

## Curriculum Vitae

**NAME:** Christianne Magee

**ADDRESS:** 1680 Campus Delivery  
Department of Biomedical Sciences  
College of Veterinary Medicine and Biomedical Sciences  
Colorado State University  
Fort Collins CO 80526

**Office Phone:** 970-491-7371  
**Email:** Christianne.Magee@colostate.edu  
**Website:** [www.ChristianneMagee.com](http://www.ChristianneMagee.com)  
**Pronouns:** she/her/ella

### **EDUCATION**

2000 BS (Biotechnology), Worcester Polytechnic Institute, Worcester, MA, USA  
2004 DVM, Cummings School of Veterinary Medicine at Tufts University, North Grafton, MA, USA  
2007 MS (Clinical Sciences), Colorado State University, Fort Collins, CO, USA  
2007 Diplomate, American College of Theriogenologists (equine reproduction specialist)  
2010 PhD (Biomedical Sciences), Colorado State University, Fort Collins, CO, USA

### **CV SECTION 1: EMPLOYMENT HISTORY AND AWARDS**

#### **ACADEMIC POSITIONS**

2023-present Associate Department Head, Director of Undergraduate Programs, Department of Biomedical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO  
2021-present Associate Professor (with tenure) Department of Biomedical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO  
2018-2021 Assistant Professor, Regular Appointment (tenure track), Department of Biomedical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO  
2012-2018 Assistant Professor, Special Appointment (non-tenure track), Department of Biomedical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO

#### **JOB DESCRIPTION**

	%Teaching/ Mentoring	% Research / Creative Activity	% Service / Outreach
2023-present	45	15	40
2018- 2023	65	20	15
2012-2018	65	15	20

#### **OTHER POSITIONS**

2010-2012 Post-doctoral fellow. Supervisor: Colin M. Clay, PhD, Animal Reproduction and Biotechnology Laboratory, Department of Biomedical Sciences, Colorado State University, Fort Collins, CO  
2005-2007 Residency, Equine Reproduction. Major Advisor: Patrick M. McCue, DVM, PhD, DipACT. Colorado State University Veterinary Teaching Hospital and the Colorado State University Equine Reproduction Laboratory, Fort Collins, CO  
2004-2005 Internship, Equine Medicine, Surgery and Ambulatory Practice. Mentors: Melissa R. Mazan, DVM, DipACVIM and Jay Merriam, DVM, MS (Surgery). Tufts University Cummings School of Veterinary Medicine, Hospital for Large Animals, North Grafton, MA and the Massachusetts Equine Clinic, Uxbridge, MA  
2004 Havemeyer Clinical Fellow, Equine Neonatal Medicine and Intensive Care. Mentor: Mary Rose Paradis, DVM, DipACVIM. Tufts University Cummings School of Veterinary Medicine, Hospital for Large Animals, North Grafton, MA

#### **HONORS AND AWARDS**

2025 Nomination, *Living our Values*, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, for the BMS Animal Anatomy Teaching Team that I lead  
Nomination, *Best Teacher Award*, Colorado State University  
2024 *The Provost's N. Preston Davis Award for Instructional Innovation Award*, Colorado State University  
Nomination, *Multicultural Staff and Faculty Council Distinguished Service Award*, Colorado State University  
Nomination, *Career Impact Award*, Colorado State University  
2023 *Faculty Advising Award*, College of Veterinary Medicine and Biomedical Sciences, Colorado State University  
2022 *Veterinarian of the Year*, Colorado Veterinary Medical Association. Nominated by students and faculty for my service and dedication to advancing education in the veterinary profession

#### **since last promotion**

2011-2015 *Clinical Award*, Contraception and Infertility Loan Repayment Program, National Institute of Child Health and Human Development, National Institutes of Health  
2013 *Teaching Fellow*, The Institute for Teaching and Learning (TILT) at Colorado State University

2009 Young Investigator Award, American Quarter Horse Foundation  
 2008 Storm Cat Career Advancement Award, Grayson Jockey Club Foundation  
 2008-2010 Trainee, NIH Training Grant in Mammalian Reproductive Biology (T32-HD007031). Animal Reproduction and Biotechnology Laboratory, Department of Biomedical Sciences, Colorado State University, Fort Collins, CO

## **CV SECTION 2: PUBLICATIONS/SCHOLARLY RECORD**

### **PUBLISHED WORKS**

#### **Refereed Journal Articles (\*corresponding author)**

1. **Magee C**, Kouri J, Cherrington B, Cantlon J, Murtazina D, Farmerie T, Davidsen M, Nett T, \*Clay C. Evidence for divergent endocrine regulation of the murine and ovine GnRH receptor gene promoters. *Frontiers in Endocrinology*. 2025. *In press*. doi: 10.3389/fendo.2025.1597028
  2. Svenson G, Arnold O, Vigil P, Nishi N, \***Magee C**. The benefits of mentoring under-resourced high schoolers in veterinary medicine and One Health through a free, experiential college course. *Journal of Youth Development*. 2025. 20(2):94–112. doi: 10.34068/jyd.20.02.09
  3. Martin JF, Linton A, Svenson GR, Garrett AC, Mango DW, Svec PM, \***Magee C**. Landmark Positioning on a Map: An Alternative Measure of Spatial Ability for Identifying Students who may Benefit from Learning Gross Anatomy with Virtual Reality. *Journal of Veterinary Medical Education*. 2024. doi: 10.3138/jvme-2024-0011. PMID: 39504204
  4. Martin JF, Linton A, Garrett AC, Mango DW, Svec PM, \***Magee C**. Relationship between the relative timing of prosection and dissection experiences and laboratory examination performance in a gross anatomy course. *Anatomical Sciences Education*. 2024. 17(6):1299-1307. doi: 10.1002/ase.2479. PMID: 38954745.
  5. Thompson RE, Meyers MA, Palmer J, Veeramachaneni DNR, **Magee C**, De Mestre AM, Antczak DF, \*Hollinshead FK. Production of mare chorionic girdle organoids that secrete equine chorionic gonadotropin. *International Journal of Molecular Sciences*. *Int J Mol Sci*. 2023. 24(11):9538. PMID: 37298490. 8 citations as of 6-30-2025.
  6. Martin JF, Arnold OR, Linton A, Jones JD, Garrett AC, Mango DW, Juarez KA, Gloeckner G, \***Magee C**. How Virtual Animal Anatomy Facilitated a Successful Transition to Online Instruction and Supported Student Learning During the Coronavirus Pandemic. *Anatomia, Histologia, Embryologia*. 2023. 52(1):36-49. PMID: 35243669. 8 citations as of 6-30-2025.
  7. Linton A, Garrett AC, Ivie KR, Jones JD, Martin JF, Delcambre JD, \***Magee C**. Enhancing anatomical instruction: Impact of a virtual canine anatomy program on learning outcomes. *Anatomical Sciences Education*. 2022. 15(2):330-340. PMID: 33838080. 11 citations as of 6-30-2025.
  8. Lee S, Wendland TM, Rao S, \***Magee C**. Orthotic Device Use in Canine Patients: Owner Perception of Quality of Life for Owners and Patients. *Frontiers in Veterinary Science*. 2021; 8:1264. PMID: 34805329. 10 citations as of 6-30-2025.
- since last promotion -----
9. \*Hollinshead FK, Ontiveros M, Burns JG, **Magee C**, Hanlon DW. Factors influencing parentage ratio in canine dual-sired litters. *Theriogenology*. 2020;158:24-30. PMID: 32927197.
  10. \***Magee C**, Bruemmer JE, Kirkley KS, Sylvester LA, Runyan B, Nett TM, Squires EL, Clay CM. Kisspeptin has an independent and direct effect on the pituitary gland in the mare. *Theriogenology*. 2020;157:199-209. PMID: 32814247. 7 citations as of 6-30-2025.
  11. \***Magee C**, McDaniel S, Turk P, Striegel N, Roman-Muniz IN. Information-Seeking Preferences of the Colorado Equine Industry for Distribution of Disease Outbreak Information. *J Equine Vet Sci*. 2020;91:103126. PMID: 32684264. 1 citation as of 6-30-2025.
  12. Murtazina DA, Arreguin-Arevalo JA, Cantlon JD, Boroojeny AE, Shrestha A, Hicks JA, **Magee C**, Kirkley KS, Jones KL, Nett TM, Chitsaz H, \*Clay CM. Enrichment of ovine gonadotropes via adenovirus gene targeting enhances assessment of transcriptional changes in response to estradiol. *Biology of Reproduction*. 2020. 102:156-169. PMID: 31504222. 4 citations as of 6-30-2025.
  13. Urias-Castro CA, Arreguin-Arevalo JA, **Magee C**, Weber E, Nett TM. Hypothalamic Concentrations of Kisspeptin (KP) and Gonadotropin-Releasing Hormone (GnRH) during the Breeding Season and Non-Breeding season in Ewes. *American Journal of Reproductive Immunology*. 2019. 82:e13146. PMID: 31206871. 4 citations as of 6-30-2025.
  14. Hall H, **Magee C**, Clapp T. 4-Step Model to Approach Case-Base Learning in the Classroom. *Journal of Adult Education*. 2016. 45:24-27. 8 citations as of 6-30-2025.
  15. Dang AK, Murtazina DA, **Magee C**, Navratil AM, Clay CM, Amberg GC. GnRH evokes localized subplasmalemmal calcium signaling in gonadotropes. *Mol Endocrinol*. 2014. 28:2049-59. PMID: 25333516. 29 citations as of 6-30-2025.
  16. **Magee C**, Bruemmer JE, Nett TM, Squires EL, Clay CM. Kisspeptide in the estrous mare: Is it an appropriate ovulation-inducing agent? *Theriogenology*. 2012. 78:1987-96. PMID: 23040060. 7 citations as of 6-30-2025.
  17. Seachrist DD, Johnson E, **Magee C**, Clay CM, Graham JK, Veeramachaneni DN, Keri RA. Overexpression of follistatin in the mouse epididymis disrupts fluid resorption and sperm transit in testicular excurrent ducts. *Biol Reprod*. 2012. 87:41. PMID: 22649074. 16 citations as of 6-30-2025.
  18. **Magee C**, Foradori CD, Bruemmer JE, Arreguin-Arevalo JA, McCue PM, Handa RJ, Squires EL, Clay CM. Biological and anatomical evidence for kisspeptin regulation of the hypothalamic-pituitary-gonadal axis of estrous horse mares. *Endocrinology*. 2009. 150:2813-21. PMID 19228887. 96 citations as of 6-30-2025.
  19. McCue PM, **Magee C**, Gee EK. Comparison of Compounded Deslorelin and hCG for Induction of Ovulation in Mares. *J Equine Vet Science*. 2007. 27:58-61. 66 citations as of 6-30-2025.

20. McCue PM, Logan NL, **Magee C**. Management of the transition period: hormone therapy. Tutorial article. *Equine Vet Educ*. 2007. 19, 215-221. 24 citations as of 6-30-2025.
21. McCue PM, Logan NL, **Magee C**. Management of the transition period: physiology and artificial photoperiod. Tutorial article. *Equine Vet Educ*. 2007. 19:146-150. 16 citations as of 6-30-2025.

#### **Textbooks:**

1. Fails AD and **Magee C**. 2025. Anatomy and Physiology of Farm Animals. 9<sup>th</sup> Edition. Wiley. 9<sup>th</sup> edition includes new learning materials and a new chapter on llamas.
2. Fails AD and **Magee C**. 2018. Anatomy and Physiology of Farm Animals. 8<sup>th</sup> Edition. Wiley. (Reviewed in JAVMA 2019. A complete revision of figures, learning objectives and the addition of a website with learning materials)

#### **Refereed External Proceedings/Presentations (since last promotion, \*presenter, #advisee):**

1. \*Ivie K, Martin J, #Cain M, Case S, Svec P, #Fouk L, #Mango D, #Evans E, #Reavill-O'Toole E, **Magee C**. A Comparative Study of Cadaveric Canine Anatomy Learning Modalities for Novice and Intermediate Learners. Invited Talk. American Association of Veterinary Anatomists Biennial Meeting. Saskatoon, Saskatchewan, Canada. July 2025.
2. \*Svec P, Case S, #Fouk L, #Mango D, #Evans E, Ivie Jr K, Martin J, **Magee C**. Advancing Veterinary Anatomy Education: Evaluation of Formaldehyde-Free Embalming Techniques for Canine Cadavers. Poster. American Association of Veterinary Anatomists Biennial Meeting. Saskatoon, Saskatchewan, Canada. July 2025.
3. \*\*Fisher SR, Martin JF, Nigussie F, Svec PM, Fails AD, Wilhite DR, **Magee C**. Improving student spatial and anatomical understanding of the larynx using 3D printed equine larynges. Student Poster Competition. American Association of Veterinary Anatomists Biennial Meeting. Saskatoon, Saskatchewan, Canada. July 2025.
4. \*\*Fouk L, #Mango D, Hennet M, Ferriman C, Svec P, Dillenbeck L, Grochal B, **Magee C**. Examination of the luminal distensibility of the canine esophagus at three potential points for obstruction. Student Poster Competition. American Association of Veterinary Anatomists Biennial Meeting. Saskatoon, Saskatchewan, Canada. July 2025.
5. \*Grochal B, #Fouk LE, #Mango DW, Hennet ML, Ferriman CP, Svec PM, Dillenbeck LS, **Magee C**. Dog Anatomy Data Collection: Research to Fuel the Dog Equivalent of the Small Parts Cylinder. Accepted as a poster at the 2025 International Consumer Product Health and Safety Organization Annual Symposium. Orlando, Florida
6. **Magee C**, Linton A, Sagalyn J, Snook T. How a Virtual Animal Anatomy atlas benefits from accessible design and will shape the future of anatomy education in extended realities (XR). Accessing Higher Ground Accessible Media, Web and Technology 2024 Conference. Platform Presentation, Denver, Colorado.
7. \*Svenson G, Arnold O, Vigil P, Nishi N, **Magee C**. The benefits of mentoring underserved high schoolers in veterinary medicine and One Health through a free, experiential college course. 2024 CVMBS Research Day. Trainee Poster.
8. #Eastman R, #Fisher S, #Lott L, Cantlon J, McCosh R, **Magee C**. Implantation and early placentation in the mare: the role of kisspeptins in trophoblast invasion. 2024 CVMBS Research Day. Student Talk.
9. \*\*Fisher S, #Mango DW, Fails AD, #Martin JF, Wilhite DR, **Magee C**. Developing an interactive low-cost 3D printed equine larynx. Veterinary Educators Symposium of the American Association Veterinary Medical Colleges, Texas Tech University, Amarillo, TX. Poster Presentation, October 2023.
10. \*\*Martin JF, Cahill GR, Garrett A, Linton A, **Magee C**. Self-Efficacy and Learning Resource Selection in the Post-Pandemic Self-Regulated Learner: A Mixed Method Analysis. Western Consortium Regional Teaching Academy Biennial Meeting. Scholarship Platform Session. Oregon State University, Corvallis, OR. July 2023
11. \*\*Mango DW, Svec P, Garrett A, #Martin JF, Fails AD, Linton A, **Magee C**. Methodology for creating 3D-printed anatomical models used for anatomy education. American Association Veterinary Anatomists Biennial Meeting. Joplin, MO. Platform presentation. July 2023.
12. \*\*Martin JF, Cahill GR, Garrett A, Linton A, **Magee C** Will virtual reality help students learn gross anatomy? How two measures of visual-spatial ability describe the relationship between learning with three-dimensional models and assessment outcomes. American Association Veterinary Anatomists biannual meeting. Joplin, MO. Platform presentation. July 2023.
13. \*\*Svec P, #Mango DW, Garrett A, #Martin JF, Linton A, **Magee C**. Methodology for Creating Interactive Anatomy-Guided Quizzes. American Association Veterinary Anatomists biannual meeting. Joplin, MO. Platform presentation. July 2023.
14. \*\*Martin JF, Linton A, Garrett A, #Svec P, #Mango DW, **Magee C**. Comparing concurrent and consecutive enrollment in anatomy: a mixed method analysis. 2022 Veterinary Educators Collaborative of the American Association Veterinary Medical Colleges, Kansas State University, Manhattan, KS. Platform talk July 2022.
15. \*\*Mango DW, Applegate T, Hall K, Becker J, Echols S, **Magee C**. Vascular perfusion models for veterinary education using canine cadavers. 2022 Veterinary Educators Collaborative of the American Association Veterinary Medical Colleges, Kansas State University, Manhattan, KS. Poster presentation.
16. #Mango DW, Johnson J, #Svec P, Garrett A, Ivie K, Echols S, \***Magee C**. Observations and initial impressions of a formaldehyde-free embalming technique for use in a canine cadaveric anatomical dissection course. 2022 Veterinary Educators Collaborative of the American Association Veterinary Medical Colleges, Kansas State University, Manhattan, KS. Poster presentation July 2022.
17. #Martin JF, Linton A, \***Magee C**. Evaluating Learning Resources Developed as a Result of the 2020 COVID-19 100% Online Transition in the 2021 Hybrid Learning Environment. Western Consortium Regional Teaching Academy Biennial Meeting. Scholarship Platform Session. Online, July 2021.

## **CONTRACTS & GRANTS** <sup>a</sup>disciplinary, <sup>d</sup>interdisciplinary, <sup>f</sup>service, <sup>e</sup>engagement

### **Research Contract**

<sup>a</sup>2024-2025 "Collection of Canine Anthropometric Data and Hazard Modelling" Role: PI. \$61,608.07 USD. *ASTM International: Pet Product Research Group*. Primary Objective: Detailed evaluation and measurement of proximal gastrointestinal tract anatomical spaces using radiographs and CT for dogs of different weight classes with publication of measurement data at the end of the project.

### **Externally Submitted, pending review**

<sup>d</sup>2025-2029 "Developing an integrated curriculum for engagement and career exploration in food, agriculture, and One Health" Role: PI. \$750,000 *USDA-NIFA Educational Workforce Development*. Primary Objectives: 1) integration and support of Veterinary Perspectives and Agricultural Sciences Alliance Summer Institutes; 2) creation of AgSci101, 1 credit course. Resubmission from 2023, "medium priority" 2024 score.

### **Externally Funded Projects as PI**

<sup>d</sup>2020-2023 "Virtual Bovine Anatomy: Pelvic Limb" \$150,000 *USDA-NIFA Higher Education Challenge*. Primary Objectives: 1) development of a 3D VBA Pelvic Limb module for DVM education; 2) the creation of an undergraduate (UG) Applied Food Animal Anatomy curriculum; 3) engagement of UG and DVM students in learning, teaching, and outreach activities.

<sup>a</sup>2017-2020 "Evaluation of Kisspeptin in the Pregnant Mare" \$113,000. *Grayson Jockey Club Foundation*, Lexington, KY. Aims: 1) Quantification of kisspeptin during equine pregnancy; 2) characterization of Kiss1/Kiss1r expression at the fetal-maternal interface

<sup>a</sup>2009-2010 "Kisspeptin Mediated Regulation of the Equine Hypothalamic Pituitary Gonadal Axis" \$50,499. Young Investigator Award, *American Quarter Horse Foundation*, Amarillo, TX. Aims: 1) characterization of Kiss1 expression in the equine hypothalamus; 2) determining the biological response to exogenous kisspeptide

### **Externally Funded Projects as Co-PI**

<sup>a</sup>2022-2023 "Evaluating extracellular vesicles from equine fetally-derived mesenchymal stem cells as an endometritis therapeutic" Role: Co-PI, PI: Hollinshead. Grayson-Jockey Club Research Foundation, \$45,418.

<sup>a</sup>2021-2022 "Exploring the Development of Relationships between Students and Faculty in Veterinary Medicine: A Mixed Methods Study Comparing Remote and In Person Techniques." \$3,000.00. PI: Marino T Western Consortium Regional Teaching Academy - Novel and Innovative Educational Research. *Transferred to CSU as a subcontract in 2022 to execute study.*

<sup>a</sup>2021-2022 "Validation of chorionic girdle organoid cell culture as an in vitro source of equine chorionic gonadotropin" \$20,000.00, PI: Hollinshead FK The Foundation for The Horse.

<sup>a</sup>2021-2026 "Reproductive Biotechnology for Sustainable Animal Production: A Multidisciplinary Graduate Fellowship Program" PI: Tesfaye D. USDA-National Needs Fellowship. (Support of PhD student, Jason Martin, 2021.)

<sup>a</sup>2020-2021 "Kisspeptins as Pro-apoptotic Mediators during Equine Endometrial Cup Demise" \$5,000. PI: Gomes VCL, Co-PI: Sones JL. Theriogenology Foundation. (Support of Gomes PhD work and I served on her PhD committee)

### **Externally Funded Projects as Collaborator**

<sup>a</sup>2023-2024 "Optimization of equine chorionic girdle organoids for bioactive eCG production." \$50,000. PI: FK Hollinshead, The Foundation for the Horse.

<sup>a</sup>2020-2021 "Equine fetally-derived mesenchymal stem cells (FDMSC) and their generated extracellular vesicles (EV) as a novel treatment for equine osteoarthritis." \$20,000. Co-PIs: FK Hollinshead & L Goodrich, AAEP Foundation for the Horse.

### **Internally Funded Projects as PI/Co-PI**

<sup>a</sup>2024-2025 "Investigation of estradiol signaling in the generation of the preovulatory luteinizing hormone surge in sheep" Role: Co-PI, PI: McCosh \$25,000 CVMBS College Research Council, Colorado State University.

<sup>a</sup>2023-2024 "Role of brainstem neurons in the generation of the preovulatory luteinizing hormone surge" Role: Co-PI, PI: McCosh \$25,000 CVMBS College Research Council, Colorado State University.

<sup>a</sup>2023-2024 "Development of biosensors for determination of luteinizing hormone concentrations in vivo" Role: PI; Co-PI McCosh \$24,968 CVMBS College Research Council, Colorado State University.

<sup>a</sup>2022-2023 "Determining the pituitary contribution to the delayed LH surge in obese ewes" Role: PI \$23,356 CVMBS College Research Council, Colorado State University.

<sup>a</sup>2020-2021 "Metabolic and Reproductive Consequences of Elevated Free Fatty Acids in Domestic Ruminants" Role: PI \$25,000 CVMBS College Research Council, Colorado State University.

### **Externally Submitted Grants, not funded (since last promotion)**

<sup>d</sup>2024-2025 "Developing novel learning tools in veterinary education" Role: Collaborator. PI: Shari Lanning. \$3,000. *Academy of Veterinary Educators*. Primary Objective: Development of a novel palpation tool for feline physical examination.

<sup>d</sup>2024-2027 "ARTS: Integrative systematics of *Diacamma* as template for revision of taxonomically difficult ants" PI: Marek Borowiec. Role: Co-I. \$835,193.26. *National Science Foundation*. Primary Objective: Developing a VR learning and outreach tool for ants and other *Diacamma*. Submitted in 2023 and 2024.

- <sup>d</sup>2024-2028 "IUSE Engaged Student Learning: Leveraging principles of ungrading to broaden student participation and shift approach to learning in undergraduate pharmacology education" PI: Sami Case. Role: Key Person & Mentor. \$381,335.77. *National Science Foundation*. Primary Objective: Integrating ungrading to online and residential undergraduate pharmacology instruction.
- <sup>a</sup>2021-2022 "Validation of Equine Endometrial Organoids as a Three-Dimensional In Vitro Culture Model for the Study of Equine Endometritis" Role: Co-PI, PI: Hollinshead, FK. Morris Animal Foundation. \$10,800.00. Primary Aim is to demonstrate the fidelity of the organoid as a model system for equine endometritis.
- <sup>a</sup>2021-2022 "Investigation of In Vitro Production of Equine Chorionic Gonadotropin Using an Organoid Culture System" Role: Co-PI, PI: Hollinshead, FK. American Quarter Horse Association, \$19,650. Young Investigator Award for Riley Thompson.
- <sup>a</sup>2021-2022 "Convergent Mechanisms Underlying Reprometabolic Syndrome in Women and Sheep" Role: Co-PI, PIs: Clay C & Santoro N. Colorado Clinical and Translational Sciences Institute Co-Pilot grant. \$45,600.00. Primary Aim is to demonstrate the fidelity of the obese sheep model for human reprometabolic syndrome.
- <sup>a</sup>2021-2022 "Organoids as Novel 3D Model for Endometritis" Role: Co-PI, PI: Hollinshead, FK. Grayson-Jockey Club Research Foundation. \$42,302.80. Primary Aim is to demonstrate the fidelity of the organoid as a model system for equine endometritis.

#### **PAPERS PRESENTED/SYMPOSIA/\*INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS**

- \*2025 North American Veterinary Community (NAVC) HiVE VetED, invited education expert/panelist. Event cancelled.
- \*2024 "Exploring Career Opportunities in VetMed and One Health" Invited Faculty for the TAPS: Tomorrow's Agricultural Professional Symposium for high school students in Alabama. Accompanied by a limited license of VAA-VR by Tuskegee University for outreach and engagement.
- \*2024 "Teaching with Virtual Reality in VetMed" Invited Faculty to Tuskegee University (Tuskegee, AL) for workshop with Executive Leadership and Faculty from Agriculture and Forestry University, Nepal. Resulted in \$750/y VAA subscription.
- \*2024 "Teaching with AI in VetMed and other STEM Disciplines" Invited Faculty Expert. University of California, Davis <https://wheel.ucdavis.edu/blog/upcoming-faculty-forum-teaching-ai-vetmed-stem>
- 2022 "Virtual Animal Anatomy VR in Veterinary Anatomy Education" – VR demo at the Veterinary Educators Collaborative of the American Association Veterinary Medical Colleges, Kansas State University, Manhattan, KS.
- \*2022 "Virtual Reality in Veterinary Education." Online Symposium between CSU and Hokkaido University.
- 2021 "How High School Students with Limited Access to Mentoring in Veterinary Medicine Received College Credit and Experiential Learning: Veterinary Perspectives Virtual Institute" CSU Diversity Symposium. Fort Collins, CO. <https://www.youtube.com/watch?v=ppkCZJdpoWc> – also accepted as a 2022 CSU TILT PDI Jan 12, 2022.
- \*2021 "Evidence-based strategies for scaffolding anatomy learning." Louisiana State University School of Veterinary Medicine Seminar Series, Virtual Presentation.

#### **----- since last promotion -----**

- \*2020 "Using Virtual Animal Anatomy to bridge the COVID-19 gap in cadaveric access and laboratory learning." [World Association Veterinary Anatomists 1<sup>st</sup> Online Meeting](#). Meeting abstract received highest score, resulting in the only abstract invited for platform presentation. Co-authors were the Spring 2020 VVET and Animal Anatomy teaching team: A Linton, A Garrett, K Juarez, and D Mango. Abstracts published in *Anatomia, Histologia, Embryologia*.
- \*2020 "Development of 3D VR assets and Evaluation of VR in DVM teaching." Invited talk and VR demonstration at the UC Davis School of Veterinary Medicine. Davis, CA.
- \*July 2019. "Virtual Animal Anatomy in DVM Education." E-Health Summer University. Invited talk and VR demonstration. Castres, France.
- \*April 2019. "Anatomical Education using Case Based Inquiry and Virtual Reality." Veterinary Medical Association Executives (VMAE) ThinkWorks Conference. Invited talk & VAA VR demonstrations. San Francisco, CA
- April 2019. "Virtual Animal Anatomy – VR Education." Veterinary Innovation Summit. Selected start-up for VR demonstrations. College Station, TX
- 2018. "Virtual Animal Anatomy: From Research to Market." Presenter at Department of Biomedical Sciences Annual Retreat. Colorado State University, Estes Park, CO
- \*2018. "Virtual Animal Anatomy - Japanese Translation." Invited talk at University of Hokkaido Veterinary School. Sapporo, Japan
- \*2017. "Scaffolding Learning in Anatomy: The Pelvic Limb." Invited Talk at Tufts University Cummings School of Veterinary Medicine, Grafton, MA
- \*2017. "Virtual Animal Anatomy: User Experiences and Future Directions." Invited Talks at Daktari Animal Hospital, Tokyo and University of Hokkaido Veterinary School. Sapporo, Japan
- 2017. "Virtual Animal Anatomy: User Experiences and Future Directions." Special Seminar, Department of Biomedical Sciences, Fort Collins, CO
- 2015. "Assessing Course Quality." Presenter with D. Johnson and S. Burns at TILT Professional Development Institute. Colorado State University, Fort Collins, CO



## **COLLABORATIVE, INTERCOLLEGIATE & INTERDISCIPLINARY SCHOLARSHIP**

### **Virtual Veterinary Education Tools (VVET) – 2012-present, Program Lead as of 2018**

**Virtual Animal Anatomy (VAA)** is a suite of virtual anatomy (canine, feline, equine, bovine) software programs produced by the Virtual Veterinary Education Tools (VVET) group within the College of Veterinary Medicine and Biomedical Sciences. I develop all strategies for creation and distribution of anatomical content through VVET to ensure support of teaching, outreach and engagement efforts. I ensure that we are compliant with CSU policies as well as accessibility (ADA/WCAG), privacy (FERPA) and security regulations. I foster collaborations, monitor external communications, determine product pricing, provide customer service, conduct customer discovery, provide user training, and supervise the VVET team. This work is completed with the assistance of 1 full-time developer (Linton), and through 2024 with 1 part-time project manager (Garrett), 2-6 student employees at any time working full-time during summer months and 10-20 hours work/week during the school year. Prior to 2021, funding for VVET came from the DVM program (VTA \$25,000/year) and total faculty/staff BMS subsidized input to VAA program development was approximately \$250,000/year. In 2021-22, all of the DVM support for VTAs and some of the salary support of Garret and Linton was shifted to program income and support from CSU Spur.

### **My specific accomplishments as Program Lead (2018-present) include:**

- Completion of the **CSUVentures Research to Market** program to improve my understanding of VAA's value proposition, target market, and market potential. Resulted in **Invention Disclosure (INV18-084)** for the Adobe Flash version of the program and was used to generate more than \$25,000 in individual program sales 2018-2020.
- **VAA-LTI Academic Subscription** – In 2018, I initiated development of this HTML5 coded version of the software program to facilitate a subscription model of Software as a Service (SaaS) to other universities using a secure learning management system and a Learning Tool Interoperability (LTI) standard (<https://bms-colostate.nbsstore.net/vaa>). Launched initially for CSU students in 2019, from March-July 2020 during the COVID pandemic the VAA-LTI was provided for free to 148 schools (>12,000 users) around the world. Post-July 2020, our peak use was 74 different schools (2,782 users), and current average use is 64 schools (4,400 users) per year at a cost of \$8-15/user/year depending on the size of the subscription.
- **VAA Single User** - Launched in 2020, this allows CSU TMI Continuing Education programs access to the VAA and single users access to VAA outside of an academic subscription (<https://www.csuvtce.com/virtual-animal-anatomy/>). The Individual Subscription net income through CSU's Translation Medicine Institute (TMI) has been reduced considerably as they have changed LMS platforms (FY22) and delivery strategies. Being explored in 2025 is a VVET maintained individual mechanism using self-hosted sites and PayPal payment mechanisms.
- **WCAG 2.0 Compliance and LTI upgrades**- From 2020 to 2025, led a major accessibility initiative to bring VAA into compliance with WCAG 2.1 Level AA, in accordance with Colorado and federal ADA standards. We contracted with Perkins Access (cost \$18,000) for independent evaluation and remediation; a revised VPAT issued in June 2025 confirms full support for all applicable criteria, with three areas partially supported due to platform-specific constraints. Additionally, in 2024, the LTI software was updated to support version 1.3, accommodating institutions that require it, while maintaining compatibility with LTI 1.2 for those still using the earlier standard.

## **CONTRACTS**

### **Virtual Animal Anatomy (HTML5-LTI) Software as a Subscription (SaaS)**

#### **Academic Subscription Income VAA LTI 1.2 (\$212,900 since FY22)**

FY19-FY21 \$98,620.50 (SaaS launch and COVID-19 pandemic)

FY22 \$67,398.00

FY23 \$42,108.00

FY24 \$44,485.00

FY25 \$58,909.00

#### **Individual Subscription Gross/Net through CSU TMI (\$36,516.45 net since FY21)**

FY21 \$13,300/ \$11,571.00

FY22 \$16,090/ \$9,333.30

FY23 \$10,885/ \$9,469.95

FY24 \$7,060/ \$6,142.20

### **Virtual Animal Anatomy (3D VR Software) - Limited Purpose Software License**

2024 SyGlass – Provided advisory input and facilitated access to bovine CT/MRI image sets for exploratory use in SyGlass's virtual anatomy materials

2024 Tuskegee University – Collaboration to deploy VAA-VR on site with veterinary school contract for VAA with Agriculture and Forestry University, Rampur, Chitwan, Nepal (USAID funded through 2025)

#### **-----since last promotion-----**

2019 Mars, Incorporated. Mars Petcare (Future of Technology, Pet Health and Innovation)

2019 International Network for Humane Education (InterNICHE). Program promotion and distribution of humane alternatives in education <http://www.interniche.org/cs/node/5941>

**My specific contributions to VAA development include production of the following:**

- **3D model production**
  - *hemisected canine skull (2021)*
  - *interactive equine larynx (2023-25)*
  - *comparative canine tarsus (2024)*
- **Virtual Animal Anatomy - Virtual Reality**
  - <https://youtu.be/II0si-jkbjE>
  - Interactive modules for CSU Spur and BMS531 Sp2021
- **Virtual Canine Anatomy**
  - *Japanese (2021) and Spanish (2020) translation*
  - *Dissection videos (2019)*
- **Virtual Equine Anatomy**
  - *thorax, abdomen, pelvis dissection (2020-22)*
  - *head dissection, skull osteology (2015) and annotation (2022)*
  - *pelvic limb osteology, dissection (2014) and annotation (2022)*
  - *thoracic limb osteology and annotation of dissection (2013)*
- **Virtual Bovine Anatomy**
  - *lameness videos (2024)*
  - *thorax, abdomen, pelvis dissection (2020-22)*
  - *claw zone anatomy (2022)*
  - *pelvic limb dissection, osteology (2018) and annotation (2022)*
  - *thoracic limb osteology (2018) and annotation (2022)*
- **Virtual Feline Anatomy**
  - *thoracic limb osteology (2019), dissection and annotation (2023)*
  - *skull and mandible osteology (2019) and annotation (2023)*
  - *pelvic limb dissection and osteology (2019) and annotation (2023)*
  - *vertebrae osteology and annotation (2023)*

**Collaborations & Engagement:**

- 2024, **Tuskegee University** and **Agriculture and Forestry University of Nepal** (Rampur, Chitwan). Support of DVM Teaching. Spring 2025 visit and program support from USAID terminated February 2025.
- 
- since last promotion-----
- 2020, **UCDavis School of Veterinary Medicine**, Development of 3D VR assets and evaluation of VR in DVM teaching, invited talk at UCDavis January 2020
  - 2020, Marco A. Pereira-Sampaio DVM, MS, PhD, Professor, Department of Morphology, **Fluminense Federal University (Brazil)**, President of the World Association of Veterinary Anatomists. Collaboration as of August 2020 for Portuguese translation of VAA. Work is ongoing
  - 2019, William Pérez, PhD, Professor of Anatomy at **Universidad de la República de Uruguay** and former President of the World Association of Veterinary Anatomists. Translation of the VCA to Spanish (launched August 2020) with ongoing VEA Spanish translation.
  - 2017, Faculty at the **University of Hokkaido in Japan**. The translation to Japanese completed in 2021

**Continuing Education and Professional Development (Approx. No. of Hours)**

2025	American Red Cross CPR Training (4h)
2024	Team Based Learning Workshop 1 – TBL 101 (3h)
	CSU Annual Conference for Veterinarians (16h)
	USDA APHIS Category II Renewal (6 modules)
	CSU Assessment Leadership Academy (6h)
	CSU CVMBS Best Practices in Teaching Workshop (6h)
2023	AAVMC Leadership Academy, CSU representative nominated by CVMBS leadership for 1 year program (60h)
	CSU Annual Conference for Veterinarians (16h)
	SafeZone Training (2.5h)
2022	Veterinary Educators Collaborative of the American Association of Veterinary Medical Colleges (6h)
	Colorado Veterinary Medical Association (12)
	CSU Annual Conference for Veterinarians (16h)
	CSU Alliance Diversity and Mentorship training (2h)
	American Red Cross CPR Training (4h)
2021	CSU Alliance Diversity and Mentorship training (2h)
	CSU Annual Conference for Veterinarians (16h)
	CSU Diversity Symposium (8h)
	Western Consortium Regional Teaching Academy annual meeting (6h)
	Society for Theriogenology Meeting, online (16h)

**since last promotion**

- 2020 Colorado Veterinary Medical Association, mandatory Controlled Substance training (2.5h)  
Society for Theriogenology Meeting, online
- 2019 CSU CVMBS Inclusive Pedagogy Training (10h)
- Who are you Teaching-The Identity of Your Students
  - Who you are- Assumptions and Biases of the Instructor
  - How are you Teaching- Pedagogy and Praxis- Part 1
  - How are you Teaching- Pedagogy and Praxis- Part 2
  - What are you Teaching- Examining Your Curriculum
- CSU CVMBS Teaching Academy Seminars (2h)
- Strategies for Making the Most Important Ideas in a Lecture Clear to Students
  - Conversations About Medical Education: Team Based Learning
- CSUVentures State of Innovation: Education Series - Considerations for Protecting Intellectual Property for Software, AI, & AR/VR Applications by Bob O'Loughlin (2h)
- Colorado State University's 80<sup>th</sup> Annual Conference for Veterinarians. Fort Collins, CO (16h)
- Regional Teaching Academy VETS 2.0 Curriculum Development Workshop, UC Davis, CA (20h)
- Society for Theriogenology Meeting, Savannah, GA (32h)
- 2018-2019 Mentoring Program, "ENCIRCLE," CSU - Standing Committee on the Status of Women Faculty & Office of the Vice Provost for Faculty Affairs (4h)
- 2018 Conference Attendance, "Record Freshmen Enrollment: What to Expect in the Future and What We Can Learn from the Past," TILT PDI CSU. Fort Collins, CO (2h)
- Short Course, "Research to Market (R2M) - Virtual Animal Anatomy," CSU Ventures, Launchpad, September - December 2018. Fort Collins, CO (100h)
- CSU Supervisor Training, "Inclusive Excellence Part 1" (2.5h)
- CSU Supervisor Training, "Effective Teams" (2.5h)
  - CSU Supervisor Training, "Mindset for Supervisors" (3h)
  - CSU Supervisor Training, "Inclusive Excellence Part 2" (2.5h)
  - CSU Supervisor Training, "Emerging Women Leaders Webinar" (1.5h)
  - CSU Supervisor Training, "Effective Communication and Conflict Resolution Skills" (2h)
  - CSU Supervisor Training, "Systems Thinking: Your Role in the Bigger Picture" (3h)
  - CSU Supervisor Training, "Rules of the Road" (4h)
- Colorado State University's 79<sup>th</sup> Annual Conference for Veterinarians (16h)
- 2014-2018 CSU CVMBS Leadership Development Group Training with Cindy Anderson Consulting, LLC. Monthly leadership seminars and workshops. Fort Collins, CO (50h)
- 2017 Society for Theriogenology Annual Meeting, Fort Collins, CO (16h)
- Colorado State University CVMBS Fall Education Seminar "Utilizing Adaptive Instruction and Adaptive Assessments in CVMBS", Fort Collins, CO (1h)
- 2016 Society for Theriogenology Annual Meeting, Baltimore, MD (16h)
- Colorado State University's 77<sup>th</sup> Annual Conference for Veterinarians, Fort Collins, CO (16h)
- 2015 Colorado State University's 76<sup>th</sup> Annual Conference for Veterinarians, Fort Collins, CO (16h)
- Communication Coaching Skills Workshop, Fort Collins, CO. Conducted by Dr. Jane Shaw of CSU, this 2-day program is designed for practitioners, communication teachers and other educators responsible for coaching individuals or teams, facilitating small groups, supervising colleagues and conducting in-the-moment coaching for hospital or clinic teams (16h)

**CV SECTION 3: EVIDENCE OF TEACHING AND ADVISING EFFECTIVENESS**

**TEACHING:**

**Courses as Course Director:** *Most of these courses are taught as a team, but as course director I am responsible for all programmatic and curricular development, content, delivery, and assessment. I provide a great deal of mentoring, advising, and individualized support to my students.*

VM795 Large Animal Anatomy Independent Study, 1 cr, Spring 2016- present (12-35 students)

BMS305 Domestic Animal Gross Anatomy (Honors), 4 cr, Spring 2012- present, Avg. 120 students

BMS496D Honors Breakout Session for BMS305, 1 cr, Spring 2013- present, Avg. 10 students

BMS 531 Domestic Animal Dissection, 3 cr, Spring 2012- present, Avg. 30 students

BMS 633 Domestic Animal Anatomy – Case Discussions, 2 cr, Spring 2012- present, Avg 20 students

BMS 384 Supervised College Teaching, 1-3 cr, Spring 2012- present, Avg. 25 students

BMS 684 Supervised College Teaching, 1-3 cr, Spring 2012-present, Avg. 5 students

BMS495 or 695F Independent Study, 1-2 cr, 2012- present, Avg. 12 students/yr

BMS304 (previously 380A) Applied Food and Fiber Animal Anatomy Course, 3 cr, Fall 2021- present, Avg 20-50 students

VMBS101 Alliance Institute Veterinary Perspectives, 1 cr online course, Summer 2020-present, 20-40 students

VM618 Professional Veterinary Medicine – Histology and Physiology, 7 cr, Fall 2016-2023. Avg. 138 students



### **Courses as Lecturer or Course Support (since 2020):**

2023, Invited teaching locum in Theriogenology, Louisiana State University, 4 hours of anatomy and physiology review

VMBS100, Introduction to Biomedical Sciences, 2 cr, Avg 115 students

Fall 2023, faculty roundtable and case presentation (2h)

Fall 2024, faculty roundtable, New One Health intro, and case presentation (3h)

BMS430, Endocrinology, 4 cr, Avg 60 students

Fall 2024, New Reproductive Endocrinology lectures (15h)

VM618 Professional Veterinary Medicine – Histology and Physiology, 7 cr, Avg. 138 students

Fall 2024, course support for Dr. Case as new coordinator, Endocrinology (6h) and Acid Base (3h)

VM616 Professional Veterinary Medicine – Functional Anatomy, 9 cr, Avg. 138 students,

Fall 2023-24, recitations (3h)

Fall 2022, floor anatomist, lab coordination, and course support as needed and 3 recitations (40 h)

Fall 2021, floor anatomist and course support as needed (15 h)

Fall 2020, pandemic response to split laboratory into 2 sections, floor anatomist for semester (128h)

### **ADVISING:**

#### **SUMMARY:**

Current Graduate Committee Memberships (excluding those chaired):

	# Plan C
50	# Plan B
	# Plan A
1	# MS/MA (no plan)
	# PhD
4	# DVM

Graduate Committee Memberships (for past 5 years, not including those above)

	# Plan C
92	# Plan B
	# Plan A
2	# MS/MA (no plan)
1	# PhD
3	#DVM

### **UNDERGRADUATE STUDENTS:**

*Undergraduate Senior Honors Thesis (ªprimary advisor, \*indicates matriculation to DVM program)*

Riley Carpenterª, 2025, "Animal Cadaver Use and Its Role in Educational Settings"

Adison Leo, 2025, "Horses without doctors: why is the equine veterinarian industry facing a shortage?"

Daniela Foardeª, 2024, "Studying the Mental Health Decline of Veterinary Professionals"

Sophie Fosterª, 2024, "Common Calcaneal Tendon Disruption in Dogs and Cats and the Associated Anatomy"

Megha Gaonkarª, 2024, "Canine skeletal articulation and analysis of osteosarcoma in relation to anatomy end function"

Kaitlyn Almquistª, 2023, "Equine Bone and Muscle Coordination Animation"

Meagan Eickelbeck\*, 2023, "Review of the Current Gaps Veterinary Students Face Concerning the Underdeveloped Virtual Equine Anatomy Programs"

Clarisse Nadeauª, 2022, "Horses through the Ages"

Aleyse Eversª, 2022, "Articulation of Canine Skeleton and Analysis of Hip Dysplasia as it is Connected to Anatomy and Mechanics of Coxofemoral Joint in Canines"

Alexis Ehrlich\*, 2022, "Colon 3D model for GI study"

Delany Lord, 2022, "Understanding Equine Recurrent Airway Obstruction, its Treatment, and its Management," committee member and support for new Clinical Sciences faculty Dr. Anna Bracken

Daniela Leopardiª, 2022, "Cadaver Usage as an Effective Learning Tool"

John Powellª, 2022, "A Study on the Mental Health Crisis in the Field of Veterinary Medicine", Thesis improvement grant (\$400, 2021), **manuscript in preparation**

Julia Loveª, 2022, "Domestic animal models for wild felid reproduction - understanding fertility regulation in felid animal models and wild cat populations"

Lexxee Wilson<sup>a</sup>, 2021 "Building teaching models for equine biomechanics"

**-----since last promotion-----**

Jordan Sandoval<sup>a\*</sup>, 2019. "Comparative Anatomy of High Altitude Disease in Camelids and Bovids"

Sera Lee<sup>a\*</sup>, 2018. "Owner Satisfaction with Canine Orthotic Device Use." **Published in FVS 2021**

Jordan Tarbutton<sup>a\*</sup>, 2018. "Bovine Claw Zone Anatomy as VR Outreach Tool" Preliminary data for USDA NIFA HEC grant "Virtual Bovine Anatomy"

Marion Steiblen<sup>a\*</sup>, 2018. "An Equine Medicine Case Study – From Dystocia to Discharge"

Carli Evatz<sup>a\*</sup>, 2017. "Equine Dentistry: A Case Study"

Rowan Seabolt<sup>\*</sup>, 2017. "Establishing and Characterizing Transgenic Mice Expressing a Firefly-luciferase Reporter Driven by the Ovine GnRHR Promoter"

Sabrina Litzelman<sup>a\*</sup>, 2017. "Comparison of Protocols and Standards of Care with a Spectrum of Veterinarians"

Ellie Beniston<sup>\*</sup>, 2017. "Diabetes and Uveitis: A comparative analysis of causes, connections, and treatments in canids and humans"

Shelly McDaniel<sup>a\*</sup>, 2016 "Social Media and the Equine Industry". **Published in JEVS 2020**

Hunter Kothenbeutel<sup>a\*</sup>, 2016. "A Comprehensive Review of Onychectomy (declaw) of Domestic Cats"

Alyx Moose<sup>a\*</sup>, 2015. "Surveying the Potential Use of Shelter Animals for Service Function"

Alyssa Carson<sup>a\*</sup>, 2015. "Uterine Torsion in Llamas and Alpacas: Review Study and Design"

Katherine Watts<sup>a</sup>, 2015. "He Made Their Glowing Colors, and Made their Tiny Wings: Short Stories of Veterinary Medicine"

Amy Scott<sup>a\*</sup>, Spring 2014. "BMS305 Reference Manual: Comparative Anatomy of the Canid, Equid and Bovid; Developing Teaching Aids for a Comparative Approach to Anatomy"

Sophia Nelson<sup>a\*</sup>, 2014. "A Comparative Analysis of Adjunct Therapies in Equine Sports Medicine"

Katherine Yunker<sup>a\*</sup>, 2014. A Comparison of Fixation Techniques for Diaphyseal Femoral Fracture in Canids"

Hannah C. Lewis<sup>a\*</sup>, 2014. "Branching of the Abdominal Aorta and Symptoms Related to Blocked Blood Flow Restrictions"

Kelsey Jung<sup>\*</sup>, 2013. "Revealing the Role of Estrogen Receptor alpha (ER $\alpha$ ) via Adenoviral Delivery of siRNA for Knockdown of ESR1 in Gonadotrope Cells"

Nicole Mikoni<sup>a\*</sup>, 2012. "Femoral Fracture Repair"

Brandi (Heckel) Dunn<sup>a\*</sup>, 2012. "What Domestic Ruminant Anatomy Tells Us About Feeding Wild Cervids"

**GRADUATE & PROFESSIONAL STUDENTS/ FELLOWS (since 2020):**

*Nedžad Hadžomerović*, Associate Professor; *Faruk Tandir*, Associate Professor. Veterinary Faculty in Anatomy, Department of Basic Sciences of Veterinary Medicine, University of Sarajevo, Bosnia. USDA Scientific Fellows and visiting faculty Fall 2024.

*Jason Frederick Martin*, PhD. Preliminary exam January 2022, defense August 2023. Dr. Martin's PhD was focused on strategies for successful learning outcomes following integration of virtual reality anatomical teaching tools in veterinary education. Post-doc completed at Utah State University College of Veterinary Medicine, hired as an Assistant Professor in BMS at CSU January 2025.

*Department of Biomedical Sciences Master of Science (1 year, MS-B) program, 16-20 students, 2012-present*

Academic Advisor for animal anatomy concentration students. This includes MS-B program admissions, student support, mentorship, and grading of annual Comprehensive Exams in animal anatomy. I also have 2-3 GTAs per year to assist with teaching laboratories (BMS304, 305, 531). Most students are applying to veterinary school and hoping to demonstrate academic capacity, though some find other passions including teaching and research. Six graduates from this program are now full-time anatomy instructors and/or laboratory coordinators, 2 others are in PhD programs and continue to teach as graduate students.

*Takashi Namba*, PhD. Advisee of Dr. Yasuhiro Kon, Professor Emeritus former Director of Veterinary Anatomy at University of Hokkaido, Hokkaido, Japan. Hosted Dr. Namba for 2 week internship fall 2022 to gain knowledge of DVM teaching at CSU and creation of 3D objects for VR image production.

*Viviane C Leite Gomes*. PhD student in Clinical Sciences at Louisiana State University, Baton Rouge, LA. Advisor, Jenny Sones, DVM, PhD, DACT. 2019-2022. Combined PhD/Theriogenology Residency program. Interest in kisspeptin during equine pregnancy. Dr. Gomes visited CSU in May 2019, I visited LSU in November 2019. Preliminary exam completed August 2021, defense October 2022. Currently an Assistant Professor, Michigan State University.

**FACULTY MENTORING:**

2023-present Sami Case, PhD, Assistant Professor (non-tenure track), Department of Biomedical Sciences, CSU

2021-present Carolyn Meyer, PhD, Assistant Professor (non-tenure track), Department of Biomedical Sciences, CSU

2019-present Kimberley Jeckel, PhD, Assistant Professor (non-tenure track), Department of Biomedical Sciences, CSU

2019-present Olivia Arnold, PhD, Graduate Coordinator and Instructor, Department of Environmental and Radiological Health Sciences, CSU

**LETTERS OF RECOMMENDATION (since 2012):**

- DVM program applicants (VMCAS +/- supplemental packets), ~25 annually
- DVM or other students seeking externship or research opportunities, ~15 annually

## **CV SECTION 4: EVIDENCE OF OUTREACH/SERVICE/ENGAGEMENT (2020-current)**

### **COMMITTEES**

#### **Colorado State University**

2024-2025 Institute for Entrepreneurship (I4E)

2023-present Multicultural Staff and Faculty Council

2022-2023 Provost's Council for Engagement

2022 Animal Sciences Department Equine Reproductive Physiologist, Search Committee Member, search completed.  
Carleigh Fedorka, PhD hired.

2019-2021 CVMBBS Representative to CSU's Faculty Council

#### **College of Veterinary Medicine and Biomedical Sciences**

2024-2025 CVMBBS Director of Communications, Search Committee member

2024-present CVMBBS Biomedical Curriculum Committee

2022-23 DVM Professional and Scholastic Standards and Professionalism Committee

2021 Clinical Sciences Department Equine Ambulatory Clinician, Search Committee Member, first search failed, second search resulted in the hire of Dr. Anna Bracken (a former MSB student and anatomy GTA)

Spur-Vida-Content Creation and Review –In addition to creating storylines for veterinary cases, the VVET team has created anatomical models, videos, and other content to support outreach at Vida.

2019-2023 DVM Curriculum Renewal– My role 2019-2023 was to provide basic sciences (anatomy, physiology) and BMS input as a member of the DVM Curriculum Renewal Committee. In 2021-22 I provided leadership in the development of the Endocrinology, Reproduction, and Biomedical Building Blocks (BBB) sections. In 2023, my duties in BMS increased, but I remain a contributor to BBB and Veterinary Education Center development.

#### **Department of Biomedical Sciences (since last promotion)**

2023-present Associate Department Head, BMS

BMS Undergraduate Education Committee, Chair

BMS Curriculum Committee, Ex officio

2025 BMS Student Appreciation Days (March 31-April 2, coordinated and executed) Developed following the rush of federal executive orders associated with higher education and research to support the connection between students and faculty. Attended by more than 300 students and 18 BMS faculty.

2024 Undergraduate BMS AP Advisor, Search Chair, hire of Deb Misuraca

BMS Teaching Retreats (Spring 2024, Summer 2024, coordinated and executed)

2022 Non-Tenure Track Faculty Assistant-Associate Professor of Anatomy and Physiology, Search Chair (2 positions) – committee charged August 2022, Sami Case & Julie Becker hired, January 2023.

Animal Anatomy Laboratory Coordinator, Hiring Authority, hired Paulina Svec January 2023.

Director of Animal Anatomy Programming and Strategic Planning (since 2019). Supervise 3 staff and 2-5 student anatomy embalming technicians.

DVM & Clinical Services Committee, 2017-2024. I collected and provided input to DVM budget requests and program planning to ensure DVM and Clinical Services needs are met by BMS. I now support this role as ADH.

Research and Facilities Committee, Member since 2015

Graduate Education Committee, Member since 2013. MS-B Steering and Admissions Sub-Committees – 2013-ongoing; PhD Education Curriculum Task Force, 2020-ongoing.

### **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

2022-present Academy of Veterinary Educators

2020-present American Association of Veterinary Anatomists (President-Elect 2023-25, President 2025-27)

2019-present Teaching Academy Fellow, Consortium of West Region Colleges of Veterinary Medicine (Faculty Development Working Group 2020-2024, External Peer Review of Teaching 2025-present)

2016-present Colorado State University Center for the Analytics of Learning and Teaching, PI for 3D Visualization in Domestic Gross Anatomy.

2007-present American College of Theriogenologists

2006-present Society for Theriogenology

Licensed to practice veterinary medicine with USDA certification\* in Colorado\*, Massachusetts\*, and New Hampshire  
DEA license (RM0586670, Schedule 2 2N 3 3N 4 5) Renewed December 2024

#### **Scientific Journal Reviewer (since last promotion)**

Community Reviewer (new term since 2025, formerly Review Editor, Editorial Board since 2023) of Comparative and Clinical Medicine, specialty section of Frontiers in Public Health, Frontiers in Medicine and Frontiers in Veterinary Science, (3 in 2024, 1 in 2023)

Journal Veterinary Medical Education (1 in 2025)

Equine Veterinary Education (1 in 2025)

Journal of Neuroendocrinology (1 in 2021)  
American Journal of Physiology-Regulatory, Integrative and Comparative Physiology (1 in 2020, 1 in 2021)  
Anatomical Sciences Education (1 in 2022, 2 in 2023, 2 in 2025)  
Anatomia, Histologia, Embryologia (1 in 2022)

#### **OUTSIDE REVIEWER FOR PROMOTION AND TENURE**

2023 - 1 faculty from a land grant university  
2021 - 2 faculty from WICHE veterinary colleges

#### **OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH (---since last promotion---)**

*Program Director, Zoetis Veterinary Perspectives Institute, College of Veterinary Medicine and Biomedical Sciences, CSU.*

This summer program is in partnership with the Alliance Center at CSU to develop an opportunity for students from diverse backgrounds and under-resourced high schools, to learn about careers in veterinary medicine. Initially planned as a residential program for summer 2020, this was put on hold as result of COVID-19, launched virtually in 2021, and is now in its 4<sup>th</sup> year as a residential program. Funded in its entirety by Zoetis, Inc. with an initial gift in 2019/2020 of \$80,000, the program is intended to host high school students for 6 nights, 7 days in the CSU residence halls, including students from Western Region DVM Consortium states (i.e. California, Nevada, Oregon, etc.). Participating high school students are paired with an Alliance Summer Institute alumnus as a primary counselor, as well as near-peer mentors from the CSU UG/G/DVM programs. Students interact with real anatomical specimens, use case studies to understand applied anatomy and One Health, and study comparative anatomy using virtual anatomy. The Veterinary Perspectives Institute also gives CSU students the opportunity to provide community service and gain leadership experience by teaching in the curriculum and mentoring participating students. For the virtual program in 2021, I re-designed the curriculum for online delivery so that approximately 40 students from high schools in the Western Consortium could explore an “outbreak” and interact with faculty experts to solve the outbreak. Students met from 9a-12p daily for 5 days to develop skills to solve this novel problem as well as explore major themes including 1) exploration of the veterinary profession, 2) pathways to veterinary medicine; 2) topics in veterinary medicine including debt awareness and repayment programs, wellness, leadership and communication skills. Participants received 1 academic credit for their efforts through CSUOnline with UCC approval in a new course that I created (VMBS101). I secured additional funding in 2021 (\$50,000) and 2022 (\$50,000) from Zoetis for a residential version of the program. The previously designed 2020 program was merged with the virtual curriculum from 2021, to deliver an exceptional academic program in 2022 for 40 student participants and 15 peer mentors. The program was delivered in 2023 with 17 participants and 10 mentors, and has reached a final steady state to the curriculum and enrollment of 20 participants and 10 mentors per year 2024-2025. **In 2024, Zoetis gave a final gift of \$75,000 and in May of 2025 a manuscript was published in the Journal of Youth Development with the program outcomes. The total Zoetis gift is \$255,000** with ongoing efforts to obtain federal funding and expand the summer program to Tuskegee University and University of Florida.

*Animal Anatomy Outreach, Department of Biomedical Sciences, CSU*

In collaboration with the Human Anatomy team in BMS, the animal anatomy team provides outreach and engagement opportunities to more than 500 K-12 students visiting CSU each year. As Director of Animal Anatomy Programming, I have supervisory role (Andrew Garrett 2019-2024, Mykee Cain 2024-present) for these activities, with a direct role in ensuring BMS anatomy policy adherence, developing content, recruiting volunteers, and collaborating with other units to provide a unified CVMBS/One Health experience.

*DVM Tutoring Program, CVMBS, CSU*

2018-2024. In 2018 I worked with Dr. Andrew West, then Director of the CVMBS Academy for Teaching and Learning/now CVMBS Associate Dean for Teaching and Learning, to revamp the DVM Tutoring Program to introduce a new program structure with a Canvas-based Group Tutoring support site for each of the major DVM year 1 and 2 courses. I supervise 2 program coordinators, a DVM Program Teaching Assistant (DPTA) for each of the major courses (5-8/semester), and the 2-3 Student Assistant Study Session (SASS) Coordinators per course (7-15/semester) who facilitate each of the weekly group study hall sessions. 2023 marks the program's 6th year, with student surveys and course performance evaluation demonstrating this program as a positive draw for students to select CSU's DVM program as well as a continued reduction in dependence on 1:1 tutoring and improved student outcomes. Leadership transitioned to Dr. Sami Case in 2024.

*Suture Clinic, Department of Biomedical Sciences, CSU*

2021-24: Led a 2 hour Suture Clinic for 20 MS students using the Canvas teaching module. Assisted by 2-3 other PA/MD/DVMs, I have also coordinated numerous suture clinics for undergraduate students using the same platform.

*Middle School Student Council Faculty Advisor, Saint Joseph's Catholic School, Fort Collins, CO*

2024-2025 school year: Weekly meetings with the student council group and other activities to support leadership, development, fundraising and community service, including a Gardens on Spring Creek (Fort Collins) cleanup.

*Pre-Veterinary Club, College of Veterinary Medicine and Biomedical Sciences, CSU*

2022: Invited talk “So you want to be a veterinarian?” at PreVet Club Monthly meeting

*Predator vs. Prey – How can you tell?*

2021 – Grades 5-8, Saint Joseph's Catholic School, Fort Collins, CO, in-class outreach for > 80 students with both anatomy specimens as well as 20 VR Oculus Quest 2 headsets using VAA-VR with CVMBS Outreach staff as a trial for SPUR Vida

-----since last promotion-----

*Anatomy Camp, Department of Biomedical Sciences, CSU*

Summer 2016-2019; cancelled 2020 due to COVID-19: This academic camp for high school students used hands-on learning to create an enriched learning environment. Many campers were considering pre-professional majors in college and the primary goal of the camp was to engage high school students in health education and to encourage their interest in college STEM majors. Campers dissected real anatomical specimens, used case studies to diagnose medical problems, and studied cross sectional anatomy using virtual anatomy. Anatomy Camp also gave CSU students the opportunity to provide community service by teaching anatomy and mentoring campers. I provided the Suture Clinic portion of the camp, was a source of advising/mentorship for counselors and campers, and faculty support for the program.

*Colorado 4-H State Conference, Fort Collins, CO*

Virtual Bovine Anatomy Workshops 2018-19; cancelled 2020 due to COVID-19: – Presentation for high school 4-H members on CVMBS major(s) and career paths, as well as a wetlabs with anatomical specimens and VAA-VR demos

*Pre-Veterinary Club Day, College of Veterinary Medicine and Biomedical Sciences, CSU*

October 2015: Provided lecture and laboratory activities for the Artificial Insemination session

January 2017: Invited talk "So you want to be a veterinarian?" at PreVet Club Monthly meeting

October 2017: Keynote Address to Pre-Vet Club Annual Symposia

October 2019: Small Animal Reproduction: Spay and Neuter Laboratory session

**Appendix 1:** Materials prepared for my 2020 Promotion and Tenure External Review of Teaching as instructed by the Western Consortium Regional Teaching Academy's guidelines for external peer review. This document is accessible from a Google Drive using this [link](#). The intention of providing this document is to catalogue breadth and depth of my teaching impact prior to 2020.

**Appendix 2:** For a visual and detailed record of my achievements, including video production and website development to support teaching, outreach, and service, please visit [www.christiannemagee.com](http://www.christiannemagee.com)