

CHELSEY A. LEISINGER, PhD, HCLD/CC (ABB)
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Education

- 2014-2018 Ph.D. in Biological and Veterinary Medical Sciences, Louisiana State University School of Veterinary Medicine
- 2011-2013 M.S. in Comparative and Veterinary Medicine, Ohio State University College of Veterinary Medicine
- 2003-2007 B.S. in Animal Science, Iowa State University

Memberships

American Society for Reproductive Medicine
College of Reproductive Biology
American Association of Bioanalysts
European Society of Human Reproduction and Embryology

Honors

2021 Ovation Fertility Leader of the Year
Recipient of \$100,000 Economic Development Assistantship, Louisiana State University 2014

Employment Experience

- 2024-present Vice President, Network Lab Compliance
CCRM Fertility
- Maintain CCRM network compliance with all regulatory agencies (OSHA, CAP, CLIA, FDA)
 - Review and oversee CCRM network quality management and quality assurance initiatives
- 2023-2024 Laboratory Director, off-site
Ovation Fertility, Cincinnati, OH
Ovation Fertility, Lafayette and Baton Rouge, LA
- 2021-2024 Laboratory Director, off-site
Ovation Fertility, Grand Rapids, MI
- 2020-2023 Laboratory Director, on-site
Ovation Fertility, Lafayette and Baton Rouge, LA

Routine job duties

- Supervise, orient, and instruct laboratory personnel
- Review and oversee laboratory quality management and quality assurance
- Maintain compliance with all regulatory agencies (OSHA, CAP, CLIA, FDA)

- Conduct all andrology and embryology laboratory procedures including gamete cryopreservation, gamete micromanipulation and embryo biopsy for PGT
- Provide physician and patient consultations as needed

2019-2023 Adjunct Assistant Professor
 LSU School of Veterinary Medicine
 Dept of Veterinary Clinical Sciences

2018-2020 Laboratory Supervisor
 Ovation Fertility-Fertility Answers, Lafayette and Baton Rouge, LA

- Conduct all andrology and embryology laboratory procedures including gamete cryopreservation, gamete micromanipulation and embryo biopsy for PGT
- Supervise, orient, and instruct laboratory personnel
- Review and oversee laboratory quality management and quality assurance
- Maintain compliance with all regulatory agencies (OSHA, CAP, CLIA, FDA)

2015-2018 Consulting Senior Embryologist
 Overlake Reproductive Health, Bellevue, WA

- Oocyte identification, retrieval, and evaluation
- Oocyte vitrification and warming (Fairfax Egg Bank, World Egg Bank, clinic's private donor program)
- 2 PN evaluation
- 2 PN vitrification and warming
- Day 3 embryo evaluations
- Day 3 laser assisted hatching
- Embryo vitrification and warming with laser assisted shrinkage
- Day 5 embryo transfers (with fresh or frozen embryos)
- Intracytoplasmic sperm injection (ICSI) on all mature oocytes retrieved
- Day 5 laser assisted trophectoderm embryo biopsy for preimplantation genetic testing (PGT) (Genesis Genetics, Igenomix)

2014-2018 Graduate Assistant
 Louisiana State University School of Veterinary Medicine

- Conducted equine in vitro embryo production for research and client animals; including in vitro oocyte maturation, ICSI, cleavage and blastocyst evaluations
- Cryopreserved bovine (slow freeze) and equine embryos (vitrification) for research and client animals
- Conducted embryo manipulation for research and client animals including assisted shrinkage of equine embryos > 300 µm for vitrification
- Assisted with transvaginal ultrasound guided oocyte aspiration (bovine, equine)
- Handled and collect research stallions
- Performed semen processing and evaluation for cooling or cryopreservation

- Conducted breeding management of project mares utilizing reproductive ultrasonography and hormonal manipulation
- Performed RNA isolation on cells and tissues (embryos and endometrium) for next generation RNA sequencing and RT PCR

2013-2014 Junior Embryologist
 Reproductive Resource Center, Overland Park, KS

- Became trained and independently performed the following laboratory procedures:
- Oocyte identification, retrieval, and evaluation
- Oocyte vitrification and warming (Fairfax Egg Bank, My Egg Bank, World Egg Bank, clinic's private donor program)
- 2 PN evaluation
- Day 3 embryo evaluations
- Day 3 laser assisted hatching
- Embryo vitrification and warming with laser assisted shrinkage
- Day 5 embryo transfers (with fresh or frozen embryos)
- Conduct intracytoplasmic sperm injection (ICSI) on all mature oocytes retrieved
- Day 5 laser assisted trophectoderm embryo biopsy for PGT (Natera, Genesis Genetics)
- Maintained records of all procedures conducted in the laboratory including SART data entry

2009-2013 Research Assistant and Theriogenology Clinical Coordinator
 The Ohio State University College of Veterinary Medicine

- Conducted bovine in vitro embryo production for research and client animals, including oocyte maturation, in vitro fertilization utilizing density gradient or swim-up sperm preparation, cleavage and blastocyst evaluations
- Assisted in all aspects of bovine and equine embryo transfer for the Theriogenology clinical service
- Cryopreserved bovine (slow freeze) and equine embryos (vitrification)
- Implemented embryo manipulation including mechanical trophectoderm biopsy for embryo sexing using PCR and gel electrophoresis
- Assisted with transvaginal ultrasound guided oocyte aspiration (bovine, equine)
- Conducted post-mortem oocyte collection in bovine, equine and alpaca
- Oocyte identification and evaluation in bovine, equine, and alpaca
- Handled and trained stallions for semen collection for the clinical service
- Performed semen processing and evaluation for cooling and cryopreservation in numerous domestic species (canine, equine, bovine, caprine, ovine, and camelid)
- Managed research and work study students in our lab and facilitated research projects

2007-2009 Embryo Transfer Assistant
 Westwood Embryo Services, Waverly, Iowa

- Detected estrus, superovulated, and artificially inseminated cattle
- Assisted with non-surgical embryo recovery from superovulated donor cattle

- Assisted with surgical embryo recovery from superovulated donor sheep
- Searched for, evaluated, and cryopreserved embryos (bovine, ovine)
- Implemented and performed embryo sexing using mechanical trophectoderm biopsy and PCR (bovine)
- Assisted with medical care of donors, recipients, and calves

Workshop Instruction

Equine OPU-ICSI Training Course. Co-developed this training course with Dr. Carlos Pinto. I taught the basics of oocyte handling and processing, micromanipulation, ICSI, sperm processing, and in vitro oocyte maturation and culture to national and international participants (4 day course; 32 hours).

April 2022, Baton Rouge, LA

June 2022, Baton Rouge, LA

September 2022, Baton Rouge, LA

November 2022, Baton Rouge, LA

November 2021, Baton Rouge, LA

January 20, 2019 International Embryo Technology Society In Vitro Embryo Technologies Workshop

Lead instructor for the equine ICSI wet lab: taught the basics of micromanipulation, ICSI, oocyte handling, sperm processing, and in vitro oocyte maturation (6 hours)

International collaboration

October 23-27, 2017 Collaborative research meeting on equine in vitro embryo production
Universidad Católica Argentina and Louisiana State University School of Veterinary Medicine

Presented lecture of current research publications, conducted laboratory instruction on equine oocyte collection, ICSI, and in vitro embryo production and gave a laboratory demonstration of vitrification utilizing the Rapid-i™ system

Extracurricular Training

August 26-30, 2010 Colorado State University Animal Reproduction and Biotechnology Laboratory

Supervisor: Dr. George Seidel

I received training in the proper steps for bovine in vitro embryo production, including chemically defined media making and preparation, oocyte collection and processing, density gradient semen preparation, embryo culture and handling techniques.

Student mentoring and training of the following people at Louisiana State University School of Veterinary Medicine:

Clinical Instructor, Theriogenology (Dr. Betsy Coffman) - responsible for training this veterinarian on in vitro embryo production in the equine, including oocyte identification and classification, in vitro oocyte maturation, intracytoplasmic sperm injection, cleavage and embryo evaluations. 2016, 2017

M.S. student (Mariah Markle)– responsible for training this student on proper laboratory techniques such as dilutions, media making, pipetting, microscopy as well as semen evaluation and processing and the basics of equine embryo handling and grading. Followed by training in all aspects of equine in vitro embryo production, including oocyte identification and classification, in vitro oocyte maturation, intracytoplasmic sperm injection, cleavage and embryo evaluations. 2015, 2016, 2017

Visiting veterinarian (Dr. Daniel Angel), Medellín, Columbia - responsible for training this veterinarian on in vitro embryo production in the equine, including oocyte identification and classification, in vitro oocyte maturation, intracytoplasmic sperm injection, cleavage and embryo evaluations. Summer 2016

Summer scholar program for DVM research students - responsible for training summer scholar research students in proper laboratory techniques such as dilutions, media making, pipetting and microscopy. Instructed them on the basics of equine embryo handling, grading, and in vitro embryo production techniques and large animal handling. Summer 2015; 3 students (Kelsey DiMicelli, Alex Carter, Sofia Raldiris), Summer 2017; 1 student (Mariah Markle)

Teaching Activities at Louisiana State University School of Veterinary Medicine

Professional courses in the veterinary curriculum:

VMED 5010 Bovine Theriogenology → laboratory instructor for 3 labs during the course: oocyte and embryo handling, evaluation, and cryopreservation (4 hours); oocyte aspiration (4 hours); embryo collection, searching, and processing with superovulated cattle (8 hours). Presented 3 lectures on embryo morphology, cryopreservation, and in vitro embryo production (3 hours); Spring 2016, Spring 2017

VMED 5361 Comparative Theriogenology →

laboratory instructor for semen processing and evaluation and bovine palpation. 8 hours/year; Fall 2014, 2015, 2016

laboratory instructor for stallion collection. 2 hours/yr; Fall 2016

lecture: Assisted Reproduction in Equine and Food Animals. 1 hour/yr; Fall 2016

Student mentoring and training of the following people at Ohio State University College of Veterinary Medicine:

Resident, Theriogenology (Dr. Betsy Coffman) - responsible for training the Theriogenology resident on the basics of bovine and equine embryo handling, grading, and cryopreservation. 2011-2012

Ph.D. student (Dr. Matt Utt)– responsible for training this student on the basics of bovine embryo handling, grading, and cryopreservation, followed by training in all aspects of bovine in vitro embryo production in order to complete the chosen dissertation research project evaluating the relationships between in vivo and in vitro heterospermic ranking, embryo cleavage rate, and sperm characteristics of Holstein and Jersey bulls. 2009-2011

Summer scholar program for DVM research students - responsible for training summer scholar research students in semen evaluation and processing in the equine and canine, as well as proper laboratory techniques such as dilutions, media making, pipetting, microscopy and large animal handling. 2 students/year; Summer 2010, 2011, 2012

Teaching Activities at Ohio State University College of Veterinary Medicine

Professional courses in the veterinary curriculum:

Vet Clin 7710.22 Senior Clinical Rotation Applied Veterinary Medicine – Theriogenology → Responsible for training senior students in semen collection, processing, and cryopreservation. 2 week clinical rotations during spring and summer 2010, 2011, 2012, 2013

Vet Clin 7710.23 Senior Clinical Rotation Advanced Theriogenology Clinical Rotation → responsible for all in vitro fertilization portions and the embryo handling, sex determination, and cryopreservation lab, assisted with cow palpation and artificial insemination segment. 13 hours/year; Fall 2011, 2012

Vet Clin 7794 Equine Theriogenology → laboratory instructor for gynecological and andrological procedures; animal handling and restraint. 30 hours/year; Fall 2010, 2011, 2012

VME 531 Functional Veterinary Histology → laboratory instructor for oocyte and embryo morphology and structure; structure of placenta and fetuses of large animals. 4 hours/year; 2010, 2011, 2012

Professional courses in the graduate curriculum:

Vet Clin 792 Advanced Theriogenology Laboratory → assisted in course design, served as laboratory instructor for bovine assisted reproduction and laboratory techniques. 14 hours/year; Fall Qtr 2011, Winter Qtr 2012

Continuing Education Instruction at Ohio State University College of Veterinary Medicine

Bovine Reproduction CE → assisted with development and instruction (lecture and laboratorial activities) of three 2-day bovine embryo transfer short courses involving the basics of bovine embryo collection and embryo handling, grading, and cryopreservation. Instructional participation: 75%
March 2012 Columbus, OH
November 2012, Columbus, OH
December 2012, Escalon, CA

Equine Reproduction CE → assisted with wet lab for reproductive procedures in mares, semen collection, evaluation, processing and packaging. 8 hours/year; February 2010, 2011, 2012

Teaching Activities at Iowa State University

Courses in the undergraduate curriculum:

AnS 334 Embryo Transfer Laboratory → laboratory instructor for embryo handling, evaluation, and cryopreservation, non-surgical bovine embryo collection, embryo searching, and non-surgical bovine embryo transfer. 14 hours/year; Fall 2007

Intramural Funding at Louisiana State University

ACRES Grant \$50,000 October 2016-June 2017

Investigators: Principal investigator: Pinto CRF, Co-investigator: Leisinger, CA

Title: Kinetics of in vitro oocyte maturation and blastocyst development of equine and bovine oocytes held at room temperature

VCS CORP Grant \$4,000 October 2016-June 2017

Investigators: Principal investigator: Leisinger CA, Co-investigators: Paccamonti DL, Sones JL, Pinto CRF

Title: Characterization of steroid hormone responsive genes in the equine endometrium during induced aluteal cycles

EHSP Grant \$6,000 September 2016-June 2017

Investigators: Principal investigator: Leisinger CA, Co-investigators: Paccamonti DL, Sones JL, Pinto CRF

Title: Developmental characteristics of in vivo equine embryos produced during induced aluteal cycles

EHSP Charles V. Cusimano Grant \$5,889 July 2015 – June 2016

Investigators: Principal investigator Leisinger CA, Co-investigators: Paccamonti DL, Pinto CRF

Title: Fertility of stallion semen cryopreserved in cryovials and subjected to repeat partial thaw-refreeze cycles in an ICSI program

VCS CORP Grant \$3123 October 2014-June 2015

Investigators: Principal investigator: Leisinger CA, Co-investigators: Paccamonti DL, Pinto CRF

Title: The effect of repeat freeze-thaw cycles on semen parameters in the stallion.

Peer reviewed manuscripts

Leisinger CA, Adaniya G, Freeman MR, Behnke EJ, Aguirre M, VerMilyea MD, Schiewe MC. Effect of microfluidic sperm separation versus standard sperm washing processes on laboratory outcomes and clinical pregnancy rates in an unselected patient population. *Reprod Med* 2021;2:125-130.

Leisinger CA, Klein C, Markle ML, Premanandan C, Sones JL, Pinto CRF, Pinto, Paccamonti DL. Altered gene expression in embryos and endometrium collected on day 8 of induced aluteal cycles in mares. *Theriogenology* 2019;128:81-90.

Schiewe MC, Freeman M, Whitney JB, VerMilyea MD, Jones A, Aguirre M, **Leisinger C**, Adaniya G, Snyder N, Chilton R, Behnke EJ. Comprehensive assessment of cryogenic storage risk and quality management concerns: best practice guidelines for ART labs. *J Assist Reprod Genet* 2019;36:5-14.

Leisinger CA, Medina V, Markle ML, Paccamonti DL, Pinto CRF. Morphological evaluation of Day 8 embryos developed during induced aluteal cycles in the mare. *Theriogenology* 2018;105:178-183.

Leisinger CA, Pinto CRF, Cramer E, Love CC, Paccamonti DL. Effects of repeated partial thaw and refreeze on post thaw parameters of stallion semen cryopreserved in cryovials. *Journal Equine Veterinary Science* 2017;49:19-24.

Leisinger CA, Coffman EA, Forshey BS, Coutinho da Silva MA, Pinto CRF. Factors affecting in vitro maturation of alpaca (*Lama paco*) oocytes. *Anim Reprod Sci.* 2014;150:70-75.

Coffman EA, Pinto CRF, Snyder HK, **Leisinger CA**, Cole K, Whisnant CS. Antiluteogenic effects of serial prostaglandin f2 α administration in cycling mares. *Theriogenology* 2014;82:1241-1245.

Invited Speaker Presentations

Comparative aspects of in vitro embryo production in humans and domestic animals. Society for Theriogenology Annual Conference. Oklahoma City, OK. July 2024

Utilizing electronic witnessing to develop and monitor technician benchmarks in the embryology laboratory. The 12th Annual Southwest Embryology Summit. Mesa, AZ. January 2023.

Peer reviewed research abstracts

Gaspard LWC, Leisinger C, VerMilyea M, VerMilyea L. Does a dry or humid incubation environment affect continuous undisturbed media protocols? *Human Reproductions* 2024;39;i296.

Adams TL, Markle ML, **Leisinger C**. Comparison of implantation and ploidy rates of day 5 and day 6 biopsied embryos. *Fertility and Sterility* 2022:118;4.

Leisinger C, VerMilyea MD. Evaluating mismatch categories and true errors using an electronic witnessing system. *Human Reproduction* 2022:37;544.

Adams TL, Markle ML, **Leisinger C**. Comparison of implantation rate and preimplantation genetic testing between hatching and hatched blastocysts. *Human Reproduction* 2022:37;435.

Adams TL, **Leisinger C**, VerMilyea MD. Novel approach to developing technician benchmarks in the contemporary embryology laboratory. *Fertility and Sterility* 2021:116(3);195.

Leisinger CA, Klein C, Markle ML, Premanandan C, Sones JL, Pinto CRF, Paccamonti DL. Day 8 embryos and endometrium from aluteal cycles in mares exhibit differential gene expression. *Journal of Equine Veterinary Science* 2018:66;165.

Mak CK, **Leisinger C**, Coffman E, Medina V, Markle M, Paccamonti DL, Pinto CR. Developmental Potential of Equine Oocytes in the Breeding and Nonbreeding Seasons. *Journal of Equine veterinary Science* 2018;66;203.

Markle ML, **Leisinger CA**, Medina V, Coffman EA, Premanandan C Pinto CRF. Histological and immunohistochemical characterization of PGF_{2α}-treated early corpus luteum. *International Symposium on Equine Reproduction* 2018;66;145.

Mak CK, **Leisinger CA**, EA Coffman, Medina V, Markle ML, Paccamonti DL, Pinto CRF. Developmental potential of equine oocytes in the breeding and nonbreeding seasons. *Journal of Equine Veterinary Science* 2018;66;203.

Leisinger CA, Pinto CRF, Love CC, Paccamonti DL. Effects of repeated partial freezing-thawing cycles on post thaw quality of stallion semen cryopreserved in cyrovials. *Journal of Equine Veterinary Science* 2016; *Journal of Equine Veterinary Science* 2016;43S;S58-S59.

Leisinger CA, Davolli GM, Foster BA, Whisnant S, Paccamonti DL, Pinto CRF. In vivo embryo production during induced aluteal cycles in the mare. *Clinical Theriogenology* 2016;8:333.

Leisinger CA, Markle ML, Paccamonti, Cramer E, Pinto CRF. Production of equine embryos in vitro using conventional intracytoplasmic sperm injection and a complete human embryo culture system. *Journal of Equine Veterinary Science* 2016;41:78.

Barros FFPC, Fuselier, Ferreira JC, **Leisinger CA**, Thomas SR, Pinto CRF. In vitro maturation of goat oocytes recovered during the non-breeding season. *Clinical Theriogenology* 2015;7:299.

Pinto CRF, Rubio C, Holland BE, Coffman EA, Snyder HK, **Leisinger CA**, Whisnant S. Antiluteogenesis effects of prostaglandin F₂-alpha (PGF) in cyclic mares. *Journal of Equine Veterinary Science* 2014;34(1):163.

Coffman EA, Pinto CRF, Snyder HK, **Leisinger CA**, Cole K. Effects of early versus mid diestrus PGF_{2α} administration in the mare. *Clinical Theriogenology* 2013;5(3):374.

Clark EE, Pinto CRF, **Messerschmidt CA**, Howell DG, Coutinho da Silva MA. Removal of seminal plasma by filtration prior to cryopreservation of canine sperm. *Clinical Theriogenology* 2012;4(3):404.

Forshey BS, Coffman EA, **Messerschmidt CA**, Lakritz J, Pinto CRF, Coutinho da Silva MA. Effects of decreasing doses of follicle-stimulating hormone on multiple ovulations and embryo production in alpacas. *Clinical Theriogenology* 2012;4(3):411.

Youngs CR, **Messerschmidt CA**, West JK, Jahnke M. Osmotic reaction of Jersey dairy cattle embryos exposed to various cryoprotective additives. *Reproduction in Domestic Animals*. 2012;Vol 47 (Suppl 4): 432

Pinto CRF, Coutinho da Silva MA, Rubio C, **Messerschmidt CA**. The use of 3D ultrasonography for determination of fetal gender in the bovine fetus during early pregnancy. *Reproduction in Domestic Animals*. 2012;Vol 47 (Suppl 4):543-544.

Messerschmidt CA, Coutinho da Silva MA, Forshey BS, Coffman EA, Pinto CRF. Factors affecting in vitro maturation of alpaca oocytes. *Reproduction in Domestic Animals*. 2012;Vol 47 (Suppl 4):530.

Coutinho da Silva MA, Pinto CRF, Forshey BS, **Messerschmidt CA**, Coffman EA, Lakritz J. Factors affecting embryo collection and transfer in alpacas. *Reproduction in Domestic Animals*. 2012;Vol 47 (Suppl 4):458.

Utt, MD, Coutinho da Silva MA, DeJarnette JM, Marshall CE, **Messerschmidt CA**, Day ML. Relationships between in vivo and in vitro heterospermic ranking, embryo cleavage rate, and sperm characteristics of Holstein and Jersey bulls. *Proceedings of the 8th Association for Applied Animal Andrology Biennial Conference*. 2012;174-175.

Utt MD, Coutinho da Silva MA, **Messerschmidt CA**, DeJarnette JM, Marshall CE, Abreu FA, Day ML. Relationships between sperm motility and in vivo and in vitro fertility of Holstein and Jersey bulls. *Journal of Animal Science*. 2012; Vol 90 (Suppl 3):575.

Messerschmidt CA, Abreu FM, Cruppe LH, Biehl MV, Day ML, Pinto CRF, Coutinho da Silva MA. Effects of meclofenamic acid on luteal function of beef cattle. *Reproduction, Fertility and Development* 2012;24:115-116.

Forshey BS, **Messerschmidt CA**, Pinto CRF, Coutinho da Silva MA. Effects of lactoferrin on post-breeding uterine inflammation in the mare. *Clinical Theriogenology* 2011;3(3):346.

Oral Research Presentations

Day 8 embryos and endometrium from aluteal cycles in mares exhibit differential gene expression. 12th International Symposium on Equine Reproduction. Cambridge, UK. July 2018.

Effects of repeated partial freezing-thawing cycles on post-thaw quality of stallion semen cryopreserved in cyrovials. 7th International Symposium on Stallion Reproduction. Urbana-Champaign, IL. September 2016.

In vivo embryo production during induced aluteal cycles in the mare. Society for Theriogenology Conference. Asheville, NC. July 2016

Production of equine embryos in vitro using conventional intracytoplasmic sperm injection and a complete human embryo culture system. 9th International Symposium on Equine Embryo Transfer and Technology. Gent, Belgium. July 2016

In vitro maturation of alpaca oocytes. International Camelid Conference. Columbus, OH. March 2012.

Poster Research Presentations

Evaluating mismatch categories and true errors using an electronic witnessing system. 38th Annual Meeting European Society of Human Reproduction and Embryology. Milan, Italy July 2022.

Effects of repeated partial thaw and refreeze on post-thaw parameters of stallion semen cryopreserved in cyrovials. Louisiana State University School of Veterinary Medicine Phi Zeta Research Emphasis Day. August 2016.

Factors affecting in vitro maturation of alpaca oocytes. 17th International Congress on Animal Reproduction. Vancouver, Canada. July 2012.

Factors affecting in vitro maturation of alpaca oocytes. Ohio State University College of Veterinary Medicine Research Day. April 2012.

Effects of meclofenamic acid on luteal function in beef cattle. 38th Annual Conference of the International Embryo Transfer Society. Phoenix, AZ. January 2012

Research Communications (Posters/abstracts co-authored)

Gaspard LWC, **Leisinger C**, VerMilyea M, VerMilyea L. Does a dry or humid incubation environment affect continuous undisturbed media protocols? 40th Annual Meeting European Society of Human Reproduction and Embryology. Amsterdam, Netherlands July 2024

Adams TL, Markel ML, **Leisinger C**. Comparison of implantation rate and preimplantation genetic testing between hatching and hatched blastocysts. 38th Annual Meeting European Society of Human Reproduction and Embryology. Milan, Italy July 2022.

Adams TL, **Leisinger C**, VerMilyea MD. Novel approach to developing technician benchmarks in the contemporary embryology laboratory. American Society for Reproductive Medicine Scientific Congress. October 2021.

Mak CK, **Leisinger C**, Coffman E, Medina V, Markle M, Paccamonti DL, Pinto CR. Developmental potential of equine oocytes in the breeding and nonbreeding seasons. International Symposium on Equine Reproduction, Cambridge, UK. July 2018.

Markle ML, **Leisinger CA**, Medina V, Coffman EA, Premanandan C, Pinto CRF. Histological and immunohistochemical characterization of PGF_{2α}-treated early corpus luteum. International Symposium on Equine Reproduction, Cambridge, UK. July 2018.

Pinto CRF, Rubio C, Holland BE, Coffman EA, Snyder HK, **Leisinger CA**, Whisnant S. Antiluteogenesis effects of prostaglandin F2-alpha (PGF) administration in cyclic mares. 11th International Symposium on Equine Reproduction. Hamilton, New Zealand. January 2014.

Snyder HK, Coffman EA, **Messerschmidt CA**, Cole K, Coutinho da Silva MA, Pinto CRF. Effects of prostaglandin F2 alpha administration during the early diestrus in mares. Meril-NIH National Veterinary Scholars Symposium. Colorado State University. August 2012.

Pinto CRF, Coutinho da Silva MA, Rubio C, **Messerschmidt CA**. The use of 3D ultrasonography for determination of fetal gender in the bovine fetus during early pregnancy. 17th International Congress on Animal Reproduction. Vancouver, Canada. July 2012.

Youngs CR, **Messerschmidt CA**, West JK, Jahnke M. Osmotic reaction of Jersey dairy cattle embryos exposed to various cryoprotective additives. 17th International Congress on Animal Reproduction. Vancouver, Canada. July 2012.

Coutinho da Silva MA, Pinto CRF, Forshey BS, **Messerschmidt CA**, Coffman EA, Lakritz J. Factors affecting embryo collection and transfer in alpacas. 17th International Congress on Animal Reproduction. Vancouver, Canada. July 2012.