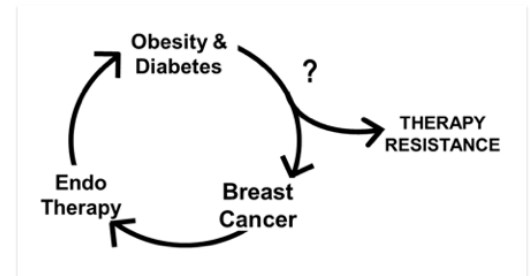


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Personal Statement

My training is in normal mammary gland biology and breast cancer metabolism. I currently hold an NCI R01 focused on FGF-FGFR signaling in endocrine-resistant breast cancer. I study the “vicious cycle” surrounding obesity and estrogen receptor positive (ER+) breast cancer (depicted in the diagram). My research focuses on the mechanisms through which obesity promotes breast cancer relapse and progression, and also on the metabolic effects of estrogen deprivation that occur with endocrine (anti-estrogen) therapy. I established a transplant-competent murine model of obesity and glucose intolerance, in which I grow breast cancer patient derived xenograft tumors (PDX) as well as established human breast cancer cell lines. I am currently investigating the mechanisms through which growth factor signaling potentiates the response to estrogen in the obese environment, potentially through ligand-independent activation of the estrogen receptor. Other projects in my laboratory focus on how obesity moderates the effects of ER antagonists and estrogen deprivation on adipose tissue expansion and adipocyte progenitor cell renewal and differentiation. We are also evaluating the role of ER in immune cell-mediated menopausal weight gain. My overall research goals include **1)** identifying host (environment)-specific drivers of breast cancer therapy resistance in the context of obesity; **2)** determining the effects of estrogens and endocrine therapy on adipose, liver, skeletal muscle, and immune cell biology, and **3)** identifying and modeling the patient population at risk for adverse effects associated with endocrine therapy and implement appropriate ways to monitor and intervene to prevent breast cancer relapse. I combine basic research techniques with preclinical (mouse and rat) models of obesity and clinical studies to comprehensively investigate the relationship between obesity, metabolic disease, and breast cancer progression.



Education

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| May 2004 | B.S. Texas A&M University, College Station, TX; Biomedical Sciences |
| May 2009 | Ph.D. Texas A&M University, College Station, TX; Toxicology |

Research Experience

| | |
|----------------|---|
| 1/2020-current | Assistant Professor-University of Oklahoma Health Sciences Center Department of Pathology; Stephenson Cancer Center; Harold Hamm Diabetes Center |
| 11/17-1/2020 | Assistant Research Professor- University of Colorado Denver Department of Pathology; Center for Women's Health Research |

- 12/14-10/17 Research Instructor-University of Colorado Denver
Department of Pathology; Center for Women's Health Research
- 11/09-11/14 Post-doctoral Fellow-University of Colorado Denver
Department of Pathology
Mentor: Dr. Steve Anderson
- 6/09-8/09 Post doctoral Research Assistant-Texas A&M University
Department of Veterinary Integrative Biosciences
Mentor: Dr. Weston Porter
- 9/04-5/09 Graduate Research Assistant -Texas A&M University
Department of Veterinary Integrative Biosciences
Mentor: Dr. Weston Porter
- 6/04-8/04 Undergraduate Student Worker-Texas A&M University
Department of Veterinary Physiology and Pharmacology
- 9/03-5/04 Undergraduate Research Assistant -Texas A&M University
Department of Veterinary Anatomy and Public Health
Principal Investigator: Dr. Shashi Ramaiah

Current Funding

NIH R01CA251600 (Yee) 6/1/2020-5/31/2025: *Disrupting insulin receptor function in breast cancer*. Role: Co-Inv (PI Doug Yee, MD)

CDMRP BCRP W81XWH-22-1-0042 (Cittelly) 9/1/2023-8/30/2026: *Mechanisms Underlying Brain Metastatic Progression in ER+ Breast Cancer*. Role: Co-Inv (PI Diana Cittelly, PhD)

Harold Hamm Diabetes Center/Stephenson Cancer Center Team Science Award (Wellberg) 7/1/2023-12/31/2024: *Characterization of the Influence of Obesity on the In-Situ-To-Invasive Transition of Breast Cancer*. Role: PI

Harold Hamm Foundation (Castillo-Castrejon) 7/1/2023-12/31/2024: *Contribution of B Cells to Obesity and Menopause-Associated Diabetes Risk*. Role: Co-Inv (PI Marisol Castillo Castrejon, PhD)

Harold Hamm Foundation (Thomas) 7/1/2024-6/30/2025: *Estrogen Receptor Inhibition Links Unhealthy Adipose Tissue to Diabetes After Breast Cancer*. Role: Mentor (PI Nisha Thomas, PhD)

Completed Funding

Department of Defense Breast Cancer Research Program Postdoctoral Fellowship 9/2010-3/2014: *Regulation of Mammary Tumor Formation and Lipid Biosynthesis by Spot14*. Role: PI

Nutrition and Obesity Research Center-Pilot Funding 9/2013-9/2014: *Activation of PR by Insulin and Glucose and the Impact on Breast Cancer Cell Metabolism*. Role: PI

Nutrition and Obesity Research Center-Pilot Funding 8/2014-8/2015: *Activation of Steroid Hormone Receptors by Obesity and Excess Energy and Postmenopausal Breast Cancer Progression*. Role: PI

Department of Medicine Team Science Award 1/1/2015-12/31/2016: Development of a PDX Xenograft Model

for Studies of Obesity and Cancer. Role: Co-PI

Cancer League of Colorado 7/1/2015-6/30/2016: The Role of the Androgen Receptor in Obesity-Associated Postmenopausal Breast Cancer. Role: PI

University of Colorado Cancer Center Cancer Prevention and Control Program 11/1/2015-10/31/2016: Addressing the role of lymphangiogenesis in obesity and breast cancer metastasis. Role: Collaborator

Center for Women's Health Research Pilot Award 11/2016-10/2017: A role for breast cancer endocrine therapy in promoting metabolic disease. Role: PI

Libations for Life Pilot Award 1/2018-12/2018: *Targeting women's cancers using a novel patient-host model*. Role: PI \$20,000 total

NIH CTSA KL2 Career Development Award 11/2017-10/2018: *Growth factor signaling in obesity associated breast cancer*. Role: PI \$300,000 total

Komen Foundation Career Catalyst Research Grant (Wellberg) 8/2017-7/2021: *Growth factor signaling in obesity associated breast cancer*. Role: PI

NIH R01CA241156 (Wellberg) 7/1/2019-6/30/2024: *Growth factor signaling in obesity associated ER-positive breast cancer*. Role: PI

NIH U54 AG062319 (SCORE; Khort) 9/20/2012 – 5/31/2023: *Bioenergetic and Metabolic Consequences of the Loss of Gonadal Function*. Role: Co-Inv (PI Wendy Khort, PhD)

BX004533VA VA Career Development Award-2 (Scalzo) 1/01/2019-12/31/2023: *The Interaction of Diabetes and Estrogen on Skeletal Muscle Bioenergetics*. Role: Mentor Committee (PI Becky Scalzo, PhD)

NIH Center for Biomedical Research Excellence (CoBRE) Diabetes Program (Castillo-Castrejon) 7/1/2021-6/30/2022. *Estrogen Receptor Signaling in B-Cells: A Potential Role in Diabetes Risk after Menopause*. Role: Mentor (PI Marisol Castillo-Castrejon, PhD)

Publications (* indicates support from Komen CCR)

1. Libby AE, Solt CM, Jackman MR, Sherk VD, Foright RM, Johnson GC, Nguyen TT, Breit MJ, Hulett N, Rudolph MC, Roberson PA, **Wellberg EA**, Jambal P, Scalzo RL, Higgins J, Kumar TR, Wierman ME, Pan Z, Shankar K, Klemm DJ, Moreau KL, Kohrt WM, et al. Effects of follicle-stimulating hormone on energy balance and tissue metabolic health after loss of ovarian function. *Am J Physiol Endocrinol Metab*. 2024 May 1;326(5):E626-E639. doi: 10.1152/ajpendo.00400.2023. Epub 2024 Mar 27. PubMed citation] PMID: 38536037, PMCID: PMC11208003

*2. Sankofi BM, Valencia-Rincón E, Sekhri M, Ponton-Almodovar AL, Bernard JJ, **Wellberg EA**. The impact of poor metabolic health on aggressive breast cancer: adipose tissue and tumor metabolism. *Front Endocrinol (Lausanne)*. 2023 Sep 20;14:1217875. doi: 10.3389/fendo.2023.1217875. eCollection 2023. Review. PubMed [citation] PMID: 37800138, PMCID: PMC10548218

*3. Thomas NS, Scalzo RL, **Wellberg EA**. Diabetes mellitus in breast cancer survivors: metabolic effects of endocrine therapy. *Nat Rev Endocrinol*. 2024 Jan;20(1):16-26. doi: 10.1038/s41574-023-00899-0. Epub 2023 Oct 2. Review. PubMed [citation] PMID: 37783846

4. Diedrich JD, Gonzalez-Pons R, Medeiros HCD, Ensink E, Liby KT, **Wellberg EA**, Lunt SY, Bernard JJ. Adipocyte-derived kynurenine stimulates malignant transformation of mammary epithelial cells through the aryl hydrocarbon receptor. *Biochem Pharmacol.* 2023 Oct;216:115763. doi: 10.1016/j.bcp.2023.115763. Epub 2023 Aug 23. PubMed [citation] PMID: 37625554, PMCID: PMC10587895

*5. Castillo-Castrejon M, Sankofi BM, Murguia SJ, Udeme AA, Cen HH, Xia YH, Thomas NS, Berry WL, Jones KL, Richard VR, Zahedi RP, Borchers CH, Johnson JD, **Wellberg EA**. FGF1 supports glycolytic metabolism through the estrogen receptor in endocrine-resistant and obesity-associated breast cancer. *Breast Cancer Res.* 2023 Aug 22;25(1):99. doi: 10.1186/s13058-023-01699-0. PubMed [citation] PMID: 37608351, PMCID: PMC10463730

6. Han Z, MacCuaig WM, Gurcan MN, Claros-Sorto J, Garwe T, Henson C, Holter-Chakrabarty J, Hannafon B, Chandra V, **Wellberg E**, McNally LR. Dynamic 2-deoxy-D-glucose-enhanced multispectral optoacoustic tomography for assessing metabolism and vascular hemodynamics of breast cancer. *Photoacoustics.* 2023 Jul 9;32:100531. doi: 10.1016/j.pacs.2023.100531. eCollection 2023 Aug. PubMed [citation] PMID: 37485041, PMCID: MC10362308

7. Leo J, Dondossola E, Basham KJ, Wilson NR, Alhalabi O, Gao J, Kurnit KC, White MG, McQuade JL, Westin SN, **Wellberg EA**, Frigo DE. Stranger Things: New Roles and Opportunities for Androgen Receptor in Oncology Beyond Prostate Cancer. *Endocrinology.* 2023 Apr 17;164(6). doi: 10.1210/endocr/bqad071. Review. PubMed [citation] PMID: 37154098, PMCID: PMC10413436

8. Geitgey DK, Lee M, Cottrill KA, Jaffe M, Pilcher W, Bhasin S, Randall J, Ross AJ, Salemi M, Castillo-Castrejon M, Kilgore MB, Brown AC, Boss JM, Johnston R, Fitzpatrick AM, Kemp ML, English R, Weaver E, Bagchi P, Walsh R, Scharer CD, Bhasin M, Chandler JD, Haynes KA, **Wellberg EA**, and Henry CJ. The 'omics of obesity in B-cell acute lymphoblastic leukemia. *J Natl Cancer Inst Monogr.* 2023 May 4;2023(61):12-29. doi:10.1093/jncimonographs/lgad014. PubMed [citation] PMID: 37139973, PMCID: PMC10157791

9. Sanchez L, Epps J, Wall S, McQueen C, Pearson SJ, Scribner K, **Wellberg EA**, Giles ED, Rijnkels M, Porter WW. SIM2s directed Parkin-mediated mitophagy promotes mammary epithelial cell differentiation. *Cell Death Differ.* 2023 Jun;30(6):1472-1487. doi: 10.1038/s41418-023-01146-9. Epub 2023 Mar 25. PubMed [citation] PMID: 36966227, PMCID: PMC10244402

*10. **Wellberg EA**, Corleto KA, Checkley LA, Jindal S, Johnson G, Higgins JA, Obeid S, Anderson SM, Thor AD, Schedin PJ, MacLean PS, Giles ED. Preventing ovariectomy-induced weight gain decreases tumor burden in rodent models of obesity and postmenopausal breast cancer. *Breast Cancer Res.* 2022 Jun 20;24(1):42. doi: 10.1186/s13058-022-01535-x. PubMed [citation] PMID: 35725493, PMCID: PMC9208221

11. MacCuaig WM, Thomas A, Claros-Sorto JC, Gomez-Gutierrez JG, Alexander AC, **Wellberg EA**, Grizzle WE, McNally LR. Differential expression of microRNA between triple negative breast cancer patients of African American and European American descent. *Biotech Histochem.* 2022 Jan;97(1):1-10. doi:10.1080/10520295.2021.2005147. Epub 2022 Jan 4. PubMed [citation] PMID: 34979848, PMCID: PMC9047185

*12. Scalzo RL, Fright RM, Hull SE, Knaub LA, Johnson-Murguia S, Kinanee F, Kaplan J, Houck JA, Johnson G, Sharp RR, Gillen AE, Jones KL, Zhang AMY, Johnson JD, MacLean PS, Reusch JEB, Wright-Hobart S, **Wellberg EA**. Breast Cancer Endocrine Therapy Promotes Weight Gain With Distinct Adipose Tissue Effects in Lean and

Obese Female Mice. *Endocrinology*. 2021 Nov 1;162(11). doi:10.1210/endo/bqab174. PubMed [citation] PMID: 34410380, PMCID: PMC8455348

13. Zhang AMY, **Wellberg EA**, Kopp JL, Johnson JD. Hyperinsulinemia in Obesity, Inflammation, and Cancer. *Diabetes Metab J*. 2021 Jul;45(4):622. doi:10.4093/dmj.2021.0131. Epub 2021 Jul 30. No abstract available. PubMed [citation] PMID: 34352994, PMCID: PMC8369215

14. Glenny EM, Coleman MF, Giles ED, **Wellberg EA**, Hursting SD. Designing Relevant Preclinical Rodent Models for Studying Links Between Nutrition, Obesity, Metabolism, and Cancer. *Annu Rev Nutr*. 2021 Oct 11;41:253-282. doi: 10.1146/annurev-nutr-120420-032437. Epub 2021 Aug 6. Review. PubMed [citation] PMID: 34357792, PMCID: PMC8900211

*15. Stout MB, Scalzo RL, **Wellberg EA**. Persistent Metabolic Effects of Tamoxifen: Considerations for an Experimental Tool and Clinical Breast Cancer Treatment. *Endocrinology*. 2021 Sep 1;162(9). doi: 10.1210/endo/bqab126. PubMed [citation] PMID: 34161568, PMCID: PMC8282119

16. Miller B, Chalfant H, Thomas A, **Wellberg E**, Henson C, McNally MW, Grizzle WE, Jain A, McNally LR. Diabetes, Obesity, and Inflammation: Impact on Clinical and Radiographic Features of Breast Cancer. *Int J Mol Sci*. 2021 Mar 9;22(5). doi: 10.3390/ijms22052757. Review. PubMed [citation] PMID: 33803201, PMCID: PMC7963150

17. Zhang AMY, **Wellberg EA**, Kopp JL, Johnson JD. Hyperinsulinemia in Obesity, Inflammation, and Cancer. *Diabetes Metab J*. 2021 May;45(3):285-311. doi:10.4093/dmj.2020.0250. Epub 2021 Mar 29. Review. Erratum in: *Diabetes Metab J*. 2021 Jul;45(4):622. doi: 10.4093/dmj.2021.0131. PubMed [citation] PMID: 33775061, PMCID: PMC8164941

18. Bernard JJ, **Wellberg EA**. The Tumor Promotional Role of Adipocytes in the Breast Cancer Microenvironment and Macroenvironment. *Am J Pathol*. 2021 Aug;191(8):1342-1352. doi: 10.1016/j.ajpath.2021.02.006. Epub 2021 Feb 24. Review. PubMed [citation] PMID: 33639102, PMCID: PMC8351133

*19. Giles ED, **Wellberg EA**. Preclinical Models to Study Obesity and Breast Cancer in Females: Considerations, Caveats, and Tools. *J Mammary Gland Biol Neoplasia*. 2020 Dec;25(4):237-253. doi: 10.1007/s10911-020-09463-2. Epub 2020 Nov 4. Review. PubMed [citation] PMID: 33146844, PMCID: PMC8197449

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21. Foright RM, Johnson GC, Kahn D, Charleston CA, Presby DM, Bouchet CA, **Wellberg EA**, Sherk VD, Jackman MR, Greenwood BN, MacLean PS. Compensatory eating behaviors in male and female rats in response to exercise training. *Am J Physiol Regul Integr Comp Physiol*. 2020 Aug 1;319(2):R171-R183. doi:10.1152/ajpregu.00259.2019. Epub 2020 Jun 17. PubMed [citation] PMID: 32551825, PMCID: PMC7473893

22. Rao DM, Shackelford MT, Bordeaux EK, Sottnik JL, Ferguson RL, Yamamoto TM, **Wellberg EA**, Bitler BG, Sikora MJ. Wnt family member 4 (WNT4) and WNT3A activate cell-autonomous Wnt signaling independent of

porcupine O-acyltransferase or Wnt secretion. *J Biol Chem*. 2019 Dec 27;294(52):19950-19966. doi:10.1074/jbc.RA119.009615. Epub 2019 Nov 18. PubMed [citation] PMID: 31740580,PMCID: PMC6937561

23. Grinman DY, Careaga VP, **Wellberg EA**, Dansey MV, Kordon EC, Anderson SM, Maier MS, Burton G, MacLean PS, Rudolph MC, Pecci A. Liver X receptor- α activation enhances cholesterol secretion in lactating mammary epithelium. *Am J Physiol Endocrinol Metab*. 2019 Jun 1;316(6):E1136-E1145. doi: 10.1152/ajpendo.00548.2018. Epub 2019 Apr 9. PubMed [citation] PMID: 30964702, PMCID: PMC6620573

*24. **Wellberg EA**, Kabos P, Gillen AE, Jacobsen BM, Brechbuhl HM, Johnson SJ, Rudolph MC, Edgerton SM, Thor AD, Anderson SM, Elias A, Zhou XK, Iyengar NM, Morrow M, Falcone DJ, El-Hely O, Dannenberg AJ, Sartorius CA, MacLean PS. FGFR1 underlies obesity-associated progression of estrogen receptor-positive breast cancer after estrogen deprivation. *JCI Insight*. 2018 Jul 26;3(14). pii: 120594. doi:10.1172/jci.insight.120594. eCollection 2018 Jul 26. PubMed [citation] PMID:30046001, PMCID: PMC6124402

25. Giles ED, Jindal S, **Wellberg EA**, Schedin T, Anderson SM, Thor AD, Edwards DP, MacLean PS, Schedin P. Metformin inhibits stromal aromatase expression and tumor progression in a rodent model of postmenopausal breast cancer. *Breast Cancer Res*. 2018 Jun 14;20(1):50. doi: 10.1186/s13058-018-0974-2. PubMed [citation] PMID:29898754, PMCID: PMC6000949

26. **Wellberg EA**, Checkley LA, Giles ED, Johnson SJ, Oljira R, Wahdan-Alaswad R, Foright RM, Dooley G, Edgerton SM, Jindal S, Johnson GC, Richer JK, Kabos P, Thor AD, Schedin P, MacLean PS, Anderson SM. The Androgen Receptor Supports Tumor Progression After the Loss of Ovarian Function in a Preclinical Model of Obesity and Breast Cancer. *Horm Cancer*. 2017 Dec;8(5-6):269-285. doi:10.1007/s12672-017-0302-9. Epub 2017 Jul 24. PubMed [citation] PMID: 28741260,PMCID: PMC6022404

27. Wie SM, **Wellberg E**, Karam SD, Reyland ME. Tyrosine Kinase Inhibitors Protect the Salivary Gland from Radiation Damage by Inhibiting Activation of Protein Kinase C- α . *Mol Cancer Ther*. 2017 Sep;16(9):1989-1998. doi:10.1158/1535-7163.MCT-17-0267. Epub 2017 Jun 21. PubMed [citation] PMID:28637715, PMCID: PMC5587414

28. Checkley LA, Rudolph MC, **Wellberg EA**, Giles ED, Wahdan-Alaswad RS, Houck JA, Edgerton SM, Thor AD, Schedin P, Anderson SM, MacLean PS. Metformin Accumulation Correlates with Organic Cation Transporter 2 Protein Expression and Predicts Mammary Tumor Regression In Vivo. *Cancer Prev Res (Phila)*. 2017 Mar;10(3):198-207. doi: 10.1158/1940-6207.CAPR-16-0211-T. Epub 2017 Feb 2. PubMed [citation] PMID: 28154203, PMCID: PMC5405741

29. **Wellberg EA**, Johnson S, Finlay-Schultz J, Lewis AS, Terrell KL, Sartorius CA, Abel ED, Muller WJ, Anderson SM. The glucose transporter GLUT1 is required for ErbB2-induced mammary tumorigenesis. *Breast Cancer Res*. 2016 Dec 20;18(1):131. doi: 10.1186/s13058-016-0795-0. PubMed [citation] PMID: 27998284, PMCID:PMC5168867

30. **Wellberg EA**, Rudolph MC, Lewis AS, Padilla-Just N, Jedlicka P, Anderson SM. Modulation of tumor fatty acids, through overexpression or loss of thyroid hormone responsive protein spot 14 is associated with altered growth and metastasis. *Breast Cancer Res*. 2014 Dec 4;16(6):481. doi:10.1186/s13058-014-0481-z. PubMed [citation] PMID: 25472762, PMCID: PMC4303195

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33. Giles ED, **Wellberg EA**, Astling DP, Anderson SM, Thor AD, Jindal S, Tan AC, Schedin PS, Maclean PS. Obesity and overfeeding affecting both tumor and systemic metabolism activates the progesterone receptor to contribute to postmenopausal breast cancer. *Cancer Res*. 2012 Dec 15;72(24):6490-501. doi:10.1158/0008-5472.CAN-12-1653. Epub 2012 Dec 7. PubMed [citation] PMID: 23222299, PMCID: PMC4010325
34. Rudolph MC, Karl Maluf N, **Wellberg EA**, Johnson CA, Murphy RC, Anderson SM. Mammalian fatty acid synthase activity from crude tissue lysates tracing α - ^{14}C -labeled substrates using gas chromatography-mass spectrometry. *Anal Biochem*. 2012 Sep 15;428(2):158-66. doi: 10.1016/j.ab.2012.06.013. Epub 2012 Jun 20. PubMed [citation] PMID: 22728958, PMCID: PMC3415257
35. Scribner KC, **Wellberg EA**, Metz RP, Porter WW. Single-minded-2s (Sim2s) promotes delayed involution of the mouse mammary gland through suppression of Stat3 and NF κ B. *Mol Endocrinol*. 2011 Apr;25(4):635-44. doi: 10.1210/me.2010-0423. Epub 2011 Feb 3. PubMed [citation] PMID: 21292822, PMCID: PMC3386548
36. McIntosh AL, Huang H, Atshaves BP, **Wellberg E**, Kuklev DV, Smith WL, Kier AB, Schroeder F. Fluorescent n-3 and n-6 very long chain polyunsaturated fatty acids: three-photon imaging in living cells expressing liver fatty acid-binding protein. *J Biol Chem*. 2010 Jun 11;285(24):18693-708. doi: 10.1074/jbc.M109.079897. Epub 2010 Apr 9. PubMed [citation] PMID: 20382741, PMCID: PMC2881794
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39. Gustafson TL, **Wellberg E**, Laffin B, Schilling L, Metz RP, Zahnow CA, Porter WW. Ha-Ras transformation of MCF10A cells leads to repression of Single-minded-2s through NOTCH and C/EBPbeta. *Oncogene*. 2009 Mar 26;28(12):1561-8. doi:10.1038/onc.2008.497. Epub 2009 Jan 26. PubMed [citation] PMID: 19169276, PMCID: PMC2692552
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41. Apte UM, Banerjee A, McRee R, **Wellberg E**, Ramaiah SK. Role of osteopontin in hepatic neutrophil infiltration during alcoholic steatohepatitis. *Toxicol Appl Pharmacol.* 2005 Aug 22;207(1):25-38. PubMed [citation] PMID: 15885730

Professional Organizations

The Endocrine Society 2013-current
The Obesity Society 2017-2020
AACR 2018-current
ASIP 2023-current
ADA 2022-2023
Nuclear Receptor (NR) IMPACT 2021-current

Awards & Achievements

OUHSC Provost's Award for Outstanding Basic Science Research 2023
The Komen Foundation Jon Shevell Young Scientist Travel Scholarship 2018
The Obesity Society Annual Meeting AICR Outstanding Abstract Award 2017
UCD NORC Outstanding Instructor Fellow Award 2017
Gordon Research Seminar Trainee Day Travel Award 2013
Endocrine Society Trainee Day Travel Award 2012
First Place Platform Presentation-Toxicology Research Forum 2008
George T. Edds Award in Toxicology-2008
NIEHS Toxicology Training Grant Appointment 2008-2009
NIEHS Toxicology Training Grant Appointment 2007-2008
NIEHS Toxicology Training Grant Appointment 2006-2007
Third Place Oral Presentation CVM-GSA Spring Research Symposium 2007
Second Place Poster Presentation-Toxicology Research Symposium 2006
Second Place Poster Presentation-Texas A&M Student Research Week 2006
Texas A&M Toxicology Regent Fellowship 2004-2005

Service and Professional Development

Research Leadership Mastery Program GLIA Leadership Jan 2024-current
Co-Leader of Cancer and Metabolism working group Stephenson Cancer Center/OUHSC-2020-current
Graduate Faculty Committee Department of Pathology OUHSC 2020-current
University of Colorado Postdoctoral Association Research Day Judge 2016 and 2017
Mammary Gland Biology Program Project Annual Retreat Organization Committee-University of Colorado 2011 and 2013.
Representative-Interdisciplinary Faculty of Toxicology-Texas A&M University Graduate Student Council 2008-2009
President-Texas A&M University College of Veterinary Medicine Graduate Student Association 2007-2008
Graduate Student Representative-Texas A&M University College of Veterinary Medicine Graduate Instruction Committee 2007-2008

Mentoring Activities

Spring 2023 Malika Sekhri, a graduate student in the Pathology program Wellberg Lab Department of Pathology at the University of Oklahoma Health Sciences. Project focus: Extracellular matrix remodeling and DCIS progression to invasive breast cancer.

Spring 2023 Estefania Valencia Rincon, a graduate student in the Pathology program Wellberg Lab Department of Pathology at the University of Oklahoma Health Sciences. Project focus: Hyperinsulinemia and breast cancer risk associated with obesity.

Spring 2022 Barbara Sankofi Mensah, a graduate student in the Pathology program Wellberg Lab Department of Pathology at the University of Oklahoma Health Sciences. Project focus: FGF1 signaling and Estrogen Receptor activation in endocrine resistant breast cancer.

Fall 2021 Nisha Thomas, PhD, a postdoctoral fellow in the Wellberg Lab Department of Pathology at the University of Oklahoma Health Sciences. Project focus: Metabolic effects of breast cancer endocrine therapy.

Spring 2020 Marisol Castillo-Castrejon, PhD, an Assistant Research Professor in the Wellberg Lab, Department of Pathology at the University of Oklahoma Health Sciences. Project focus: Estrogen signaling in immune cell populations and the relationship with weight gain, breast cancer, and diabetes.

Fall 2020 Alex Yeschenko, BS, a graduate student in Biomedical Sciences at the University of Oklahoma Health Sciences Center. Project title: Characterization of ER activation in obesity associated breast cancer.

Summer 2019 Benjamin Freije, a Cancer Center Fellow. Project title: Effects of adjunct therapies on hepatic steatosis in Tamoxifen-treated females.

Spring 2018 Darcy Kahn, a graduate student in the Integrative Physiology program at the University of Colorado. Project title: FGFR1 and obesity associated breast cancer: A potential role for ER signaling.

Summer 2016 Ashley Ward, an undergraduate recipient of a University of Colorado Cancer Center summer research fellowship. Project title: A role for GLUT3 in compensating for the loss of GLUT1 in breast cancer progression.

Summer 2014 Alyssa Dixon, an undergraduate summer research fellow from Chaminade University in Honolulu, Hawaii. Project title: Determining the sensitivity of breast cancer subtypes to Glut1 inhibition.

Fall 2012 Nuria Padilla Just, a graduate student in the Cancer Biology Program at the University of Colorado Anschutz Medical Campus. Project title: The effect of Spot14 loss on tumor progression in MMTV-PyMT mice.

Fall 2011 Kristen Jahr, a graduate student in the Cancer Biology Program at the University of Colorado Anschutz Medical Campus. Project title: Analyzing the metabolic flexibility of breast cancer cells lacking Glut1 expression.

Summer 2011 Sophina Taitanos, an undergraduate student with the Endocrine Society's Minority Access Program at the University of Colorado Anschutz Medical Campus. Project title: Analyzing the metabolic flexibility of breast cancer cells lacking Glut1 expression. *Note: Sophina's project won a poster award at the Endocrine Society National Meeting in 2011.*

Summer 2010 Chelsea Saito-Reis, an undergraduate student with the Endocrine Society's Minority Access Program at the University of Colorado Anschutz Medical Campus. Project title: Regulation of breast cancer lipid synthesis by the Progesterone Receptor and SREBP1. *Note: Chelsea's project won a poster award at the Endocrine Society National Meeting in 2010.*

Spring 2010 Erin McKinsey, a graduate student in the Cancer Biology Program at the University of Colorado Anschutz Medical Campus. Project title: Are PR-positive breast cancer cells less sensitive to metformin than PR-negative cells?