

ERNESTO OROZCO LUCERO

Full-time Professor (2018-)
Biomedical Sciences Institute.
Autonomous University of
Ciudad Juárez (UACJ)
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Academic Group, consolidated
Animal Production
(UACJ-CA-0059)

EDUCATION

B.Sc: Biology (UACJ;
2005)
M.Sc: Animal Production
(Autonomous University of
Chihuahua; 2010)
Higher Degree: PhD IN
ANIMAL SCIENCE (2016)
Degree obtained from:
Université Laval (Canada)
PRODEP Profile: YES
Researchers National System
(SNI), level: 1



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ICB

SCIENTIFIC PRODUCTION

Papers

- **Orozco-Lucero E**, Orozco-Galindo BV, Quintero-Elisea JA, Itza-Ortiz MF, Chávez-Solano M, Carrera-Chávez JM, Varela-Ramírez A, Quezada-Casasola A (2020). Influence of the duration of in vitro maturation and incubation with activating agent on the hatching capacity of bovine parthenotes. *Veterinarski Arhiv*. 90 (5) 527-534. DOI: [10.24099/vet.arhiv.0930](https://doi.org/10.24099/vet.arhiv.0930).
- Grigoruță M, Chávez-Solano M, Varela-Ramírez A, Sierra-Fonseca JA, **Orozco-Lucero E**, Hamdan JN, Gosselink KL, Martínez-Martínez A (aceptado). Maternal separation induces retinal and peripheral blood mononuclear cell alterations across the lifespan of female rats. *Brain Research*. 1749 147117. DOI: [10.1016/j.brainres.2020.147117](https://doi.org/10.1016/j.brainres.2020.147117).
- Quezada-Casasola A, Roldán-Domínguez HP, Cano-Reagan DE, Escárcega-Ávila AM, Itza-Ortiz MF, Carrera-Chávez JM, **Orozco-Lucero E** (2020). Corpora lutea affect in vitro maturation of bovine cumulus-oocyte complexes and embryonic development after fertilization with sex-sorted or conventional semen. *Tropical Animal Health and Production*. 52 (6) 3493-3499. DOI: [10.1007/s11250-020-02383-7](https://doi.org/10.1007/s11250-020-02383-7).
- Moreno-Escamilla J, Jiménez-Hernández F, Álvarez-Parrilla E, de la Rosa L, Martínez-Ruiz N, González-Fernández R, **Orozco-Lucero E**, González-Aguilar G, García-Fajardo J, Rodrigo-García J (2020). Effect of elicitation on polyphenol and carotenoid metabolism in butterhead lettuce (*Lactuca sativa* var. capitata). *ACS Omega*. 5 (20) 11535-11546. DOI: [10.1021/acsomega.0c00680](https://doi.org/10.1021/acsomega.0c00680).
- Carrera-Chávez JM, Jiménez-Aguilar EE, Acosta-Pérez TP, Núñez-Gastelum JA, Quezada-Casasola A, Escárcega-Ávila AM, Itza-Ortiz MF, **Orozco-Lucero E** (2020). Effect of Moringa oleifera seed extract on antioxidant activity and sperm characteristics in cryopreserved ram semen. *Journal of Applied Animal Research*. 48 (1) 114-120. DOI: [10.1080/09712119.2020.1741374](https://doi.org/10.1080/09712119.2020.1741374).
- Carrera-Chávez JM, Guedea-Betancourt JJ, Núñez-Gastelum JA, **Orozco-Lucero E**, Escárcega-Ávila AM, Quezada-Casasola A (2019). Effect of the addition of Moringa oleifera seed extract on the quality and capacity of fertilization of cryopreserved sheep semen. *Revista Mexicana de Agroecosistemas*. 6 (Supl 2) 719-726.
- Itza-Ortiz MF, Alonso-Mendoza VM, Carrera-Chávez JM, **Orozco-Lucero E**, Quezada-Casasola A, Aguilar-Urquiza E (2019). Productive performance in pigs fed with a start diet with inclusion of food organic waste fluor. *Revista Colombiana de Ciencias Pecuarias*. 32 (Supl) 179.
- Carrera-Chávez JM, Marmolejo-Aldana CA, Escárcega-Ávila AM, Itza-Ortiz MF, **Orozco-Lucero E**, Pérez-Eguía E, Quintero-Elisea JA, Quezada-Casasola A (2019). Risk factors associated with retained placenta in dairy cattle in northern Mexico. *Ecosistemas y Recursos Agropecuarios*. 6 (18) 573-579. DOI: [10.19136/era.a6n18.2070](https://doi.org/10.19136/era.a6n18.2070).
- **Orozco-Lucero E**, Dufort I, Sirard MA. (2017). Regulation of ATF1 and ATF2 transcripts by sequences in their 3'-untranslated region in cleavage-stage cattle embryos. *Molecular Reproduction and Development*. 84 (4) 296-309. DOI: [10.1002/mrd.22785](https://doi.org/10.1002/mrd.22785).
- Aguirre-Reyes LG, Ramos-Soto MA, Orozpe-Olvera JA, **Orozco-Lucero E**, Lobo-Galo N, Plenge-Tellechea LF, Valero-Galván J, Álvarez-Parrilla E, Martínez-Martínez A, Díaz-Sánchez AG. (2016). Structural and mechanistic aspects of the urease enzyme and its accessory proteins. *Ciencia en la Frontera*. 14 (special) 19-36.
- Sirard MA, Macaulay A, Labrecque R, **Orozco-Lucero E**, Khan D, Robert C. (2016). RNA accumulation in competent oocytes. *Human Reproduction*. 31(supl 1):21-22.

- **Orozco-Lucero E**, Sirard MA. (2014). Molecular markers of fertility. Progress and challenges. *Animal Reproduction*. 11 (3) 183-194.
<https://www.animal-reproduction.org/article/5b5a603ef7783717068b4654>.
- **Orozco-Lucero E**, Dufort I, Robert C, Sirard MA. (2014). Rapidly cleaving bovine two-cell embryos have better developmental potential and a distinctive mRNA pattern. *Molecular Reproduction and Development*. 81 (1) 31-41. DOI: [10.1002/mrd.22278](https://doi.org/10.1002/mrd.22278).
- Gonzalez-Rodriguez E, Soto-Orduno E, Moreno-Brito V, Lechuga-Valles R, Burrola-Barraza E, Barcelo-Fimbres M, **Orozco-Lucero E**, Leal-Berumen I. 2010. Identification of multiple isoforms of the ASHWIN gene in cattle. *Biology of Reproduction* 83(supl):415.
https://academic.oup.com/biolreprod/article/83/Suppl_1/415/2955850.
- **Orozco-Lucero E**, Gonzalez-Rodriguez E, Burrola-Barraza E, Moreno-Brito V, Rodriguez-Almeida FA, Barcelo-Fimbres M, Leal-Berumen I. 2010. Use of a lentiviral platform for subcellular localization of FIGLA, a key transcription factor for female reproductive capacity. *Biology of Reproduction* 83(supl):612.
https://academic.oup.com/biolreprod/article/83/Suppl_1/612/2956169.

Theses Supervision

- Leticia Jiménez Alvarez. Evaluation of oxidative stress impact on bovine parthenotes development. In progress. **Director.**
- Melissa Molina García. Analysis of reactive oxygen species levels in murine parthenogenetic blastocysts upon hydrogen peroxide and quercetin in vitro supplementation. Bachelor's in Veterinary Medicine. In progress. **Director.**
- Christian Yael Félix Delgado. Evaluation of the effect of hydrogen peroxide and quercetin on mouse parthenotes in vitro development. Bachelor's in Veterinary Medicine. In progress. **Director.**
- Gabriela Denisse Román Arévalo. The impact of hydrogen peroxide on bovine parthenotes mitochondrial viability. Bachelor's in Veterinary Medicine. In progress. **Director.**
- Claudia Ivonne Olivas Fabela. The influence of oxidative stress on reactive oxygen species level in bovine parthenotes. Bachelor's in Veterinary Medicine. In progress. **Director.**
- Bianca Viviana Orozco Galindo. 2019. Establishment of a bovine parthenotes in vitro production system. Bachelor's in Veterinary Medicine. Finished. **Director.**

RESEARCH

Projects

- **2020. Principal investigator.** The influence of oxidative stress on murine parthenotes in vitro development. No funding. In progress.
- **2018. Principal investigator.** The impact of oxidative stress on bovine parthenotes in vitro development. External funding-PRODEP. In progress.
- **2018. Collaborator.** The effect of corpus luteum on trypan blue and brilliant cresyl blue-selected bovine oocytes in vitro maturation, fertilization, and development. External funding-Escobar Dairy S.A. de C.V. In progress.

- **2018. Collaborator.** Effects of glycerol and diverse semen collection methods on roosters sperm viability. No funding. Finished.
- **2017. Collaborator.** Evaluation of Moringa oleifera extract addition in ram semen cryopreservation. Internal funding UACJ-PIVA. In progress.
- **2017. Collaborator.** Evaluation of quercetin in bovine oocytes in vitro maturation and embryonic development. Internal funding UACJ. In progress.
- **2017. Principal investigator.** Effects of hydrogen peroxide-induced stress on rat and mouse early development. No funding. Finished.
- **2017. Collaborator.** Productive performance in weaned pigs fed with a start diet with inclusion of food organic waste flour. External funding-CAPRA. Finished.
- **2016. Collaborator.** Effect of different inducers in bioactive compound metabolism and its impact on the sensorial quality of lettuce as functional food. External funding-CONACYT Basic Scientific Research. Finished.
- **2016. Collaborator.** Evaluation of risk factors associated with retained placenta in dairy cattle in northern México. No funding. Finished.
- **2011. PhD student.** The functional analysis of developmentally important genes in bovine oocytes using siRNA and morpholino oligonucleotides. External funding-NSERC, EmbryoGENE, FQRNT (Canada). Finished.