

# Jenifer Monks, Ph.D.

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*Last updated: May 29, 2026*

## CURRENT POSITION

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### **Assistant Professor**

Division of Reproductive Sciences  
Department of Obstetrics and Gynecology  
University of Colorado Anschutz School of Medicine  
Aurora, Colorado

## EDUCATION

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| <b>Postdoctoral Fellowship</b><br>Division of Reproductive Sciences, Department of Obstetrics & Gynecology<br>University of Colorado Anschutz Medical Campus, Aurora, Colorado | 2006–2009 |
| <b>Postdoctoral Fellowship</b><br>Division of Cell Biology, Department of Pediatrics<br>National Jewish Medical Center, Denver, Colorado                                       | 2000–2004 |
| <b>Ph.D. in Cell &amp; Developmental Biology</b><br>University of Colorado Health Sciences Center, Denver, Colorado  | 1991–1999 |
| <b>B.S. in General Chemistry (Dean's List 1990, 1991)</b><br>Harvey Mudd College, Claremont, California  | 1987–1991 |

## PROFESSIONAL POSITIONS AND EXPERIENCE

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### **Academic Appointments**

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|---|--------------|
| Assistant Professor<br>Division of Reproductive Sciences, Department of Obstetrics and Gynecology, University of Colorado Anschutz Medical Campus, Aurora, Colorado | 2018–present |
| Instructor<br>Department of Obstetrics and Gynecology, University of Colorado Anschutz Medical Campus, Aurora, Colorado   | 2009–2018    |

## PROFESSIONAL DEVELOPMENT

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| <b>The Academy of Research Mentoring Educators (ARME)</b><br>Center for the Improvement of Mentored Experiences in Research (CIMER) Training<br>University of Colorado School of Medicine, Aurora, Colorado | 2025 |
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<b>Women's Leadership Training</b>	2022–2023
University of Colorado School of Medicine, Aurora, Colorado	
<b>American Stereology</b>	April 2003
7th International Society for Stereology & Image Analysis Conference, La Jolla, California	
<b>Optical Microscopy and Imaging in the Biomedical Sciences</b>	July 2001
Director: Dr. Colin S. Izzard, Marine Biological Laboratory, Woods Hole, Massachusetts	
<b>Cryo-Microscopy</b>	October 2001
Sponsor: Leica, Denver, Colorado	

## PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

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American Society for Cell Biology (ASCB)	1991–present
American Academy for the Advancement of Science (AAAS)	2012–present
Association of Women in Science (AWIS)	2012–present
International Society for Research in Human Milk & Lactation (ISRHML)	2022–present

## EDITORIAL BOARD APPOINTMENTS

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Journal of Mammary Gland Biology & Neoplasia	2023–present
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## COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

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### Ad hoc grant reviewer

NIH, NICHD, ICER study section	June 2025
ISRHML training grants	November 2024
NIH, DPPS, EMS, NMHD study section	April 2025

### Ad hoc manuscript reviewer

Journal of Physiology	2026
Scientific Reports	2025
BioMolecules	2024
Journal of Dairy Research	2018, 2022, 2024
Reproduction and Breeding	2024
Journal of Mammary Gland Biology & Neoplasia	2023, 2024
Physiological Genomics	2023
iScience	2023
Nutrients	2019, 2020, 2022
Maternal & Child Nutrition	2020

## EDUCATIONAL ACTIVITIES

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### **Graduate School Teaching**

“Mammary gland development, differentiation, and lactation” (lecture) 2021–2026  
Integrated Physiology program Spring Repro Bio course (IPHY7800)

### **Medical School Teaching**

“Breast Development & Physiology” (lecture) – Life Cycle Block 2021-2022

“Fluorescence Microscopy Lab: Immunohistochemistry” (lecture and lab) 2013–2016  
Practical Application of Molecular and Cell Biology Techniques for the Clinical Investigator (CLSC 7500)

### **Mentoring**

#### ***Postdoctoral Fellows***

Jayne Martin Carli, PhD 2019–2025  
Assistant Professor, Division of Reproductive Sciences, Department of Obstetrics & Gynecology, CU  
Anschutz School of Medicine, Aurora, CO

#### ***Medical Fellows***

Sahar M. Stephens, MD 2014–2016  
Reproductive and Infertility Medicine, Northern California Fertility Medical Center

Malgorzata E Skaznik-Wikiel, MD, FACOG 2016–2019  
Fertility Physician, Conceptions Reproductive Associates of Colorado

#### ***Graduate Students***

Evelyn Llerena-Cari, PhD, Integrated Physiology Program 2018–2022  
PhD awarded July 14, 2022 (committee member)  
Board of Directors of the Colorado Fertility Advocates; Vice President of Colorado Association of  
Reproductive Technologists; Embryologist at Denver Fertility Care, Denver, CO

Karli Swenson, PhD, Integrated Physiology Program 2019–2023  
PhD awarded September 18, 2023 (committee chair)  
Program assistant, Colorado Perinatal Care Quality Collaborative; Postdoctoral fellow at Children’s Hospital  
Colorado, eXtraordinary Kids Clinic

Petra Dahms, PhD, Cancer Biology Program 2023–2025  
PhD awarded April 2, 2025 (committee member)  
Research Scientist with Vortex Biotechnology

Lauren Cozzens, Cancer Biology Program 2023–2026  
PhD awarded 2026 (committee member)

Roxana Gutierrez, Cell Biology, Stem Cells, and Development Program (Advisor) 2026–present

Kara Fusco, Integrated Physiology Program (Advisor) 2026–present

#### ***Rotation Students***

Kiarra Coger, Integrated Physiology Program Spring 2026  
Mackenzie Amrine, Integrated Physiology Program Fall 2026

## ***Undergraduate Students***

Aneesha Panda  
Max Monks

*Summer 2023*  
*Summer 2023*

## **HONORS AND AWARDS**

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Florence Myers Goldhamer Fellowship in Pediatric Allergy & Immunology  
National Jewish Medical Center 2001

Dean's List 1990–1991  
Harvey Mudd College

National Merit Scholar 1987  
National Merit Scholarship Corporation

## **GRANTS AND CONTRACT AWARDS**

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### **Current**

NIH 1R01HD117769-01 (Monks PI) 04/01/2025–03/31/2030  
Project Title: Investigating the Role of Lipid Droplet Docking in Lactation Initiation and Milk Secretion  
Goal: To expand our understanding of the basic mechanisms controlling milk secretion.  
Total Award: \$3,848,802 | Direct: \$2,499,994 | Indirect: \$1,348,808

### **Pending**

NIH (Monks PI) 04/01/2027–03/30/2029  
Project Title: Establishing Mammary Organoids to Study Milk Letdown Response  
Goal: To develop new organoid systems with functional myoepithelial cells to study mechanisms and regulation of contraction in human mammary myoepithelial cells.  
Role: PI | Effort: 15% | Total Award: \$429,000 | Direct: \$275,000 | Indirect: \$154,000

### **Past Awarded**

NIH R01 HD093729-01A1 (McManaman & Monks MPI) 09/01/2018–05/31/2024 (NCE)  
Project Title: Molecular Determinants of Lactation Success  
Goal: Used novel transgenic mouse models to investigate molecular mechanisms regulating milk lipid secretion and lactation success.  
Role: Co-PI | Effort: 50% | Total Award: \$1,923,760 | Direct: \$1,240,000 | Indirect: \$683,760

NIH R21 HD096228 (Frank & Lanaspas MPI) 04/01/2019–03/31/2022  
Project Title: Contributions of perinatal sugar exposure to childhood metabolic syndrome  
Role: Co-Investigator | Effort: 8% | Total Award: \$427,625 | Direct: \$275,000 | Indirect: \$152,625

Departmental Bridge Funding – Dept. of OB-GYN 07/01/2023–06/30/2024  
Effort: 50% | Total: \$67,000

Departmental Bridge Funding – Dept. of OB-GYN 07/01/2024–06/30/2025  
Effort: 56% | Total: \$50,000

CU-SOM Bridge Funding 10/01/2023–09/30/2024  
No salary support | Total: \$50,000 | Univ. of Colorado Anschutz School of Medicine

CU-SOM Across the Finish Line Grant 07/01/2024–06/30/2025  
No salary support | Total: \$50,000 | Univ. of Colorado Anschutz School of Medicine

NIH Gap Funding Program 04/15/2025–10/15/2025  
Effort: 56% | Total: \$55,000 | Office of the Vice Chancellor for Health Affairs, CU Anschutz

### **Scored/Not Funded**

NIH 2R01HD093729-06A1 (Monks PI) 07/01/2024–06/30/2029  
Project Title: Molecular Determinants of Lactation Success | Impact Score: 30 | Percentile: 17

NIH 2R01HD093729-06 (McManaman & Monks MPI) 09/01/2023–08/31/2028  
Project Title: Molecular Determinants of Lactation Success | Impact Score: 39 | Percentile: 29

NIH 1R21HD119327-01 (Monks PI) 07/01/2025–06/30/2027  
Project Title: Establishing Mammary Organoids to Study Milk Letdown Response in Myoepithelial Cells  
Impact Score: 46 | Percentile: 40+

Dept. of the Army – USAMRAA, Ovarian Cancer Research Program (OC240276) 06/01/2025–05/31/2027  
Project Title: Elucidating the path of tumorigenesis through fallopian tube secretory epithelial cells

NIH 1 UC2 HD113040-01 (Jansson PI) 07/01/2023-06/30/2028  
Project Title: Expression and function of understudied nutrient transporters in the human placenta across gestation and in the mammary epithelium in different stages of lactation | Impact Score: 40

## **PUBLICATIONS**

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*Citations: 2,337 • h-index: 23 • i10-index: 26*

### **Preprints/Under Review**

1. Monks CRF, Fester SA, Nicks CJ, Coger K, **Monks J**. MyoNet and AlveoliNet: A hybrid 3D neural-net pipeline for the instance segmentation and scoring of epithelial cells in intact mammary alveoli. 2026. BIORXIV/2026/727878, doi: <https://doi.org/10.64898/2026.05.26.727878>
2. Arenas G, Polkowske J, Fallahi S, Formento C, Elkins J, Lu S, Julian C, Moore L, **Monks J**, Weiser-Evans MCM, Restrepo D. Ex vivo optogenetics-dependent vasoconstriction of non-pregnant and pregnant mouse uterine artery. 2026. (submitted to *Scientific Reports*)

### **Peer-reviewed Publications**

3. Martin Carli JF, Dzieciatkowska M, Hernandez TL, **Monks J\***, McManaman JL\*. Comparative proteomic analysis of human milk fat globules and paired membranes and mouse milk fat globules identifies core

cellular systems contributing to mammary lipid trafficking and secretion. *Front Mol Biosci.* 2023;10:1259047. \*Contributed equally. (8 Citations)

4. Fini MA, **Monks JA**, Li M, et al. Macrophage Xanthine Oxidoreductase Links LPS Induced Lung Inflammatory Injury to NLRP3 Inflammasome Expression and Mitochondrial Respiration. *bioRxiv.* 2023 Jul 21. doi: 10.1101/2023.07.21.550055. (6 Citations)
5. **Monks J**, Orlicky DJ, Libby AE, Dzieciatkowska M, Ladinsky MS, McManaman J. Perilipin-2 promotes lipid droplet-plasma membrane interactions that facilitate apocrine lipid secretion in secretory epithelial cells of the mouse mammary gland. *Front Cell Dev Biol.* 2022;10:958566. PMID: 36158190. (19 Citations)
6. Martin Carli JF, Trahan GD, Jones KL, Hirsch N, Rolloff KP, Dunn EZ, Friedman JE, Barbour LA, Hernandez TL, MacLean PS, **Monks J**, McManaman JL, Rudolph MC. Single Cell RNA Sequencing of Human Milk-Derived Cells Reveals Sub-Populations of Mammary Epithelial Cells with Molecular Signatures of Progenitor and Mature States: a Novel, Non-invasive Framework for Investigating Human Lactation Physiology. *J Mammary Gland Biol Neoplasia.* 2020 Dec;25(4):367-387. PMID: 33216249. (64 Citations)
7. **Monks J**, Ladinsky MS, McManaman JL. Organellar Contacts of Milk Lipid Droplets. *Contact (Thousand Oaks).* 2020;3. doi: 10.1177/2515256419897226. PMID: 32232194. (35 Citations)
8. Orlicky DJ, Libby AE, Bales ES, McMahan RH, **Monks J**, La Rosa FG, McManaman JL. Perilipin-2 promotes obesity and progressive fatty liver disease in mice through mechanistically distinct hepatocyte and extra-hepatocyte actions. *J Physiol.* 2019;597(6):1565–1584. PMID: 30536914. (103 Citations)
9. Libby AE, Bales ES, **Monks J**, Orlicky DJ, McManaman JL. Perilipin-2 deletion promotes carbohydrate-mediated browning of white adipose tissue at ambient temperature. *J Lipid Res.* 2018;59(8):1482–1500. PMID: 29866659. (40 Citations)
10. **Monks J**, Orlicky DJ, Stefanski AL, Libby AE, Bales ES, Rudolph MC, Johnson GC, Sherk VD, Jackman MR, Williamson K, Carlson NE, MacLean PS, McManaman JL. Maternal obesity during lactation may protect offspring from high fat diet-induced metabolic dysfunction. *Nutr Diabetes.* 2018 Apr 25;8(1):18. PMID: 29695710. (51 Citations)
11. Hazegh KE, Nemkov T, D'Alessandro A, Diller JD, **Monks J**, McManaman JL, Jones KL, Hansen KC, Reis T. An autonomous metabolic role for Spen. *PLoS Genet.* 2017 Jun 22;13(6):e1006859. doi: 10.1371/journal.pgen.1006859. Erratum in: *PLoS Genet.* 2018 Mar 6;14(3):e1007266. PMID: 28640815. (25 Citations)
12. **Monks J**, Dzieciatkowska M, Bales ES, Orlicky DJ, Wright RM, McManaman JL. Xanthine oxidoreductase mediates membrane docking of milk-fat droplets but is not essential for apocrine lipid secretion. *J Physiol.* 2016;594(20):5899–5921. PMID: 27357166. (53 Citations)
13. Frank DN, Bales ES, **Monks J**, Jackman MJ, MacLean PS, Ir D, Robertson CE, Orlicky DJ, McManaman JL. Perilipin-2 Modulates Lipid Absorption and Microbiome Responses in the Mouse Intestine. *PLoS One.* 2015 Jul 6;10(7):e0131944. PMID: 26147095. (53 Citations)
14. Neville MC, Webb P, Ramanathan P, Mannino MP, Pecorini C, **Monks J**, Anderson SM, MacLean P. The insulin receptor plays an important role in secretory differentiation in the mammary gland. *Am J Physiol Endocrinol Metab.* 2013 Nov 1;305(9):E1103-14. PMID: 23982156. (99 Citations)
15. Crunk AE, **Monks J**, Murakami A, Jackman M, Maclean PS, Ladinsky M, Bales ES, Cain S, Orlicky DJ, McManaman JL. Dynamic regulation of hepatic lipid droplet properties by diet. *PLoS One.* 2013 Jul 11;8(7):e67631. PMID: 23874434. (93 Citations)
16. Orlicky DJ, **Monks J**, Stefanski AL, McManaman JL. Dynamics and molecular determinants of cytoplasmic lipid droplet clustering and dispersion. *PLoS One.* 2013;8(6):e66837. PMID: 23825572. (49 Citations)
17. Fini MA, **Monks J**, Farabaugh SM, Wright RM. Contribution of xanthine oxidoreductase to mammary epithelial and breast cancer cell differentiation in part modulates inhibitor of differentiation-1. *Mol Cancer Res.* 2011;9(9):1242–54. PMID: 21775420. (41 Citations)
18. Rudolph MC, **Monks J**, Burns V, Phistry M, Marians R, Foote MR, Bauman DE, Anderson SM, Neville MC. Sterol regulatory element binding protein and dietary lipid regulation of fatty acid synthesis in the mammary epithelium. *Am J Physiol Endocrinol Metab.* 2010 Dec;299(6):E918-27. PMID: 20739508. (133 Citations)
19. O'Brien J, Lyons T, **Monks J**, Lucia MS, Wilson RS, Hines L, Man YG, Borges V, Schedin P. Alternatively activated macrophages and collagen remodeling characterize the postpartum involuting mammary gland across species. *Am J Pathol.* 2010 Mar;176(3):1241-55. PMID: 20110414. (355 Citations)

20. **Monks J**, Henson PM. Differentiation of the mammary epithelial cell during involution: implications for breast cancer. *J Mammary Gland Biol Neoplasia*. 2009;14(2):159–70. PMID: 19408104. (49 Citations)
21. **Monks J**, Smith-Steinhart C, Kruk ER, Fadok VA, Henson PM. Epithelial cells remove apoptotic epithelial cells during post-lactation involution of the mouse mammary gland. *Biol Reprod*. 2008;78(4):586–94. PMID: 18057312. (191 Citations)
22. **Monks J**. TGFbeta as a potential mediator of progesterone action in the mammary gland of pregnancy. *J Mammary Gland Biol Neoplasia*. 2007;12(4):249–57. PMID: 18027075. (14 Citations)
23. **Monks J**, Rosner D, Geske FJ, Lehman L, Hanson L, Neville MC, Fadok VA. Epithelial cells as phagocytes: apoptotic epithelial cells are engulfed by mammary alveolar epithelial cells and repress inflammatory mediator release. *Cell Death Differ*. 2005 Feb;12(2):107-14. PMID: 15647754. (281 Citations)
24. **Monks J**, Neville MC. Albumin transcytosis across the epithelium of the lactating mouse mammary gland. *J Physiol*. 2004;560(Pt 1):267–80. PMID: 15297572. (68 Citations)
25. Geske FJ, **Monks J**, Lehman L, Fadok VA. The role of the macrophage in apoptosis: hunter, gatherer, and regulator. *Int J Hematol*. 2002;76(1):16–26. PMID: 12138891. (90 Citations)
26. **Monks J**, Geske FJ, Lehman L, Fadok VA. Do inflammatory cells participate in mammary gland involution? *J Mammary Gland Biol Neoplasia*. 2002;7(2):163–76. PMID: 12463737. (116 Citations)
27. **Monks J**, Huey PU, Hanson L, Eckel RH, Neville MC, Gavigan S. A lipoprotein-containing particle is transferred from the serum across the mammary epithelium into the milk of lactating mice. *J Lipid Res*. 2001;42(5):686–96. PMID: 11352975. (32 Citations)
28. **Monks J**, Neville MC. Vesicular transport of soluble substances into mouse milk. *Adv Exp Med Biol*. 2001;501:257–63. PMID: 11787689. (3 Citations)
29. Zhang P, Sawicki V, Lewis A, Hanson L, **Monks J**, Neville MC. The effect of serum iron concentration on iron secretion into mouse milk. *J Physiol*. 2000;522(Pt 3):479–91. PMID: 10713971. (22 Citations)
30. Neville MC, Medina D, **Monks J**, Hovey RC. The mammary fat pad. *J Mammary Gland Biol Neoplasia*. 1998;3(2):109–16. PMID: 10819521. (188 Citations)
31. Neville MC, Chatfield K, Hansen L, Lewis A, **Monks J**, Nuijens J, Ollivier-Bousquet M, Schanbacher F, Sawicki V, Zhang P. Lactoferrin secretion into mouse milk. Development of secretory activity, the localization of lactoferrin in the secretory pathway, and interactions of lactoferrin with milk iron. *Adv Exp Med Biol*. 1998;443:141-53. PMID: 9781353. (33 Citations)

## Encyclopedia Entries

32. **Monks J**, Mather IH. Mammary Gland, Milk Biosynthesis and Secretion: Secretion of Milk Constituents. In: McSweeney PL, McNamara JP, editors. *Encyclopedia of Dairy Sciences*, 3rd ed. Academic Press: Elsevier; 2022. pp. 206–213.
33. McManaman JL, Carli JFM, **Monks J**. Human milk lipids: an overview. *Human Milk*, 2021
34. Neville MC, **Monks J**. The Cell Biology of the Lactating Mammary Epithelium. In: Skinner MK, editor. *Encyclopedia of Reproduction*, vol. 2. Academic Press: Elsevier; 2018. pp. 779–785.

## PUBLISHED ABSTRACTS AND PRESENTATIONS

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### Oral Presentations

#### *National/International Meetings (Invited)*

35. Monks J. 2023. Nutrients and Metabolism in Normal and Cancer. Section Leader at Gordon Research Conference on Mammary Gland Biology: Molecules and Mechanisms From Normal Biology to Cancer. West Dover, VT.
36. Monks J, Martin Carli J. 2022. Insulin, Diabetes and Breastfeeding. Phoenix Epidemiology and Clinical Research Branch (PECRB), NIH, virtual seminar.

37. Monks J. 2019. Breastfeeding in the 21st Century: Modern Resources and Challenges. American Gynecological Club. Denver, CO.
38. Monks J, McManaman J. 2017. Cell Biology of Lactation: Docking and Stimulated Secretion of Milk Fat Globules. Gordon Research Conference on Mammary Gland Biology: Understudied Areas in Mammary Gland Biology and Breast Cancer. Stowe, VT.
39. Monks J, Henson P, Fadok VA. 2003. Clearance of Apoptotic Cells in the Involuting Mammary Gland. Gordon Research Conference on Clearance of Apoptotic Cells by Phagocytes. New London, CT.
40. Monks J, Fadok VA. 2002. Clearance of Apoptotic Cells in the Involuting Mammary Gland. 10th Euroconference on Apoptosis, Pasteur Institute, Paris.

### ***Local/Regional Meetings (Invited)***

41. Monks J. 2024. Investigating the Role of Lipid Droplet Docking in Lactation Initiation and Milk Secretion. Department of OB-GYN Research Retreat. University of Colorado Anschutz, Aurora, CO.
42. Monks J. 2024. Molecular Determinants of Lactation Success. Invited Speaker, Retirement Symposium for Dr. James McManaman, University of Colorado Anschutz, Aurora, CO.
43. Monks J. 2023. Human Milk Research & Biotechnology. Rocky Mountain Children's Health Foundation Healthy Baby Summit. Denver, CO.
44. Monks J. 2021. Mammary development and lactation (virtual). WiSTEM group, University of Colorado Anschutz, Aurora, CO.
45. Monks J. 2020. Understanding Lactation Insufficiency at the Cellular Level. Division of Reproductive Sciences Seminar, University of Colorado School of Medicine, Denver, CO.
46. Monks J. 2019. Developing pre-clinical models to study how maternal obesity impairs lactation. Perinatal Research Center Seminar, University of Colorado Anschutz Medical Center, Denver, CO.

### **Poster Presentations**

### ***National/International Meetings***

1. Orlicky DJ, Elliott E, Madi L, Llerena Cari E, Danhorn T, Goodspeed A, Johnson J, Martin Carli J, Mather IH, McManaman JL, Monks J. 2026. Disrupting Milk Fat Globule Secretion Delays Secretory Activation. 4th Annual Kohlberg Johnson Family Human Milk Institute Symposium, HMI'26, San Diego, CA.
2. Fusco K, MacLean P, McManaman JL, Martin Carli JF, **Monks J**. 2026. Developing pre-clinical models to study how maternal obesity impairs lactation. 4th Annual Kohlberg Johnson Family Human Milk Institute Symposium, HMI'26, San Diego, CA.
3. Orlicky DJ, Elliot E, Madi L, et al. 2023. Disruption of Milk Fat Globule Docking Reveals Mammary Adaptation Postpartum. Gordon Research Conference on Mammary Gland Biology, West Dover, VT.
4. Elliot E, Martin Carli J, Johnson J, Orlicky DJ, McManaman JL, Monks J. 2022. Lactogenesis requires cross-talk between the milk secretory cells and contractile, myoepithelial cells in the mammary gland. Society for Reproductive Investigation, Denver, CO.
5. Monks J, Martin Carli JF, Bales ES, Orlicky DJ, Mather IH, McManaman JL. 2019. Docking of Milk Fat Globules at the Apical Plasma Membrane Prior to Secretion. Gordon Research Conference: Heterogeneity in Mammary Gland Development and Breast Cancer. Newry, ME.
6. Monks J, Bales ES, Orlicky DJ, McManaman JL. 2019. Let-down Controls Lactation Success: Stimulated Secretion of Milk Fat Globules. Gordon Research Conference on Salivary Glands and Exocrine Biology, Galveston, TX.
7. Monks J, Dzieciatkowska M, Bales E, Libby AE, Orlicky DJ, McManaman JL. 2018. Perilipin 2 (ADRP/ADPH) dissociates cytoplasmic lipid droplets from the endoplasmic reticulum during milk fat secretion. International Milk Genomics Consortium Symposium, Sacramento, CA.
8. Monks J, Martin Carli J, Libby AE, et al. 2017. Docking of Milk Fat Globules at the Apical Plasma Membrane Prior to Secretion. Gordon Research Conference on Mammary Gland Biology, Stowe, VT.

9. Monks J, Dzieciatkowska M, Bales ES, Orlicky DJ, Wright RM, McManaman JL. 2016. Xanthine Oxidoreductase mediates membrane docking of the lipid droplet during milk fat globule secretion. *FASEB Lipid Droplets: Dynamic Organelles in Metabolism and Beyond*.
10. Orlicky DL, Stefanski A, Chong B, Monks J, Monks C, McManaman JL. 2011. Perilipin, Moesin and Microtubule Dependence of Lipid Droplet Clustering and Dispersion. *American Society for Cell Biology Annual Meeting*.
11. Monks J, Henson P, Neville M. 2007. The Clearance Phase of Mammary Involution. *Gordon Research Conference on Mammary Gland Biology, Newport, RI*.
12. Monks J, Fadok VA. 2003. Clearance of Apoptotic Cells in the Involuting Mammary Gland. *Gordon Research Conference on Mammary Gland Biology, Bristol, RI*.
13. Monks J, Rosner D, Neville MC, Hanson L, Fadok VA. 2001. Clearance of Apoptotic Cells During Mammary Involution is Mediated by Mammary Epithelial Cells as well as by Macrophages. *Keystone Symposium on Molecular Mechanisms of Apoptosis, Keystone, CO*.
14. Monks J, Fadok VA. 2001. Clearance of Apoptotic Cells During Mammary Involution. *Gordon Research Conference on Mammary Gland Biology, Bristol, RI*.
15. Monks J, Neville MC. 1998. Elucidating albumin transcytosis across the mammary epithelium of the lactating mouse. *Intracellular Transports in Mammary Epithelial Cells, INRA, Jouy-en-Josas, France*.
16. Monks J, Neville MC. 1997. Transport of Extra-Alveolar Proteins into Mouse Milk. *Gordon Research Conference on Mammary Gland Biology, Plymouth, NH*.
17. Monks J, Gavigan S, Neville MC. 1996. LDL is transported whole, as is Albumin, across the Lactating Mammary Epithelium. *Gordon Research Conference on Lipid Metabolism, Meriden, NH*.
18. Monks J, Neville MC. 1995. LPL Transport in the Lactating Mammary Gland. *Gordon Research Conference on Mammary Gland Biology, New London, NH*.

### **Local/Regional Meetings**

19. Monks J, Martin Carli JF, Bales ES, Orlicky DJ, McManaman JL. 2019. Mouse models of diet-induced-obesity have defective mammary gland development during pregnancy. *Rocky Mountain Reproductive Sciences Symposium, Fort Collins, CO*.
20. Monks J, Bales ES, Libby AE, Orlicky DJ, McManaman JL. 2018. Cell Biology of Lactation: Membrane Docking and Stimulated Secretion of Milk Fat Globules. *Rocky Mountain Membrane Trafficking Meeting*.
21. Monks J, Orlicky DJ, Libby AE, et al. 2017. Developmental Programming by Mother's Milk. *Building Better Babies Symposium, Univ. Colo. Anschutz*.
22. Monks J, Bales ES, Libby AE, Orlicky DJ, McManaman JL. 2016. Let-down Controls Lactation Success: Stimulated Secretion of Milk Fat Globules. *Women's Health Research Day, Univ. Colo. Anschutz*.
23. Monks J, Bales ES, Rudolph M, et al. 2015. Maternal Effects on the Neonate: Nursing is a susceptibility window for programming adverse health outcomes. *Division of Reproductive Sciences Research Retreat, Univ. Colo. Anschutz*.
24. Monks J, Bales ES, Cain S, et al. 2014. Loss of Xanthine Oxidoreductase Impairs Milk Fat Globule Secretion. *Women's Health Research Day, Univ. Colo. Anschutz*.

## **OTHER SCHOLARLY CONTRIBUTIONS**

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### **Proteomic Data Sets**

Computational Mass Spectrometry (CCMS), Mass Spectrometry Interactive Virtual Environment (MassIVE)  
 Proteomic Analysis of Paired Human Milk Fat Globules and MFGMs: MSV000092892 2023  
 Proteomic Analysis of Mouse Milk Fat Globules: MSV000092915 2023

### **Genomic Data Sets**

NCBI Gene Expression Omnibus  
Single Cell RNA Sequencing of Human Milk-Derived Cells: GSE153889 2020

### **Analysis Tools**

MyoNet and AlveoliNet: Novel, deep learning AI 3D U-Nets for segmentation and scoring of myoepithelial cells in intact mammary alveoli (<https://www.biorxiv.org/content/10.64898/2026.05.26.727878v1>) 2026

### **Other Creative Products**

Birthing, Bonding & Breastfeeding: educational poster 2021  
Monks J and Christy Jo Hendricks. Available at <https://www.birthingandbreastfeeding.com/>

## **SERVICE**

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### **University Activities**

Department of OB-GYN Grant Mentorship Committee 2025–present  
A committee of OB-GYN faculty meets monthly with junior faculty for intensive mentoring to complete a major grant submission within 1 year.

Graduate Training and Oversight Committee, Integrated Physiology Graduate Program 2024–present  
Each GTOC member is aligned with first or second-year students who they meet with a few times per year to discuss progress. This committee also reviews T32 training grant applications.

Program Project Grant Internal Advisory Board – 1P01CA310983 2025–present  
Breast Cancer Co-opts Reversible Physiologic Programs of Immune Suppression; Traci Lyons, PhD, lead PI. Quarterly review of productivity, integration, accomplishments of the aims, and scientific guidance.

Participating Faculty, K12 renewal “Colorado BIRCWH Program” (Regensteiner, Santoro, Brown) 2026  
Provided evidence of current funding and support for the training grant.

Minor User Faculty Support, NIH S10 application (PI: Benninger) 2025–2026  
Provided evidence of current funding and emphasized necessity of new equipment for the Advanced Light Microscopy Core Facility.

Division of Reproductive Sciences Seminar Administrator search committee 2025  
Interviewed and identified candidates for the position of Business Services Professional.

Carol Lange, PhD – Dean’s Distinguished Seminar Speaker 2024  
Nominated and hosted.

Retirement Symposium for Dr. James McManaman – Organizer 2024  
Extended personal invitations, coordinated speakers, and hosted a day-long science symposium honoring the career of my mentor.

Division of Reproductive Sciences Seminar Series – Organizer 2022–2024  
Coordinated weekly speakers (internal and invited), assisted with scheduling, and hosted dinners.

Division of Reproductive Sciences Journal Club – Organizer 2019–2020  
Coordinated and coached trainees for a monthly journal club presentation to the division.

Institutional Animal Care and Use Committee (IACUC) - Scientific Advisor  
Reviewed animal care protocols for the University

2008-2014

**Community Activities**

Scientific Advisor, Advisory Council of the Mothers' Milk Bank

2018–present

Rocky Mountain Children's Health Foundation. Council meets quarterly to discuss the workings of the milk bank, new regulations, and policies. Provides reports on the current science of breastmilk and lactation.

Scientific Advisor – ETCHED Study (ClinicalTrials.gov ID NCT03481829, PI: Sinha)

2021

Designed breast milk biospecimen collection protocol for secondary studies of milk composition and infant outcomes.