

Louisa A. Rispoli

CREW Scientist

Center for Conservation and Research of Endangered Wildlife
Cincinnati Zoo & Botanical Garden, 3400 Vine Street, Cincinnati, OH 45220

Education/Training

Institution and Location	Degree	Year	Field of Study
University of California, Davis, CA	B.S.	1995	Animal Science
Colorado State University, Fort Collins, CO	Ph.D.	2005	Reproductive Physiology

Positions and Honors

Apr 2023 - present	CREW Scientist, Center for Conservation and Research of Endangered Wildlife, Cincinnati Zoo and Botanical Garden, Cincinnati, OH
Nov 2019 – Mar 2023	Post-doctoral Scientist, Center for Conservation and Research of Endangered Wildlife, Cincinnati Zoo and Botanical Garden, Cincinnati, OH
Sept 2019 - present	Adjunct Faculty, Department of Animal Science, University of Tennessee Institute of Agriculture, Knoxville, TN
July 2012 - Sept 2019	Research Assistant Professor, Department of Animal Science, University of Tennessee Institute of Agriculture, Knoxville, TN
Jan 2005 - Jun 2012	Post-doctoral Research Assistant, Department of Animal Science, University of Tennessee Institute of Agriculture, Knoxville, TN
Aug 1997 - Aug 1999	Research Associate, Animal Reproduction and Biotechnology Laboratory, Colorado State University, Fort Collins, CO
Sept 1995 - July 1997	Research Assistant & Lab Manager, Department of Molecular and Cellular Biology, University of California, Davis, CA

Selected Peer-Reviewed Publications

- Rispoli LA** and Roth TL. 2023. Validation of the iSperm for assessing rhinoceros sperm. *Theriogenology Wild.* 3:100048.
- Roth TL, Donelan EM, **Rispoli LA**, and Reilly T. 2023. Prolactin enzyme-linked immunosorbent assay for rhinoceros – Another tool for assessing reproductive function and dysfunction in this taxon. *Theriogenology Wild* 2:100035.
- Klabnik JL, Christenson LK, Pohler KG, Moorey S, **Rispoli LA**, Gunewardena SSA, Bloomer C, Payton RR, Schrick FN, and Edwards JL. 2022. Heat-induced hyperthermia impacts the transcriptome of cumulus and granulosa cells in the periovulatory follicle of lactating dairy cows. *Journal of Animal Science* 100(7):skac121.
- Rowinski JR, **Rispoli LA**, Payton RR, Schneider LG, Schrick FN, McLean KJ, and Edwards JL. 2020. Impact of an acute heat shock during in vitro maturation on interleukin 6 and its associated receptor component transcripts in bovine cumulus-oocyte complexes. *Animal Reproduction* 17(4):e20200221.
- Rispoli LA**, Edwards JL, Pohler KG, Russell S, Jordan R, Somiari R, Payton RR, and Schrick FN. 2019. Heat-induced hyperthermia impacts the follicular fluid proteome of the periovulatory follicle in lactating dairy cows. *PLoS ONE.* 14(12): e0227095.

- Campen KA, Abbott CR, **Rispoli LA**, Payton RR, Saxton AM, and Edwards JL. 2018. Heat stress impairs gap junction communication and cumulus function of bovine oocytes. *Journal of Reproduction and Development*. 64(5): 385-392.
- Payton RR, **Rispoli LA**, Nagel KA, Gondro C, Saxton AM, Voy B, and Edwards JL. 2018. Mitochondrial-related consequences of heat stress exposure during bovine oocyte maturation persist in early embryo development. *Journal of Reproduction and Development*. 64(3):243-251.
- Goodwin MR, **Rispoli LA**, Payton RR, Saxton AM, and Edwards JL. 2016. Developmental consequences of supplementing with matrix metalloproteinase-9 during in vitro maturation of heat stressed bovine oocytes. *Journal of Reproduction and Development*. 62(6):553-560.
- Hooper LM, Payton RR, **Rispoli LA**, Saxton AM, and Edwards JL. 2015. Impact of heat stress on germinal vesicle breakdown and lipolytic changes during in vitro maturation of bovine oocytes. *Journal of Reproduction and Development*. 61(5):459-464.
- Rispoli LA**, Payton RR, Gondro C, Saxton AM, Nagle KA, Jenkins BM, Schrick FN, and Edwards JL. 2013. Heat stress effects on the cumulus cells surrounding the bovine oocyte during maturation: altered matrix metalloproteinase 9 and progesterone production. *Reproduction* 146(2):193-207.
- Rispoli LA**, Lawrence JL, Payton RR, Saxton AM, Schrock GE, Schrick FN, Middlebrooks BM, Dunlap JR, Parrish JJ, and Edwards JL. 2011. Disparate consequences of heat stress exposure during meiotic maturation: Embryo development after chemical activation versus fertilization of bovine oocytes. *Reproduction*. 142(6):831-843.
- Payton RR, **Rispoli LA**, Saxton AM, and Edwards JL. 2011. Impact of heat stress exposure during meiotic maturation on oocyte, surrounding cumulus cell and embryo RNA populations. *Journal of Reproduction and Development*. 57(4):481-491.
- Slough TL, **Rispoli LA**, Carnevale EM, Niswender GD, and Bruemmer JE. 2011 Temporal gene expression in equine corpora lutea based on serial biopsies in vivo. *Journal of Animal Science* 89(2):389-386.
- Payton RR, **Rispoli LA**, and Edwards JL. 2010. General features of certain RNA populations from gametes and cumulus cells. *Journal of Reproduction and Development* 56(6):583-592.
- Rispoli LA** and Nett TM. 2005. Pituitary gonadotropin-releasing hormone (GnRH) receptor: Structure, distribution and regulation of expression. Special issue entitled: GnRH in Domestic Animal Reproduction. *Animal Reproduction Science* 88:57-74.

Selected Abstracts

- Rispoli LA**, Pennington PM, Donelan E, and Roth TL. 2024. The pros and cons of urethral catheterization for semen collections in rhinos. 50th International Embryo Technology Society Conference. Denver, CO. *Reproduction, Fertility and Development*. 2023 36(2):161-162.
- Pennington PM, Donelan E, **Rispoli LA**, Consago C, and Roth TL. 2024. Investigating the role of serum progesterone, estrogen, and testosterone in cyclic and acyclic black rhinos. 50th International Embryo Technology Society Conference. Denver, CO. *Reproduction, Fertility and Development*. 2023 36(2):160
- Donelan E, Virgin E, **Rispoli L**, Curry E, and Roth T. 2023. An efficient way to evaluate multiple biomarkers in serum samples. 8th International Society of Wildlife Endocrinology Conference. Jim Corbett National Park, India.
- Rispoli LA**, and Roth TL. 2021. Toll-Like Receptors 7 and 8 and Their Potential for Sex-Sorting Rhinoceros Sperm. Fifty-fourth Annual Meeting of the Society for the Study of Reproduction. St. Louis, MO, USA.
- Rispoli LA**, Dye Z, Schweighart A, Knightly F, Peterson E, Flora P, Neatour C, Whitebread B, Edwards JL, and Terrell K. 2017. Preliminary evidence for the production of anti-sperm antibodies and a link to infertility in captive African elephants (*Loxodonta africana*). Fiftieth Annual Meeting of the Society for the Study of Reproduction. Washington DC, USA. abstr. 114.