Spencer, N.P. Smirnova, R.V. Anthony, and T.R. Hansen. 2010. Uterine vein infusion of interferon tau (IFNT) extends luteal lifespan in ewes. *Biology of Reproduction*. 82(4):725-35.
- Ashley, R.L.**, J.A. Arreguin-Arevalo, and T.M. Nett. 2009. Binding characteristics of the ovine membrane progesterone receptor alpha and expression of the receptor during the estrous cycle. *Reproductive Biology and Endocrinology*. 7:42 (11 May 2009).
- Oliveira, J.F., L.E. Henkes, **R.L. Ashley**, S.H. Purcell, N.P. Smirnova, R.V. Anthony, T.R. Hansen. 2008. Expression of ISGs in extrauterine tissues during early pregnancy in sheep is the consequence of endocrine IFN-tau release from the uterine vein. *Endocrinology*. Mar, 149(3):1252-9.

Ashley, R.L., C. M. Clay, T.A. Farmerie, G.D. Niswender, and T.M. Nett. 2006. Cloning and characterization of an ovine intracellular seven transmembrane receptor for progesterone that mediates calcium mobilization. *Endocrinology*. 147(9):4151-9.

Ashley, A.K., **R.L. Ashley**, M.A.Siepel, and J.R. Strickland. 2006. Toxicokinetic profile of swainsonine following acute and subacute exposure in sheep. *New Zealand Journal of Veterinary Medicine*. 54(1):34-40.

Abstracts and Proceedings Articles

Robinson, C.L., S.Z. Prosser, K.K. Kane, and **R.L. Ashley**. 2018. Inhibition of chemokine receptor 4 (CXCR4) signaling at the fetal-maternal interface alters ROCK1 and mTOR signaling pathways during early gestation in sheep. Society for the Study of Reproduction, 51st Annual Meeting.

Prosser, S.Z., K.E. Quinn, and **R.L. Ashley**. 2018. CXCL12 may function as a luteotropic factor by regulating inflammatory cytokine production in the corpus luteum. Society for the Study of Reproduction, 50st Annual Meeting.

Robinson, C.L., S.Z. Prosser, K.E. Quinn, K.K. Kane, and **R.L. Ashley**. 2017. Elucidating the involvement of CXCL12-CXCR4 signaling axis in driving angiogenesis at the fetal-maternal interface. Society for the Study of Reproduction, 50th Annual Meeting.

Prosser, S.Z., K.E. Quinn, K.K. Kane, and **R.L. Ashley**. 2017. Inhibition of chemokine (C-X-C motif) receptor 4 (CXCR4) signaling at the fetal-maternal interface regulates inflammatory cytokine production during early gestation. Society for the Study of Reproduction, 50th Annual Meeting.

Prosser, S.Z., C.J. Maxam, K.E. Quinn, and **R.L. Ashley**. 2017. In utero inhibition of chemokine receptor four signaling alters peripheral blood immune response during early pregnancy in ewes. 89th Annual Meeting of Western Section American Society of Animal Science.

Quinn, K.E., K. K. Kane, S.Z. Prosser, and **R.L. Ashley**. 2016. Inhibition of chemokine (C-X-C motif) receptor four (CXCR4) signaling during early gestation suppresses events crucial for embryo survival. Society for the Study of Reproduction, 49th Annual Meeting.

Prosser, S.Z., K.K. Kane, K.E. Quinn, and **R.L. Ashley**. 2016. Inhibition of chemokine (C-X-C motif) receptor 4 (CXCR4) signaling at the fetal-maternal interface increases T-helper 1 (Th1) cytokines during early gestation in sheep. Society for the Study of Reproduction, 49th Annual Meeting.

Robinson, C.L., K.E. Quinn, S.Z. Prosser, K.K. Kane, and **R.L. Ashley**. 2016. Inhibition of CXCL12-CXCR4 signaling at the fetal-maternal interface impacts vascularization during implantation and placentation in sheep. Society for the Study of Reproduction, 49th Annual Meeting.

Young, C.H., P. Gard, K.E. Quinn, **R.L. Ashley**, B.D. Cherrington. 2016. Peptidylarginine deiminase (PAD) enzymes are expressed in ewe caruncles at pregnancy day 25 and citrullinate histone H3 arginine residues. Society for the Study of Reproduction, 49th Annual Meeting.

Quinn, K.E., M.S. Crouse, K.J. McLean, L.P. Reynolds, C.R. Dahlen, P.P. Borowicz, B.W. Neville, J.S. Caton, **R.L. Ashley**. 2016. CXCL14, CXCL12, CXCR4, and ACKR3 expression in bovine utero-placental tissues on days 22 to 50 of gestation. Society for the Study of Reproduction, 49th Annual Meeting.

Prosser, S.Z., K.E. Quinn, and **R.L. Ashley**. 2016. Immunological implications of pregnancy: A focus on inflammatory cytokines. 88th Annual Meeting of Western Section American Society of Animal Science.

- Quinn, K.E., S.Z. Prosser, and **R.L. Ashley**. 2015. Inhibition of chemokine receptor four (CXCR4) signaling in vivo suppresses trophoblast invasion during early gestation in sheep. 87th Annual Meeting of Western Section American Society of Animal Science.
- Prosser, S.Z., K.E. Quinn, and **R.L. Ashley**. 2015. Chemokine ligand twelve and T-helper 1 cytokines increase in corpus luteum during implantation in sheep. 87th Annual Meeting of Western Section American Society of Animal Science.
- Garza, A.L., K. E. Quinn, **R. L. Ashley**, K. H. Marchetti, C. L. Shelley, and S. L. Lodge-Ivey. 2015. Comparison of the Vaginal Microbiota in Non-Pregnant and Pregnant Ewes During Early Pregnancy. 87th Annual Meeting of Western Section American Society of Animal Science.
- Salazar, M., A.K. Ashley, A. Lerma-Ortiz, J. P. Houston, and **R.L. Ashley**. 2015. Membrane Progesterone Receptor Alpha Signaling in Breast Cancer Cells. Society of Toxicology Annual Meeting.
- Coleson, M.P.T., **R.L. Ashley**, and T.T. Ross. 2014. Effects of hCG administration in ewes post mating on production of 3 β -hydroxysteroid dehydrogenase, steroidogenic acute regulatory protein, and interferon-stimulated gene 15. 86th Annual Meeting of Western Section American Society of Animal Science.
- Sanchez, N.S., M.P.T. Coleson, T.T. Ross, K.E. Quinn, A.K. Ashley, and **R.L. Ashley**. 2014. Expression of Membrane Progesterone Receptors and Select Angiogenic Factors, are Altered in Ewes Treated with hCG. 86th Annual Meeting of Western Section American Society of Animal Science.
- Quinn, K.E., L.P. Reynolds, A.T. Grazul-Bilska, P.P. Borowicz, S.T. Dorsam, and **R.L. Ashley**. 2014. Chemokine ligand twelve (CXCL12) protein in ovine placenta increases during early gestation: role in maternal-fetal crosstalk? 86th Annual Meeting of Western Section American Society of Animal Science.
- Coleson, M.P.T., C.M. Richardson, **R.L. Ashley**, K.E. Quinn, C.A. Gurule, R. Halalsheh, D.M. Hallford, and T.T. Ross. 2013. Effects of human chorionic gonadotropin administration in ewes post mating on serum progesterone concentrations and number of corpora lutea and concepti. 85th Annual Meeting of Western Section American Society of Animal Science.
- Quinn, K.E. and **R.L. Ashley**. 2013. Regulation of Vascular Endothelial Growth Factor (VEGF) by (C-X-C motif) Ligand 12 (CXCL12) in Ovine Caruncle Explants. 85th Annual Meeting of Western Section American Society of Animal Science.
- Quinn, K.E., L.P. Reynolds, P.P. Borowicz, A.T. Grazul-Bilska, S.T. Dorsam, and **R.L. Ashley**. 2013. CXCL12 Expression Increases in Sheep Uterine and Fetal Tissues during Early Gestation. Society for the Study of Reproduction, 46th Annual Meeting.
- DeAtley, K. L., M. L. Colgrave, M. G. Thomas, M. R. S. Fortes, J. F. Medrano, G. Rincon, A. Islas-Trejo, **R. L. Ashley**, G. A. Silver, A. Reverter, A. Canovas, W.M. Snelling. 2013. Analysis of six neuropeptides detected in hypothalamus and pituitary gland of pre- and post-pubertal brangus heifers. 85th Annual Meeting of Western Section American Society of Animal Science.

- DeAtley, K. L., M. G. Thomas, M. R. S. Fortes, J. F. Medrano, G. Rincon, A. Islas-Trejo, **R. L. Ashley**, G. A. Silver, S.O. Peters, A. Reverter, A. Canovas, M. L. Colgrave, W.M. Snelling. 2013. X marks the spot: Region of Bovine Chromosome X Associated with Heifer Fertility Traits in Brangus Cattle. ADSA-AMPA-ASAS-CSAS-WSASAS Joint Annual Meeting.
- Ashley, A.K., K.A. Troksa, C.L. Amerin, **R.L. Ashley**, P. Le, B. Sishc, A.M. Clayshulte, S.M. Bailey, M. Shrivastav and J.A. Nickoloff. 2012. DNA-PKcs Modulates the Cellular Replication Stress Response. Mountain West Society of Toxicology Meeting, Salt Lake City, Utah.
- Quinn, K.E., L.P. Reynolds, D.A. Redmer, P.P. Borowicz, A.T. Grazul-Bilska, and **R.L. Ashley**. 2012. Alterations in CXCR4 and CXCL12 in ovine placental tissues during early pregnancy: natural breeding and assisted reproductive technologies (ART). Society for the Study of Reproduction, 45th Annual Meeting.
- Reynolds, L.P., M.L. Johnson, J.S. Haring, **R.L. Ashley**, P.P. Borowicz, D.A. Redmer, A.T. Grazul-Bilska. 2012. Expression of Sex Steroid Receptors in Ovine Placental Tissues during Early Pregnancy: Effects of Assisted Reproductive Technologies (ART). Society for the Study of Reproduction, 45th Annual Meeting.
- Ashley, R.L.**, K.E. Quinn, and A.K. Ashley. 2012. Membrane Progesterone Receptors (α , β , and γ) in early pregnancy. ADSA-AMPA-ASAS-CSAS-WSASAS Joint Annual Meeting. Platform Presentation.
- Quinn, K.E., J.D. Lindsey, S.M. Stanbrough, A.K. Ashley, **R.L. Ashley**. 2012. Fetal and Maternal Induction of Angiogenic Factors during Early Pregnancy. 84th Annual Meeting of Western Section American Society of Animal Science.
- Reynolds, L.P., P.P. Borowicz, M.L. Johnson, J.S. Haring, **R.L. Ashley**, and A.T. Grazul-Bilska. 2012. Expression of Sex Steroid Receptors in Placental Tissues during Early Pregnancy in Sheep. ADSA-AMPA-ASAS-CSAS-WSASAS Joint Annual Meeting.
- Luna-Nevarez, P., J.C Leyva-Corona, F. Rivera-Acuña, J.F. Medrano, G. Rincon, G.A. Silver, D.M. Hallford, **R.L. Ashley**, and M.G. Thomas. 2012. Lactation and physiological performance in Holstein dairy cows managed under summer heat stress conditions in northwest Mexico. ADSA-AMPA-ASAS-CSAS-WSASAS Joint Annual Meeting.
- Quinn, K. and **R. Ashley**. 2011. CXCL12 and CXCR4 expression in peripheral blood from pregnant and non-pregnant sheep: implications in pregnancy diagnosis. 83rd Annual Meeting of Western Section American Society of Animal Science, Miles City, Montana.
- Ashley, R.L.**, A. Q. Antoniazzi, Russell V. Anthony, and Thomas R. Hansen. 2011. Expression of Ovine Membrane Progesterone Receptors (Alpha, Beta, and Gamma) During Early Pregnancy: Implications in Conceptus Growth and Development. Society for the Study of Reproduction, 44th Annual Meeting, Portland, OR. Abstract #459. Poster Presentation.
- Hansen, T.R., L. Henkes, **R. L. Ashley**, R. Veeramachaneni, R. V. Anthony, K. Gates, B. Webb, G. J. Bouma, and J. K. Pru. 2011. Isgylation: A Conserved Pathway in Mammalian Pregnancy. Society for the Study of Reproduction, 44th Annual Meeting, Portland, OR. Abstract #105. Platform Presentation.

- Ashley, R.L.**, A.Q. Antoniazzi, R.V. Anthony, and T.R. Hansen. 2010. The expression profile of ovine chemokine receptor 4 (CXCR4) and its ligand, CXCL12, in endometrium and conceptus during early pregnancy: Implications in implantation and placentation. Society for the Study of Reproduction, 43rd Annual Meeting, Milwaukee, WI. Abstract #486. Poster Presentation.
- Antoniazzi, A.Q., **R. L. Ashley**, J. F. Oliveira, F. W. Bazer, T. E. Spencer, and T. R. Hansen. 2010. Interferon-tau Has Endocrine Action on the Ovine Corpus Luteum During Early Pregnancy That Is Independent of Its Paracrine Effect on Endometrial ESR1 and OXTR. Society for the Study of Reproduction, 43rd Annual Meeting, Milwaukee, WI. Abstract #229. Poster Presentation.
- Ashley, R.L.**, N.P. Smirnova, and T.R. Hansen. 2009. The expression profile of the chemokine receptor CXCR4 and specific T-cell markers in peripheral blood and endometrium during early pregnancy in cows. Society for the Study of Reproduction, 42nd Annual Meeting, Pittsburgh, PA. Abstract #603. Poster Presentation.
- Ashley, R.L.**, L.E. Henkes, R.V. Anthony, K.C. McBroom, J.K. Pru, and T.R. Hansen. 2008. ISG15 is a molecular sentinel that functions to assist mothers in coping with environmental stressors imposed on pregnancy. Society for the Study of Reproduction, 41st Annual Meeting, Kona, Hawaii. Abstract #502. Poster Presentation.
- Bott, R., **R. Ashley**, L. Henkes, J. Bruemmer, G. Niswender, T. Spencer, F. Bazer, R. Anthony, and T. Hansen. 2008. Uterine Vein Infusion of Interferon-tau Acts Systemically to Induce ISG15 in the Ovine Corpus Luteum. Society for the Study of Reproduction, 41st Annual Meeting, Kona, Hawaii. Abstract #636. Platform Presentation.
- Ashley, R.L.**, L.E. Henkes, J.K. Pru, and T.R. Hansen. 2007. Deletion of *Isg15* gene results in differential decidual gene expression and pregnancy loss between 7.5 and 12.5 dpc. Society for the Study of Reproduction, 40th Annual Meeting, San Antonio, TX. Abstract #501. Platform Presentation.
- Alejandro Arreguin-Arevalo, J., **R. Ashley**, and T. Nett. 2007. Interaction of genomic and non-genomic actions of estradiol (E2) on the expression of the preovulatory like-surge of LH: The role of estrogen receptor subtypes in the synthesis of GnRH receptors in OVX ewes. Society for the Study of Reproduction, 40th Annual Meeting, San Antonio, TX. Abstract #119. Poster Presentation.
- Ashley, R.L.**, C. M. Clay, T.A. Farmerie, G.D. Niswender, and T.M. Nett. 2006. An ovine membrane progesterone receptor that mediates calcium mobilization. Society for the Study of Reproduction, 39th Annual Meeting, Omaha, NE. Abstract #121. Platform Presentation.
- Ashley, R.L.**, G.D. Niswender, C. M. Clay, and T.M. Nett. 2005. Identification of a putative ovine membrane progesterone receptor. Society for the Study of Reproduction, 38th Annual Meeting, Quebec City, Quebec, Canada. Abstract #81. Platform Presentation.
- Ashley, R.L.**, M. C. Allen, A. Staley, and T.M. Nett. 2004. Effects of GnRH-PAP on gonadotroph secretion and testicular weight in rams. Society for the Study of Reproduction, 37th Annual Meeting, Vancouver, British Columbia, Canada. Abstract #582. Platform Presentation.
- Ashley, R. L.**, J. R. Strickland, T. T. Ross, A. K. Clayshulte, and M. A. Siepel. 2002. Precision-cut liver slice methodology for study of snakeweed toxicity. J. Anim. Sci. 80 (Suppl. 2):130.

- Clayshulte, A. K., J. R. Strickland, **R. L. Ashley**, M. A. Siepel, and M. D. Remmenga. 2002. Swainsonine toxicokinetics of acute versus subacute oral exposure in sheep. Abstract #100 *J. Anim. Sci.* 80 (Suppl. 2):129.
- Siepel, M. A., J. R. Strickland, A. K. Clayshulte, **R. L. Ashley**, and M. D. Remmenga. 2002. Swainsonine effects on para-aminohippuric acid clearance in wethers consuming a locoweed/blue grama hay diet. Abstract # 102. *J. Anim. Sci.* 80 (Suppl. 2):130.
- Clayshulte, A. K., J. R. Strickland, J. B. Taylor, **R. L. Ashley**, and M. A. Siepel. 2001. Preliminary characterization of swainsonine absorption and elimination in sheep following initial acute exposure. Abstract #22 *J. Anim. Sci.* 79 (Suppl. 2):116.
- Waterman, R.C., L. Canales, **R.L. Ashley**, J.E. Sawyer, J.B. Taylor, G.D. Pulsipher, N.H. Wells, C.P. Mathis, D.E. Hawkins, G.B. Donart, E.E. Parker, S.H. Cox, J.A. Hartung, J. Horton and M.K. Petersen. 2001. Responses to range supplements differing in glucogenic potential with or without propionate salt to young postpartum beef cows. *Proc. West. Sec. Am. Soc. Anim. Sci.* 52:181-185.
- Ashley, R.L.**, D.S. Al-Ajmi, J.R. Strickland, T.T. Ross, A.K. Clayshulte, D. Padilla, and G. Parker. 2000. Effects of hexane and ether fractions of snakeweed (*Gutierrezia* spp.) on selected serum constituents of male Sprague-Dawley rats. *Proc. West. Sec. Am. Soc. Anim. Sci.* 51:160-162.
- Al-Ajmi, D.S., J.R. Strickland, T.T. Ross, **R.L. Ashley**, D. Padilla, and G. Parker. 2000. Effects of hexane and ether fractions of snakeweed (*Gutierrezia* spp.) on selected serum constituents of male Sprague-Dawley rats. *J. Anim. Sci.* 78(suppl 2):122.

Book Chapter

- Taylor, J.B., J.R. Strickland, C.R. Krehbiel, A.K. Clayshulte, M.A. Siepel, and **R.L. Ashley**. 2003. Chapter 15: Disposition of swainsonine in sheep following acute oral exposure. Eds. T. Acamovic, C. S. Stewart, and T. W. Pennycott. *Poisonous Plants and Related Toxins*. CABI Publishing – Wallingford, Oxfordshire, UK. ISBN: 0851996140. pp. 102-107.

Bulletins

- Waterman, R.C., and **R.L. Ashley**. 2000. Johne's Disease: A silent threat to domesticated and non-domesticated ruminants. *Arizona and New Mexico Dairy Newsletter*.
- Waterman, R.C., **R.L. Ashley**, and M.L. Looper. 2000. Johne's Disease: A silent drain on production and profits. *Hoads West*.

Activities, Service and Outreach

Professional Memberships:

- Regular member, Society for the Study of Reproduction (SSR), 2011-present
- Regular member, American Society of Animal Science (ASAS), 2011-present
- Member, W2112 Western Regional Multistate Research Project, 2010-present
- Active Member, American Association for Cancer Research (AACR), 2016-present
- Faculty advisor, Alpha Gamma Rho Fraternity, 2013-present

Peer Reviewer:

- Biology of Reproduction
- Domestic Animal Endocrinology
- Reproduction
- BMC Genomics
- Molecular and Cellular Endocrinology
- Journal of Animal Science
- Journal Veterinary Medicine
- Reproductive Biology and Endocrinology
- Cellular and Molecular Immunology
- Animal Reproduction Science
- Placenta
- Acta Biochimica et Biophysica Sinica
- Journal of Endocrinology
- PLOS ONE
- Frontiers in Biology
- Molecular Reproduction and Development

Honors & Awards

- Invited speaker, American Dairy Science Association, NE ASAS Meeting. 2018
- Gamma Sigma Delta Distinguished Award for Graduate Teaching/Advisement. 2017
- Keynote speaker, NMSU Graduate Research & Arts Symposium (GRAS). 2017
- Invited speaker, NMSU Biomedical Research Seminar Series. NMSU Faculty Spotlight. 2017
- Distinguished Teacher Award. 2016. Western Section-American Society of Animal Science
- Teaching Award of Merit. North American Colleges & Teachers of Agriculture (NACTA) and NMSU. 2016
- Young Scientist Award. 2015. Western Section-American Society of Animal Science
- Invited speaker, Placental Association of the Americas satellite symposium at The Society for Reproductive Investigation (SRI) meetings, 2015
- Invited speaker, Animal Science Department Seminar, University of Connecticut, 2014
- Invited speaker, Animal Biological Systems Seminar, University of Nebraska, 2013
- Invited speaker, Reproductive Biology Forum, Texas A&M University, 2012
- Invited speaker, Rocky Mountain Reproductive Science Symposium, Ft. Collins, CO, 2011
- Society for the Study of Reproduction, Larry Ewing Travel Award, 2010
- Society for the Study of Reproduction, Larry Ewing Travel Award, 2009
- Invited speaker, University of Northern Colorado, 2009
- Society for the Study of Reproduction, Larry Ewing Travel Award, 2008
- 3rd Place, Graduate Student/Post-doc Oral Presentation, College of Veterinary Medicine and Biomedical Sciences Research Day, Colorado State University, 2007
- Society for the Study of Reproduction, Larry Ewing Travel Award, 2007
- 3rd Place, Graduate Student/Post-doc Oral Presentation, College of Veterinary Medicine and Biomedical Sciences Research Day, Colorado State University, 2006
- 2nd Place, Graduate Student/Post-doc Oral Presentation, College of Veterinary Medicine and Biomedical Sciences Research Day, Colorado State University, 2005

Honor Society Memberships

- Gamma Sigma Delta Honors Society, New Mexico State University, 2000
- Phi Kappa Phi Honor Society, New Mexico State University, 1999
- Alpha Zeta, Honors Society, West Texas A&M University, 1997;
- Alpha Zeta, Honors Society, New Mexico State University, 1999
- Sam Steel Honorary Society, New Mexico State University, 1999
- Phi Eta Sigma National Honorary Society, West Texas A&M University, 1996