

CURRICULUM VITAE

Helena D. Zomer

Department of Physiological Sciences
University of Florida, College of Veterinary Medicine
2015 SW 16th Ave. Office V2-161
Gainesville, FL, 32610
helenazomer@ufl.edu
TheZomerLab.com
(352) 294-4015

EDUCATION

Ph.D., Cell and Developmental Biology	2014 - 2018
Department of Cell Biology, Embryology and Genetics - Federal University of Santa Catarina, Brazil	
Project: Dermis versus adipose tissue: influence of the source of mesenchymal stromal cells in tissue engineering for skin wound healing.	
M.S., Anatomy of Domestic and Wild Animals	2012 - 2013
Department of Surgery, University of Sao Paulo, Brazil	
Project: Induction of pluripotency in rabbit adipose-derived mesenchymal stromal cells.	
D.V.M., Doctor of Veterinary Medicine	2007 - 2011
Santa Catarina State University, Brazil	

PROFESSIONAL EXPERIENCE

Assistant Professor	2021 - present
Department of Physiological Sciences, University of Florida, Gainesville, FL	
Postdoctoral Research Associate, Laboratory of Dr. Prabhakara Reddi	2018 - 2021
Department of Comparative Biosciences, University of Illinois, Urbana, IL	
Graduate Teaching Assistant in Histology	2016
College of Biological Sciences, Federal University of Santa Catarina, Brazil	
Graduate Teaching Assistant in Animal Physiology	2013
College of Veterinary Medicine, University of Sao Paulo, Brazil	
Veterinary Student Research Assistant	2010 - 2011
Departments of Animal Reproduction and Pathology, Santa Catarina State University, Brazil	

OTHER TRAINING

Visiting Scholar at Dr. Ratner Bioengineering Lab - University of Washington, Seattle, WA	2017 - 2018
Visiting Scholar at Dr. Ambrosio Stem cells Lab - University of Sao Paulo, Brazil	2011
Visiting Scholar at Dr. Nardi Stem cells Lab - Brazilian Lutheran University, Brazil	2010
Visiting Scholar at Dr. Pippi Stem cells Lab - Federal University of Santa Maria, Brazil	2010

HONOR AND AWARDS

Early Career Faculty Award, Wound Healing Society, Grapevine, TX	2025
C.E. Cornelius Young Investigator Award, University of Florida, Gainesville, FL	2024
Best Poster Presentation, Claude D. Pepper Older Americans Independence Centers Meeting, Arlington, VA	2024
Travel Award, Tissue Engineering and Regenerative Medicine International Society (TERMIS) Americas, Boston, MA	2023

Butler-Williams Scholar, National Institute on Aging, National Institutes of Health, Virtual	2022
Distinguished Travel Awardee, TERMIS Americas, Toronto, Canada	2022
Burroughs Wellcome Travel Fellowship for Underrepresented Minority, SSR, Saint Louis, MO	2021
Trainee Research Award Poster Competition (third place), Society for the Study of Reproduction, Saint Louis, MO	2021
Celebration of Research Top Award, University of Illinois College of Veterinary Medicine, Urbana, IL	2021
Trainee Merit Award Finalist, American Society of Andrology, Virtual	2021
Travel Award, Society for the Study of Reproduction, Virtual	2020
Best Ph.D. thesis of the Department of Cell Biology, Embryology and Genetics from the Federal University of Santa Catarina, selected to the 2018 National Prize for Best Thesis, CAPES, Brazil	2018
Best poster (second place), 1 st TERMIS Americas Workshop / IV International Meeting of Tissue Engineering and Regenerative Medicine, Brazil	2018
Best poster (third place), 1 st TERMIS Americas Workshop / IV International Meeting of Tissue Engineering and Regenerative Medicine, Brazil	2018
Ph.D. Internship Abroad Fellowship, Coordination for the Improvement of Higher Education Personnel (CAPES), Brazil	2017-2018
Selected for the Theoretical and Practical Course on Stem Cells: Basics and Biotechnological Aspects, Brazilian-Argentinian Biotechnology Center	2012

RESEARCH

I have maintained a strong publication record, with 25 peer-reviewed articles to date, including 14 in the last four years. I am senior author on three and the first or co-first author on 17 of these publications. My research impact has consistently been recognized within the field, and these publications have played a significant role in advancing the knowledge of stem cell biology and tissue repair.

SCIENTIFIC PRODUCTION

1. Mediha Guhel, **Helena D. Zomer**, Peter S. McFetridge. Physiologically – modeled dynamic stimulation and growth factors induce differentiation of mesenchymal stem cells to a vascular endothelial cell phenotype. *Microcirculation*. 2025. In press.
2. William H. Walker, **Helena D. Zomer**, Paul S. Cooke. Steroid hormone action. *Encyclopedia of Endocrine Disease*, 3rd Ed., Elsevier, 2024. In press. (Book Chapter)
3. **Helena D. Zomer**, Paul S. Cooke. Advances in drug treatments for companion animal obesity. *Biology (Basel)*. 2024. 13(5):335. doi: 10.3390/biology13050335 **Featured paper**
4. **Helena D. Zomer***, Victor J.S. Lima, Monique C. Bion, Karynne N. L. Brito; Michele Rode, Marcus A. Stimamiglio, Talita S. Jeremias, Andrea G. Trentin. Evaluation of secretomes derived from human dermal and adipose tissue mesenchymal stem/stromal cells for skin wound healing: Not as effective as cells. *Stem Cell Research & Therapy*, 2024. 15(1):82. doi: 10.1186/s13287-024-03697-1 ***Corresponding Author**
5. Jones B. Graceli*, **Helena D. Zomer***, Theresa I. Medrano, Ken Korach, Rex A. Hess, Paul S. Cooke. Role for non-genomic estrogen signaling in male fertility. *Endocrinology*, 2024. 165(3):bqad180. doi: 10.1210/endocr/bqad180. ***Equal first authors**
6. Emily G. Kaye, Kavyashree Basavaraju, Geoffrey M. Nelson, **Helena D. Zomer**, Debarun Roy, Irene I. Joseph, Reza Rajabi-Toustani, Huanyu Qiao, Karen Adelman, Prabhakara Reddi. RNA polymerase II pausing is essential during spermatogenesis for appropriate gene expression and completion of meiosis. *Nature Communications*, 2024. 15(1):848. doi: 10.1038/s41467-024-45177-3.
7. Leslie A. Goldberg*, **Helena D. Zomer***, Calum McFetridge, Peter S. McFetridge. Silica nanoparticles enhance interfacial self-adherence of a multi-layered extracellular matrix scaffold for vascular tissue regeneration. *Biotechnology Letters*, 2024. doi: 10.1007/s10529-024-03469-0. Epub ahead of print. ***Equal first authors**

8. Leslie A. Goldberg*, **Helena D. Zomer***, Calum McFetridge, Peter S. McFetridge. Silica nanoparticles enhance the cyto- and hemocompatibility of a multilayered extracellular matrix scaffold for vascular tissue regeneration. *Biotechnology Letters*, 2024. 46(2):249-261. doi: 10.1007/s10529-023-03459-8. ***Equal first authors**
9. **Helena D. Zomer***, Paul S. Cooke. Targeting estrogen signaling and biosynthesis for aged skin repair. *Frontiers in Physiology*, 2023. 31;14:1281071. doi: 10.3389/fphys.2023.1281071. ***Corresponding Author**
10. Jeanini Zimerman, Oscar M. S. Niño, Charles S. da Costa, Jordana F. Zanol, Milena Comério, Letícia N. da Gama de Souza, Leandro Alves-Miranda, Rosiane A. Miranda, Patrícia C. Lisboa, Tays A. Camilo, Rodrigo Rorato, Guilherme Andrade Alves, Renata Frazão, **Helena D. Zomer**, Leandro C. Freitas-Lima, Jones B. Graceli. Subacute high-refined carbohydrate diet leads to abnormal reproductive control of the hypothalamic-pituitary axis in female rats. *Reproductive Toxicology*, 2023. 119:108410. doi: 10.1016/j.reprotox.2023.108410.
11. **Helena D. Zomer**, Hari P. Osuru, Apoorv Chebolu, Jeremy M. Rayl, Madeline Timken, Prabhakara P. Reddi. Sertoli cells require TDP-43 to support spermatogenesis. *Biology of Reproduction*, 2022. 14;107(5):1345-1359. doi: 10.1093/biolre/ioc165.
12. Katie Campbell, Yidin Xu, Chin Patel, Jeremy M Rayl, **Helena D. Zomer**, Hari Prasad Osuru, Michael Pratt, Patcharin Pramoonjago, Madeline Timken, Lyndzi M Miller, Abigail Ralph, Kathryn M Storey, Yiheng Peng, Jenny Drnevich, Clotilde Lagier-Tourenne, Philip C Wong, Huanyu Qiao, Reddi PP. Loss of TDP-43 in male germ cells causes meiotic failure and impairs fertility in mice, *Journal of Biological Chemistry*, 2021. 297(5):101231. doi: 10.1016/j.jbc.2021.101231.
13. Priscilla B. Delben*, **Helena D. Zomer***, Camila A. Silva, Rogério S. Gomes, Fernanda R. Melo, Patricia Dillenburg-Pilla, Andrea G. Trentin. Human adipose-derived mesenchymal stromal cells from face and abdomen undergo replicative senescence and loss of genetic integrity after long-term culture. *Experimental Cell Research*, 2021. 1;406(1):112740. doi: 10.1016/j.yexcr.2021.112740. ***Equal first authors**
14. **Helena D. Zomer***, Ana Julia G. Goncalves, Jessica Andrade, Aloisio Benedetti, Andrea Trentin. Umbilical cord blood banking: knowledge and attitudes of Brazilian pregnant women. *Cell and Tissue Banking*, 2021. 22(4):597-607. doi: 10.1007/s10561-021-09903-1. ***Corresponding author**
15. **Helena D. Zomer**, Prabhakara Reddi. Mouse Sertoli cell isolation by lineage tracing and sorting. *Molecular Reproduction and Development*, 2020. 87(8):871-879. doi: 10.1002/mrd.23406.
16. **Helena D. Zomer**, Prabhakara Reddi. Characterization of rodent Sertoli cell primary cultures. *Molecular Reproduction and Development*, 2020. 87(8):857-870. doi: 10.1002/mrd.23402.
17. **Helena D. Zomer**, Talita da Silva Jeremias, Buddy Ratner, and Andrea Gonçalves Trentin. Mesenchymal stromal cells from dermal and adipose tissues induce macrophage polarization to a pro-repair phenotype and improve skin wound healing. *Cytotherapy*, 2020. 22(5):247-260. doi: 10.1016/j.jcyt.2020.02.003.
18. **Helena D. Zomer**, Gisele Kristina dos Santos Varela, Priscilla Barros Delben, Diana Heck, Talita da Silva Jeremias, and Andrea Gonçalves Trentin. In vitro comparative study of human mesenchymal stromal cells from dermis and adipose tissue for application in skin wound healing. *Journal of Tissue Engineering and Regenerative Medicine*, 2019. 13(5):729-741. doi: 10.1002/term.2820.
19. **Helena D. Zomer**, Kelly C. S. Roballo, Natália N. Gonçalves, Thais B. Lessa, Fabiana F. Bressan, Andrea G. Trentin, Flavio V. Meirelles, Carlos E. Ambrósio. Distinct features of rabbit and human adipose derived mesenchymal stem cells: implications for biotechnology and translational research. *Stem Cells and Cloning: Advances and Applications*, 2018. 23(11):43-54. doi: 10.2147/SCCAA.S175749.
20. **Helena D. Zomer**, Andrea G. Trentin. Skin wound healing in humans and mice: challenges in translational research. *Journal of Dermatological Science*, 2018. 90(1):3-12. doi: 10.1016/j.jdermsci.2017.12.009. **Featured paper**
21. Gabriela C. Nardelli, **Helena D. Zomer**. Association of low potency laser therapy and mesenchymal stem cells (Portuguese). *Nosso Clínico*, 2017. 117(6):1-5. ISSN: 1808-7191
22. **Helena D. Zomer**, Atanásio S. Vidane, Natália N. Gonçalves, Carlos E. Ambrósio. Mesenchymal and induced pluripotent stem cells: general insights and clinical perspectives. *Stem Cells and Cloning: Advances and Applications*, 2015. 28(8):125-34. doi: 10.2147/SCCAA.S88036.

23. Atanásio S. Vidane, **Helena D. Zomer**, Bruna M. M. Oliveira, Carina F. Guimarães, Cláudia B. Fernandes, Felipe Perecin, Luciano A. Silva, Maria A. Miglino, Flávio V. Meirelles, Carlos E. Ambrósio. Reproductive stem cell differentiation: extracellular matrix, tissue microenvironment, and growth factors direct the mesenchymal stem cell lineage commitment. *Reproductive Sciences*, 2013. 20(10):1137-43. doi: 10.1177/1933719113477484.
24. Marina P. Brólio, Atanásio S. Vidane, **Helena D. Zomer**, Cristiane. V. Wenceslau, Juliana J. Ozório, Daniele. S. Martins, Maria A. Miglino, Carlos E. Ambrósio. Morphological characterization of the progenitor blood cells in canine and feline umbilical cord. *Microscopy Research and Technique*, 2012. 75(6):766-70. doi: 10.1002/jemt.21123.
25. Dilayla K. Abreu, Thais B. Lessa, Bruno M. Bertassoli, **Helena D. Zomer**, Paula Fratini, Sonia E. A. L. Will, Rose R. E. G. Rici, Antonio C. Assis Neto, Maria A. Miglino, Carlos E. Ambrósio. Picrosirius Staining for Dystrophic Animal Models of Diaphragm Morphology. *Current Microscopy Contributions to Advances in Science and Technology*, A. Méndez-Vilas (Ed.), Formatex, 2012. (Book chapter)

ABSTRACTS / POSTERS

1. Helen Hernandez, **Helena D. Zomer**, Dani Baisden, Ingrid Fleming. Delayed wound healing and hypergranulation in a child with smoc1 mutation: a case report. *Wound Healing Society*, Grapevine, Texas, 2025.
2. Priscilla B. Delben, Camila A. Silva, **Helena D. Zomer**, Andrea G. Trentin. Human facial UVA-induced photoaging: a comparative study investigating the decline in regenerative properties and genetic integrity between mesenchymal stem cells derived from dermal and adipose tissues. *XXI Congress of the Brazilian Society for Cell Biology*, Brazil, 2024.
3. **Helena D. Zomer**, Adriane C. Fagundes, Lais A. Ferreira, Augusto C. Ascitutti, Priscilla B. Delben, Mayara M. da Silva, Talita Jeremias, Andrea G. Trentin. Comparative characterization of human dermal mesenchymal stromal cells from different anatomical locations and across the lifespan. *International Society of Cell Therapy*, Vancouver, Canada, 2024.
4. **Helena D. Zomer**, Payton Corey, Peter McFetridge, Paul S. Cooke. Targeting estrogen signaling for aged skin repair. *Claude D. Pepper Older Americans Independence Center Meeting*, Arlington, VA, 2024. **Awarded Best Poster Presentation**
5. Paul S. Cooke, Vijay K. Sirohi, **Helena D. Zomer**, Jones B. Graceli, Ana Mesa, Theresa Medrano 17 α -estradiol signals primarily through nongenomic mechanisms: implications for its beneficial longevity effects. *Endocrinology*, Chicago, IL, 2023.
6. **Helena D. Zomer**, Vijay Sirohi, Theresa Medrano, Paul S. Cooke. Unraveling nongenomic mechanisms by which 17 α -estradiol extends healthspan and longevity. *GSA*, Tampa, FL, 2023.
7. Leslie A. Goldberg, **Helena D. Zomer**, Calum McFetridge, Peter S. McFetridge. Silica nanoparticles enhance the cyto- and hemocompatibility of a multilayered extracellular matrix scaffold for vascular tissue regeneration. *TERMIS-AM*, Boston, MA, 2023. **Travel award to my mentee Calum McFetridge (presenter)**
8. **Helena D. Zomer**, Payton Corey, Calum McFetridge, Peter McFetridge, Paul Cooke. A regenerative medicine approach to restore estrogen signaling in older adults' chronic skin wounds. *TERMIS-AM*, Boston, MA, 2023. **Travel award & selected for oral presentation** (presented by my mentee Calum McFetridge).
9. **Helena D. Zomer**, Rex Hess, Prabhakara Reddi. Deletion of negative elongating factor B (Nelf-b) in Sertoli cells leads to sperm aberrations and infertility in mice. *Society for the Study of Reproduction*, Saint Louis, MO, 2021. **Burroughs Travel Award & Top #3 Award**
10. **Helena D. Zomer**, Prabhakara Reddi. Deletion of negative elongating factor B (Nelf-b) in Sertoli cells leads to sperm aberrations and infertility in mice. *Celebration of Research*, College of Veterinary Medicine, University of Illinois, 2021. **Top Award**
11. **Helena D. Zomer**, Prabhakara Reddi. Deletion of negative elongating factor B (Nelf-b) in Sertoli cells leads to sperm aberrations and infertility in mice. *American Society of Andrology Virtual Meeting*, 2021. **Trainee Merit Award finalist**
12. Priscilla B. Delben, **Helena D. Zomer**, Rogério S. Gomes, Daniel G. Perez, Andrea G. Trentin. Biological responses of mesenchymal stromal cells derived from the human facial dermis and hypodermis against UVA radiation. *XI Brazilian Association of Cell and Gene Therapy*, Online, 2021.
13. Camila A. Silva, Priscilla B. Delben, **Helena D. Zomer**, Rogério S. Gomes, Andrea G. Trentin. γ -H2AX expression in human adipose tissue derived mesenchymal stromal cells: influence of anatomical region, long-term expansion and UVB radiation stress. *XI Brazilian Association of Cell and Gene Therapy*, Online, 2021.

14. **Helena D. Zomer**, Jeremy Rayl, Prabhakara Reddi. Loss of TDP-43 in Sertoli cells leads to failure of spermatogenesis in mice. Society for the Study of Reproduction Virtual meeting, 2020. **Travel award**
15. **Helena D. Zomer**, Talita S. Jeremias, Andrea G. Trentin. Human dermal and adipose tissue mesenchymal stromal cells versus their corresponding conditioned media: a comparative study of skin wound healing. International Society for Stem Cell Research Virtual meeting, 2020.
16. **Helena D. Zomer**, Ana Julia Girardi, Jessica Andrade, Aloisio Benedetti, Andrea G. Trentin. Knowledge and opinions of Brazilian pregnant women about umbilical cord blood banking. International Society for Stem Cell Research Virtual meeting, 2020.
17. **Helena D. Zomer**, Jeremy Rayl, Prabhakara Reddi. Loss of TDP-43 in Sertoli cells leads to disruption of the blood-testis barrier and infertility. Illinois Symposium for Reproductive Science, Chicago, IL, 2019. **Selected for oral presentation**
18. **Helena D. Zomer**, Prabhakara Reddi. Role of TDP-43 in Sertoli cell function. VetMed Research day, University of Illinois, Urbana, IL, 2019.
19. **Helena D. Zomer**, Talita S. Jeremias, Buddy Ratner, Andrea G. Trentin. Macrophage polarization in skin wounds treated with a dermal substitute associated with mesenchymal stem cells. 1st Termis Americas Workshop / 4th International meeting on Tissue Engineering and Regenerative Medicine, Brazil, 2018. **2nd prize in graduate student's category**
20. **Helena D. Zomer**, Talita S. Jeremias, Andrea G. Trentin. Influence of the source of mesenchymal stem cells for tissue engineering: dermal versus adipose tissue in skin wound healing. 1st Termis Americas Workshop / 4th International meeting on Tissue Engineering and Regenerative Medicine, Brazil, 2018. **3rd prize in graduate student's category**
21. Gisele K. S. Varela, **Helena D. Zomer**, Bianca L. Teixeira, Andrea G. Trentin. Effect of human dermal and adipose derived mesenchymal stromal cells conditioned medium in the skin repair in vitro. XIX Congress of the Brazilian Society for Cell Biology, Brazil, 2018.
22. **Helena D. Zomer**, Gisele K. Varela, Priscilla B. Delben, Rafaela G. Machado, Talita S. Jeremias, Andrea G. Trentin. Dermal versus adipose derived mesenchymal stem cells associated with Integra Matrix® in skin wound healing. 14th Conference of Latin American Society of Biomaterials, Artificial Organs and Tissue Engineering - SLABO (5th Workshop of Biomaterials, Tissue Engineering and Artificial Organs – OBI), Brazil, 2017.
23. **Helena D. Zomer**, Priscilla B. Delben, Gisele K. Varella, Talita S. Jeremias, Patrícia D. Pilla, Andrea G. Trentin. In vitro comparative study of human mesenchymal stem cells from adipose and dermal tissues for application in cutaneous wound healing. XX Conference of the Brazilian Association of Bone Marrow Transplantation, Brazil, 2016.
24. Priscilla B. Delben, **Helena D. Zomer**, Rogério S. Gomes, Camila Acordi, Debora Cornelio, Talita S. Jeremias, Silvia B. Medeiros, Patrícia D. Pilla, Andrea G. Trentin. Comparative evaluation of genetic integrity and long-term expansion of human adipose-derived stromal cells from face and abdomen. XX Conference of the Brazilian Association of Bone Marrow Transplantation, Brazil, 2016.
25. **Helena D. Zomer**, Gisele K. Varella, Priscilla B. Delben, Maiara Marques, Gabriel S. Pescador, Talita S. Jeremias, Patrícia D. Pilla, Andrea G. Trentin. Characterization of mesenchymal stromal cells derived from human abdominal dermis. XVIII Congress of the Brazilian Society for Cell Biology, Brazil, 2016.
26. Priscilla B. Delben, **Helena D. Zomer**, Camila Acordi, Aruana Hansel, Fernanda R. Melo, Rogério S. Gomes, Talita S. Jeremias, Debora Cornelio, Gabriel S. Pescador, Silvia B. Medeiros, Patrícia D. Pilla, Andrea G. Trentin. Cicatricial potential of ASCS isolated from human facial and abdominal adipose tissues. XVIII Congress of the Brazilian Society for Cell Biology, Brazil, 2016.
27. Gisele K. Varela, **Helena D. Zomer**, Priscilla B. Delben, Maiara Marques, Andrea G. Trentin. Characterization of mesenchymal stromal cells from human abdominal dermis (Portuguese). IV Integrated Symposium of Post graduations in Biological Sciences. Federal University of Santa Catarina, Brazil, 2015.
28. **Helena D. Zomer**, Natália N. Gonçalves, Fabiana Bressan, Carlos E. Ambrósio. Failure in the induction of pluripotency in rabbit adipose derived stem cells: a high proliferation problem? I Latin American VIII Brazilian and I Argentine Congress of Stem Cells and Cell Therapy, Brazil, 2014.
29. **Helena D. Zomer**, Atanásio S. Vidane, Aline F. Souza, Bruna A. Salvato, Juliana B. Casals, Natalia, J. Nardelli, Flavio V. Meirelles, Carlos E. Ambrósio. Isolation and characterization of fibroblasts and adipose derived stem cells from rabbits. IV International Symposium on Animal Biology and Reproduction, Brazil, 2012.

30. **Helena D. Zomer**, Atanásio S. Vidane, Aline F. Souza, Juliana B. Casals, Natalia J. Nardelli, Fabiana Bressan, Flavio V. Meirelles, Carlos E. Ambrosio. Establishment of culture of induced pluripotent stem cells from fibroblasts and adipose derived stem cells of rabbits. VII Brazilian Conference on Stem Cells and Cell Therapy, Brazil, 2012.
31. **Helena D. Zomer**, Lain U. Ohlweiler, Norton Klein, Tiffany C. E. Silva, Thalita C. Cardoso, Matthew B. Wheeler, Aldo Gava, Joana C. Mezzalira, Alceu Mezzalira. Mitotracker® for detection of cell migration after transplant of mice stromal stem cells. VI Brazilian Conference on Stem Cells and Cell Therapy, Brazil, 2012.

INVITED SPEAKER – SCIENTIFIC SEMINARS AND CONFERENCE TALKS

1. Placental-derived protein matrix enhances estrogen signaling and promotes healing of aged skin wounds, 05/02/25 Wound Healing Society, Grapevine, TX
2. Redefining healing: How regenerative medicine is advancing skin repair, Aging Seminar Series, University of 03/11/25 Florida, Gainesville, FL
3. Redefining healing: New strategies in regenerative medicine for improving skin repair, STEMinar Series, 11/21/24 Daytona State College, Daytona, FL
4. Redefining healing: New strategies in regenerative medicine for improving skin repair, Clinical and 11/01/24 Translational Science Institute, University of Florida, Gainesville, FL
5. Redefining healing: New strategies in regenerative medicine for improving skin repair, Department of 09/13/24 Biomedical Engineering – Seminar Speaker Series, University of Cincinnati, Cincinnati, OH
6. Physiological modulation of mesenchymal stem/stromal cells secretome for skin wound healing, Wound 05/16/24 Healing Society meeting, Orlando, FL
7. Unraveling nongenomic mechanisms by which 17 alpha-estradiol extends health span and longevity. Butler- 11/08/23 Williams Alumni Symposium, GSA, Tampa, FL
8. Physiological modulation of mesenchymal stem/stromal cells secretome for skin wound healing, UF Health 07/26/23 Shands Burn Center, College of Medicine, University of Florida, Gainesville, FL
9. New strategies in tissue engineering for skin wound healing and regeneration, Department of Physiology 02/27/23 and Aging, College of Medicine, University of Florida, Gainesville, FL
10. New strategies in tissue engineering for skin wound healing and regeneration, Department of Physiological 11/29/22 Sciences, University of Florida, Gainesville, FL
11. Novel human placental derived extracellular matrix for healing estrogen-deprived elderly chronic skin 07/11/22 wounds – Tissue Engineering and Regenerative Medicine International Society (TERMIS) Americas, Toronto, Canada, 2022. Distinguished Travel Award.
12. New strategies in tissue engineering for skin regeneration, DevBio Webinar – available at 06/28/22 <https://www.youtube.com/watch?v=l3Tg9wNn-ac&t=1503s>
13. Stem cells and 25 years of Dolly (Portuguese), interview to Vem Cienciar Podcast – available at 03/09/22 <https://anchor.fm/vemcienciar/episodes/Episodio-89---Clulas-tronco-e-25-anos-da-Dolly-e1fga00>
14. Transcriptional regulation of spermatogenesis: from male infertility to new contraceptives – Department of 12/09/21 Cell Biology, Embryology and Genetics, Federal University of Santa Catarina, Brazil (*online*)
15. Transcriptional regulation of spermatogenesis: from male infertility to new contraceptives - Reproductive 11/10/21 & Perinatal Biology Seminar Series, University of Florida, Gainesville, FL
16. Applied biotechnology for the study of stem cells – Federal University of Sao Francisco Valley, Brazil (*online*) 11/02/21
17. Transcriptional regulation of spermatogenesis: from male infertility to new contraceptives – Department of 08/25/21 Pharmacology, Federal University of Santa Catarina, Brazil (*online*)
18. New strategies in tissue engineering to improve skin wound healing - Department of Biomedical 03/19/21 Engineering, Michigan State University, East Lansing, MI (*online*)
19. Lack of information about umbilical cord blood banking leads to decreased donation rates among Brazilian 03/09/21 pregnant women. Lutheran University of Brazil, Brazil (*online*)

20. Loss of TDP-43 in Sertoli cells leads to disruption of the blood-testis barrier and infertility. Illinois Symposium 11/14/19 for Reproductive Science, Chicago, IL
21. Mesenchymal stromal cells in tissue engineering for skin wound healing. Department of Comparative 02/06/19 Biosciences, University of Illinois, Urbana, IL
22. Influence of the source of mesenchymal stem cells to tissue engineering: dermal versus adipose tissue in 02/12/18 skin wound healing. Department of Bioengineering, Washington State University, Pullman, WA
23. Skin wound healing in humans and mice: challenges in translational research. Department of Comparative 01/11/18 Medicine, University of Washington, Seattle, WA
24. Dermal versus adipose-derived mesenchymal stem cells associated with Integra™ matrix in skin wound 10/26/17 healing. Department of Bioengineering, University of Washington, Seattle, WA
25. Stem cells in veterinary medicine, Santa Catarina State University, Brazil 10/19/16
26. Adipose and dermal derived mesenchymal stromal cells in wound healing. Department of Bioengineering, 04/18/16 University of Washington, Seattle WA
27. Stem cells in skin regeneration, Department of Cell Biology and Development, Federal University of Santa 02/17/16 Catarina, Brazil
28. Pluripotency Induction in rabbit adipose derived stem cells, Department of Cell Biology and Development, 12/03/14 Federal University of Santa Catarina, Brazil

TEACHING

Beyond research, I am passionate about teaching and mentorship. I co-direct a graduate-level course each year and deliver lectures on regenerative medicine, skin physiology, and wound healing across several graduate programs. To date, I have mentored 28 students, including college, undergraduate, D.V.M., and M.D. trainees. I am especially committed to making science accessible to underrepresented groups and to inspire young women in STEM.

COURSE COORDINATION

VME6937L Graduate Spring Seminar Series

2024-Present

INVITED SPEAKER – INSTRUCTIONAL COURSES AND LECTURES

1. Veterinary Regenerative Medicine – Bench to Market – Invited lecture at Bench to Market: Regenerative 03/25/24 Medicine - University of Florida, Gainesville, FL
2. Skin physiology, wound healing and regeneration – Invited lecture at VME 5244 Physiology of Mammals - 11/20/23 University of Florida, Gainesville, FL
3. Physiology of Reproduction – Invited lecture at VME 5244 Physiology of Mammals - University of Florida, 11/27/23 Gainesville, FL
4. Skin physiology, wound healing and regeneration – Invited lecture at VME 5244 Physiology of Mammals - 10/27/21 University of Florida, Gainesville, FL
5. II Karyokinesis Symposium - Round table about the job market for alumni of the Department of Cell Biology 11/06/20 Embryology and Genetics, Federal University of Santa Catarina, Brazil (online)
6. Practical Course of Stem cell isolation, Santa Catarina State University, Brazil 2016
7. II Summer Course in Cell Biology and Development, Federal University of Santa Catarina, Brazil 2016
8. Practical Course for new talents in Science, Federal University of Santa Catarina, Brazil 2016
9. Stem cells in the field of food science and technology, School of Food Engineering, Federal University of 2016 Santa Catarina, Brazil
10. Pluripotent stem cells, Department of Cell Biology and Development, Federal University of Santa Catarina, 10/22/15 Brazil

11. Short Course of Stem cells from the Laboratory of Stem Cells and Tissue Regeneration, Federal University of Santa Catarina, Brazil 2015
12. Stem cells in Nutritional Sciences, School of Nutrition, Federal University of Santa Catarina, Brazil 2015-2016
13. Veterinarian instructor on Week of Professions for High School Students, Energia School, Brazil 2015-2017
14. Stem cells: concepts and therapeutic perspectives, Veterinary School, University of Sao Paulo, Brazil 08/27/13

GRADUATE STATUS

Department of Physiological Sciences, College of Veterinary Medicine, University of Florida 2023-present

MENTORING

Gabriel T. Casanova	Graduate Student -Masters	Advisory committee, University of Florida (UF)	2024-present
Jessica M. Novaes	PhD visiting scholar	Tissue engineering, Federal University of Sao Carlos, Brazil	2024-present
Leela S. Zhuo	Undergraduate student	Physiological Sciences, UF	2024-present
Ezinne U. Nwoye	Undergraduate student	Physiological Sciences, UF	2024-2025
Julia Mitze	DVM student	Florida Veterinary Scholar Program, UF	2024
Gustavo Zamora	DVM student	Florida Veterinary Scholar Program, UF	2024
Karynne Nazare Lins Brito	PhD candidate	Advisory committee, Federal University of Santa Catarina (UFSC), Brazil	2023-2024
David Raguindin	Eight Grade Student	Research Advisor – Pinecrest Academy Space Coast	2023-present
Gabbie Robilotto	PhD candidate	Advisory Committee, Physiological Sciences, UF	2023-2024
Yiming Lin	Graduate volunteer	Tissue Engineering, UF	2023
Luis Parera	DVM student	Florida Veterinary Scholar Program, UF	2023
Calum McFetridge	Undergraduate student/graduate volunteer	Tissue Engineering, UF	2021-2024
Payton Corey	DVM student	Florida Veterinary Scholar Program, UF	2022
Audrey McAnally	Undergraduate student	Physiological Sciences, UF	2022
Ann Steephen	Undergraduate student	Molecular and cellular biology, University of Illinois at Urbana-Champaign (UIUC)	2021
Miles Ham	Undergraduate student	Molecular and cellular biology, UIUC	2021
Peyton Hopkins	Undergraduate student	Molecular and cellular biology, UIUC	2020-2021
Allison Schierer	Undergraduate student	Molecular and cellular biology, UIUC	2018-2021
Saakshi Pothina	Undergraduate student	Molecular and cellular biology, UIUC	2019-2021
Jessica Andrade	Medical student	Umbilical cord blood banking outreach project, UFSC, Brazil	2015-2018
Ana Julia Goncalves	Medical student	Umbilical cord blood banking outreach project, UFSC, Brazil	2015-2018
Sara Elis Schmitt	DVM student	Stem cells and regenerative medicine, UFSC, Brazil	2017
Mariana Koursiouni	MD student- International visiting scholar - Greece	Stem cells and regenerative medicine, UFSC, Brazil	2017
Maria Carmona	MD student- International visiting scholar - Portugal	Stem cells and regenerative medicine, UFSC, Brazil	2017
Tania Monarrez Barron	MD student-International visiting scholar - Mexico	Stem cells and regenerative medicine, UFSC, Brazil	2017
Gisele Varela	Undergraduate student	Academic advisor (dissertation), UFSC, Brazil	2014-2015

Gabriela Nardelli	Graduate student	Academic advisor (dissertation), Bioethicus Institute, Brazil	2015
Priscila B. Delben	Undergraduate student	Advisory committee, UFSC, Brazil	2014

TEACHING ASSISTANT

Graduate Teaching Assistant in Histology	2016
College of Biological Sciences, Federal University of Santa Catarina, Brazil	
Graduate Teaching Assistant in Animal Physiology	2013
College of Veterinary Medicine, University of Sao Paulo, Brazil	

SERVICE

PROFESSIONAL AFFILIATIONS

Wound Healing Society	2022-Present
American Aging Association	2022-Present
The Gerontological Society of America	2022-Present
University of Florida Institute on Aging	2021-Present
Tissue Engineering and Regenerative Medicine International Society	2020-Present
Society for the Study of Reproduction	2020-2023
American Society of Andrology	2020-2021
International Society for Stem Cell Research	2020-Present

AD HOC REVIEWER

Stem Cell Research and Therapy	International Wound Journal
Biology of Reproduction	Wound Repair and Regeneration
Experimental Cell Research	International Journal of Nanomedicine
PLOS One	Critical Care Explorations
Rejuvenation Research	Dermatology and Therapy

EVENT ORGANIZATION / VOLUNTEER

CVM 3-Minute Thesis (3MT) competition, University of Florida	2024-2025
Society for the Study of Reproduction, Saint Louis, MO	2021
Course for new talents in Science CAPES, Department of Cell Biology and Developmental Biology, Federal University of Santa Catarina, Brazil	2016
II Summer Course in Cell Biology and Developmental Biology, Federal University of Santa Catarina, Brazil	2016
Expo Stem cells - Who, what, where? Federal University of Santa Catarina, Brazil	2015

OTHER PROFESSIONAL ACTIVITIES

Membership and Communications Committee – Wound Healing Society	2024-Present
Review panel for the Foundation for the Support of Science and Technology of the State of Pernambuco - FACEPE, Brazil.	2024
Department of Physiological Sciences Communications Committee	2023-2024
Search committee for Chair of Small Animal Clinical Sciences	2023
Review Editor, Frontiers in Medicine - Dermatology section	2023-Present
Judge for 2023 Best in Show Graduate Research Competition – Department of Physiological Sciences, University of Florida, Gainesville, FL	2023
Co-chair, Skin, Wound Healing, and Inflammation Section, Tissue Engineering and Regenerative Medicine - Americas Chapter	2022-Present

Judge for 2022 Best in Show Graduate Research Competition – Department of Physiological Sciences, University of Florida, Gainesville, FL	2022
Judge for the 2020 Undergraduate Research Symposium, University of Illinois, Urbana, IL	2020
Treasurer, Research Trainee Group, University of Illinois, Urbana, IL	2020
Founder and member of the outreach project "Therapeutic application of mesenchymal stem cells in veterinary medicine" (Portuguese). Federal University of Santa Catarina, Brazil	
Student representative of the Program of Cell Biology and Development, Federal University of Santa Catarina, Brazil	2016-2017
Founder and leader of the outreach project "Evaluation of the knowledge and opinions of Brazilian pregnant women about umbilical cord blood banks" (Portuguese). Federal University of Santa Catarina, Brazil	2015-2018
Judging committee for selection of master's degree candidates for the Program of Cell Biology and Development, Federal University of Santa Catarina, Brazil	2016

RESEARCH SUPPORT

For the past 3 years, I submitted an average of eight grant proposals per year, with a 25% success rate across small, medium, and large grants as PI, Co-PI, and Co-I. Currently, 95% of my salary is grant-supported, and for the past two years, I have consistently secured at least 50% salary support through my funding. I have funding secured to cover at least 50% of my salary through 2028. An R35 application is pending, and I am submitting a new R01 in the June 2025 cycle.

AWARDED

Molecular, functional, and clinical response of allogenic canine mesenchymal stem cell therapy in pet dogs with oxygen dependent pneumonia - a blinded, and randomized study

Irish Wolfhound Foundation

Role: Co-PI (R. Goncalves, PI)

This project received \$54,355 over 1 year to run the Restored Clinical Trial, aiming to test whether canine mesenchymal stem cells (isolated and characterized by my lab) can improve clinical parameters in dogs with oxygen-dependent pneumonia admitted to UF Emergency and Critical Care service.

Therapeutic efficiency of mesenchymal stem cells enhanced by soy isoflavones: new frontiers in immunomodulatory regenerative therapies

CNPq/MCTI/FDCNT (Brazil)

Role: Co-Investigator (A.P.I. Boemo, PI)

Programa Conhecimento Brasil: – This program supports projects involving international networks with Brazilian researchers abroad. Our project is a collaboration between my laboratory and Drs. Boemo and Trentin from the Federal University of Santa Catarina (Brazil). We were awarded BRL\$ 480,000 (equivalent to ~USD\$ 82,000) to study the modulation of mesenchymal stem cells with soy isoflavones.

Unraveling nongenomic mechanisms by which 17 α -estradiol extends health span and longevity in a sex-specific manner

Hevolution Foundation

Role: Co-Investigator (P. Cooke, PI)

This project received \$1,619,870 over 4 years to study whether 17 α -estradiol acts through estrogen membrane receptors to promote longevity and health span. Our team also includes Drs. Bowden from UF, Michael Stout from Oklahoma Medical Research Foundation, and Hugh Taylor from Yale.

A regenerative medicine approach to restore estrogen signaling in older adults' chronic skin wounds

University of Florida Claude D. Pepper Older Americans Independence Center P30AG028740

Role: Principal Investigator

This program promotes the development of independent investigators in interdisciplinary research on aging relevant to the independence of older Americans. The total award is \$125,000 for 2 years and includes salary and research support.

Physiological modulation of mesenchymal stem/stromal cells secretome for skin wound healing

Wound Healing Society Research Grant

Role: Principal Investigator

This study was awarded \$25,000 to test in vitro modulation of mesenchymal stem/stromal cells for production of efficient secretomes for skin wound healing.

Potential for a novel human-derived extracellular matrix to heal estrogen-deprived skin wounds

2021-2022

University of Florida College of Veterinary Medicine Fall Competition

Role: Principal Investigator

This study was awarded \$10,000 to gather preliminary results for an extramural application concerning a novel placental material to promote skin wound healing in elderly chronic wounds.

GnRH Expression in adult mice following intramuscular, intravenous and subcutaneous injection of an adeno-associated virus type 9 (AAV9) that will produce GnRH

2021-2023

The Michelson Found Animals Foundation

Role: Co-principal investigator (P. Cooke, PI)

This study was awarded \$22,216 to test a new gene therapy strategy to induce contraception.

PENDING

Unraveling the crosstalk between tissue stem cells and the microenvironment

2025-2030

R35 – NIH – NIGMS

Role: Principal Investigator

Requested: \$1,941,200

Interplay of stem cells, vascularization and estrogen signaling in aged skin repair

2026-2031

R01 – NIH

Role: Principal Investigator

Requested: \$2,646,073