

Jessica E. Thaxton, PhD, MsCR

Associate Professor

Department of Cell Biology & Physiology

Lineberger Comprehensive Cancer Center, Immunotherapy Program

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<https://www.thaxtonimmuno.com/>**Education**

NCI Paul Calabresi Clinical Oncology Fellowship		2016-2018
Hollings Cancer Center, Medical University of South Carolina ER Stress in T Cell Anti-Tumor Immunity		
Department of Defense Breast Cancer Research Program Post-Doctoral Fellowship		2012-2015
Department of Microbiology & Immunology, Oregon Health & Science University Department of Microbiology & Immunology, Medical University of South Carolina Virus-specific T cells in Cancer Patients		
Medical University of South Carolina	Masters of Clinical Research	2015
NIH Ruth Kirschstein Fellowship	Oregon Health & Science University	2011-2012
Department of Microbiology & Immunology Virus-specific T cells in Cancer Patients		
Brown University	Doctorate of Philosophy Pathobiology & Immunology <i>Magna Cum Laude</i>	2009
Amherst College	Bachelor of Arts	2001

Professional Experience

Associate Professor , University of North Carolina, Chapel Hill, NC		2021-PRES.
Department of Cell Biology & Physiology Independent translational research program in ER stress and anti-tumor immunity		
Assistant Professor , Tenure-Track, Medical University of South Carolina, Charleston, SC		2015-2021
Departments of Orthopaedics and Microbiology & Immunology Independent translational research program in ER stress and anti-tumor immunity		
Post-doctoral Fellow , Medical University of South Carolina, Charleston, SC		2012-2015
Department of Microbiology & Immunology Discovered a role for ER stress in T cell anti-tumor immunity		
Post-doctoral Fellow , Oregon Health & Sciences University, Portland, OR		2010-2012

Department of Microbiology & Immunology
Researched virus-specific T cells in breast cancer mouse models and patients

Graduate Student, *Brown University, Providence, RI* 2004-2009
Department of Microbiology & Immunology
Researched immunity in fetal tolerance and loss

Research Specialist, *Garvan Institute of Medical Research, Sydney, Australia* 2002-2004
Department of Allergy & Inflammation
Studied T regulatory cells in graft rejection in pancreatic islet transplantation

Membership of Professional Societies

Immunotherapy Program, Lineberger Comprehensive Cancer Center	Member	2021-Present
American Association of Immunologists	Member	2019-Present
Society for Immunotherapy of Cancer Membership Committee	Member	2018-Present
Society for Immunotherapy of Cancer	Member	2015-Present
American Association of Cancer Research	Member	2015-Present
Society for Immunotherapy of Cancer Sparkathon Class	Member	2018-2020
Society for Immunotherapy of Cancer Early Career Scientist Committee	Member	2018-2021
Menten Club, Medical University of South Carolina	Member	2017-2020
Cancer Immunotherapy Program, Hollings Cancer Center	Member	2016-2021
Sigma Xi	Member	2009-2015
Sheridan Center for Teaching and Learning, Brown University	Member	2005-2009

Honors & Awards

2022	Paper of the Year, Department of Cell Biology & Physiology, UNC-Chapel Hill
2020	Co-Chair, Rapid Oral Sessions, Society for Immunotherapy of Cancer, National Meeting
2020	Chair, Meet the Expert Events, Society for Immunotherapy of Cancer, National Meeting
2019	Session Leader and Moderator, Society for Immunotherapy of Cancer, National Meeting
2018	Oral Presenter, Society for Immunotherapy of Cancer, National Meeting
2018	Sparkathon Winner, Team SITCure, Society for Immunotherapy of Cancer
2018	Sparkathon Participant, Society for Immunotherapy of Cancer
2017	Selection to Immuno-oncology Young Investigators' Forum, Houston TX
2017	Dean's Nominee, AAMC Young Female Faculty Leadership Series
2017	Selection to AAMC Young Female Faculty Leadership Series
2017	Harper Drolet Award for Excellence in Sarcoma Research
2017	Re-selection for NCI Paul Calabresi Clinical Oncology Scholarship
2017	Society for Immunotherapy of Cancer Young Investigator Award
2016	NCI Paul Calabresi Clinical Oncology Scholarship
2013	ESMO Postdoctoral Travel Award, Brussels, Belgium
2012	Department of Defense Breast Cancer Research Fellowship Award
2011	Early Clinical Investigator Award
2010	NIH Ruth Kirschstein NRSA Fellowship
2009	SRI Graduate Travel Award, Philadelphia, PA
2008	ASRI Graduate Travel Award, Chicago, IL
2008	ASRI Outstanding New Investigator Award
2007	ISRI Graduate Travel Award, Rio de Janeiro Brazil
2007	Environmental Toxicology Award, Brown University
2006	1 st Place Research Retreat Presentation, Brown University
2005	GAAAN Training Award, Brown University

Bibliography

In Preparation/ Under Review & Revision:

Hurst KE*, Riesenberger BP*, Hunt EG, Andrews AM, Tennant MD, Gandy EJ, Gao P, Ball LE, Wallace ED, Corcoran D, **Thaxton JE**. Acetyl-CoA Carboxylase Inhibition Rewires T cell Fate and Tumor Immunotherapy. 2023, Under Review, *Cancer Immunology & Immunotherapy*.

Guillermo O. Rangel Rivera^{1,2,3*}, Connor J. Dwyer³, Hannah M. Knochelmann^{1,2,3}, Aubrey S. Smith^{1,2,3}, Arman Aksoy³, Anna C. Cole^{1,2}, Megan M. Wyatt^{1,2}, Jessica E. Thaxton^{4,5}, Gregory B. Lesinski⁶, Chrystal M. Paulos^{1,2*}. T-cells have degrees of stemness that differentially impacts the potency of adoptive immunotherapy in a Tcf-1 and Lef-1 dependent manner. 2023, Under Review, *Science Translational Medicine*.

Silvia Guglietta¹, Kent Armeson, Zequn Sun (shared), Lauren Fanning, Alexandria Cousart, David N. Lewin^{1,3}, J. Grant Brazeal, John A. Baron⁶, Dongjun Chung, Alexander Alekseyenko, Kristin Wallace. Diminished antitumor immune response in preinvasive and invasive colorectal neoplasia in African Americans. In preparation.

Published refereed papers/articles:

Riesenberger BP, Hunt EG, Andrews AM, Hurst KE, Tennant MD, Leddy LR, Neskey DM, Hill EG, Gao P, Ball LE, **Thaxton JE**. [Stress-mediated translation attenuation undermines T cell tumor control](#). *Cancer Res*. 2022 Dec 2;82(23):4386-4399. doi: 10.1158/0008-5472.CAN-22-1744. PMID: 36126165.

Hunt EG, Andrews AM, Larsen S, **Thaxton JE**. [The ER-mitochondria Interface as a Dynamic Hub for T Cell Efficacy in Solid Tumors](#). *Front Cell Dev Biol*. 2022 Apr 27; 10:867341. doi:10.3389/fcell.2022.867341. PMID: 35573704

Smith AS, Knockelmann HM, Wyatt MM, Dwyer CJ, Rangel Rivera GO, Rivera Reyes AM, **Thaxton JE**, Bartee EC, Rubinstein MP, Liu B, Paulos CM. [B cells imprint adoptively transferred CD8⁺ T cells with enhanced tumor immunity](#). *J Immunother Cancer*. 2022 Jan;10(1):e003078. doi: 10.1136/jitc-2021-003078. PMID: 35017148

Wallace K, El Nahas GJ, Bookhout C, **Thaxton JE**, Lewin DN, Nikolaishvili-Feinberg N, Cohen SM, Brazeal JG, Hill EG, Wu JD, Baron JA, Alekseyenko AV. [Immune responses vary in preinvasive colorectal lesions by tumor location and histology](#). *cancer*. *Cancer Prevention Research*. *Cancer Prev Res (Phila)*. 2021 Sep;14(9):885-892. doi: 10.1158/1940-6207.CAPR-20-0592. PMID: 34341013

Rangel Rivera GO, Smith AS, Knockelmann HM, Wyatt MM, Dwyer CJ, Rivera Reyes AM, **Thaxton JE**, Paulos CM. [Fundamentals of T cell metabolism and strategies to enhance cancer immunotherapy](#). *Frontiers in Immunology*; 2021_Mar 18;12:645242. doi: 10.3389/fimmu.2021.645242. PMID: 33815400.

Thomas U. Marron, MD, PhD, Aileen E. Ryan, PhD, Sangeetha M. Reddy, MD, Msci, Sabina Kaczanowska, PhD, Rania H. Younis, BDS, MDS, PhD, Dipti Thakkar, PhD, Jiajia Zhang, MD, MPH, Todd Bartkowiak, PhD, Rachel Howard, PhD, Kristin G. Anderson, PhD, Daniel Olson, MD, Abdul Rafah Naqash, MD, Ravi B. Patel, MD, PhD, Esha Sachdev, MD, María Esperanza Rodríguez-Ruiz, MD, PhD, Michal Sheffer, PhD, Sarah E. Church, PhD¹⁸, Christopher Fuhrman, PhD¹⁸, Abigail Overacre-Delgoffe, PhD¹⁹, Rosa Nguyen, MD, PhD¹³, Vaia Florou, MD, **Jessica E. Thaxton, PhD**, David H. Aggen, MD, PhD and Jennifer L. Guerriero, PhD. [Considerations for treatment duration in responders to immune checkpoint immunotherapy](#). *Journal for Immunotherapy of Cancer*; 2021 Mar;9(3):e001901. PMID: 33653801.

Mehta A, Cheney EM, Hartl C, Pantelidou C, Oliwa M, Castrillon JA, Lin J-R, Hurst, KE, Taveira M, Johnson NT, Oldham WM, Kalocsay M, Berberich MJ, Boswell SA, Kothari A, Johnson S, Dillon DA, Lipschitz M, Rodig S, Santagata S, Garber JE, Tung N, **Thaxton JE**, Mittendorf EA, Sorger PK, Shapiro GI, Guerriero JL. [Targeting immunosuppressive macrophages overcomes PARP inhibitor resistance in BRAC1-associated triple-negative breast cancer](#). *Nature Cancer*. 2020 Dec; 2, 66-82.

Andrews AM, Tennant MD, **Thaxton JE**. [Stress relief for cancer immunotherapy: Implications for the ER stress response in tumor immunity](#). *Cancer Immunol, Immuno*. 2020 Oct 26; doi: 10.1007/s00262-020-02740-3. PMID: 33104836

Halbert CH, Jefferson MS, Danielson C, Froeliger B, Giordano A, **Thaxton JE**. [An observational study and randomized trial of stress reactivity in cancer disparities](#). *Health Psychol*. 2020 Sep;39(9):745-757. doi: 10.1037/hea0000882. PubMed PMID: 32833476.

Dwyer CJ, Arhontoulis DC, Rangel Rivera GO, Knochelmann HM, Smith AS, Wyatt MM, Rubinstein MP, Atkinson C, **Thaxton JE**, Neskey DM, Paulos CM. [Ex vivo blockade of PI3K gamma or delta signaling enhances the antitumor potency of adoptively transferred CD8⁺ T cells](#). *Eur J Immunol*. 2020 May 8;. doi: 10.1002/eji.201948455. [Epub ahead of print] PubMed PMID: 32383488.

Hurst KE, Lawrence KA, Robino RA, Ball LE, Chung D, **Thaxton JE**. [Remodeling Translation Primes CD8⁺ T-cell Antitumor Immunity](#). *Cancer Immunol Res, Priority Brief*. 2020 May;8(5):587-595. doi: 10.1158/2326-6066.CIR-19-0516. Epub 2020 Feb 19. PubMed PMID: 32075802.

Hurst KE, Lawrence KA, Reyes Angeles L, Ye Z, Zhang J, Townsend DM, Dolloff N, **Thaxton JE**. [Endoplasmic Reticulum Protein Disulfide Isomerase Shapes T Cell Efficacy for Adoptive Cellular Therapy of Tumors](#). *Cells*. 2019 Nov 26;8(12). doi: 10.3390/cells8121514. PubMed PMID: 31779147; PubMed Central PMCID: PMC6953024.

Hurst KE, Lawrence KA, Essman MT, Walton ZJ, Leddy LR, **Thaxton JE**. [Endoplasmic Reticulum Stress Contributes to Mitochondrial Exhaustion of CD8⁺ T Cells](#). *Cancer Immunol Res*. 2019 Mar;7(3):476-486. doi: 10.1158/2326-6066.CIR-18-0182. Epub 2019 Jan 18. PubMed PMID: 30659052; PubMed Central PMCID: PMC6397687.

Thaxton JE, Wallace C, Riesenber B, Zhang Y, Paulos CM, Beeson CC, Liu B, Li Z. [Modulation of Endoplasmic Reticulum Stress Controls CD4⁺ T-cell Activation and Antitumor Function](#). *Cancer Immunol Res*. 2017 Aug;5(8):666-675. doi: 10.1158/2326-6066.CIR-17-0081. Epub 2017 Jun 22. PubMed PMID: 28642246; PubMed Central PMCID: PMC5585019.

Ansa-Addo EA, **Thaxton J**, Hong F, Wu BX, Zhang Y, Fugle CW, Metelli A, Riesenber B, Williams K, Gewirth DT, Chiosis G, Liu B, Li Z. [Clients and Oncogenic Roles of Molecular Chaperone gp96/grp94](#). *Curr Top Med Chem*. 2016;16(25):2765-78. doi: 10.2174/1568026616666160413141613. Review. PubMed PMID: 27072698; PubMed Central PMCID: PMC5041304.

Zhang Y, Wu BX, Metelli A, **Thaxton JE**, Hong F, Rachidi S, Ansa-Addo E, Sun S, Vasu C, Yang Y, Liu B, Li Z. [GP96 is a GARP chaperone and controls regulatory T cell functions](#). *J Clin Invest*. 2015 Feb;125(2):859-69. doi: 10.1172/JCI79014. Epub 2015 Jan 20. PubMed PMID: 25607841; PubMed Central PMCID: PMC4319419.

Thaxton JE, Liu B, Zheng P, Liu Y, Li Z. [Deletion of CD24 impairs development of heat shock protein gp96-driven autoimmune disease through expansion of myeloid-derived suppressor cells](#). *J Immunol*. 2014 Jun 15;192(12):5679-86. doi: 10.4049/jimmunol.1302755. Epub 2014 May 7. PubMed PMID: 24808359; PubMed Central PMCID: PMC4185284.

Thaxton JE, Li Z. [To affinity and beyond: harnessing the T cell receptor for cancer immunotherapy](#). *Hum Vaccin Immunother*. 2014;10(11):3313-21. doi: 10.4161/21645515.2014.973314. Review. PubMed PMID: 25483644; PubMed Central PMCID: PMC4514023.

Thaxton JE, Nevers T, Lippe EO, Blois SM, Saito S, Sharma S. [NKG2D blockade inhibits poly\(I:C\)-triggered fetal loss in wild type but not in IL-10^{-/-} mice](#). *J Immunol*. 2013 Apr 1;190(7):3639-47. doi: 10.4049/jimmunol.1203488. Epub 2013 Mar 1. PubMed PMID: 23455498; PubMed Central PMCID: PMC3608719.

Thaxton JE, Nevers TA, Sharma S. [TLR-mediated preterm birth in response to pathogenic agents](#). *Infect Dis Obstet Gynecol*. 2010;2010. doi: 10.1155/2010/378472. Epub 2010 Aug 23. Review. PubMed PMID: 20827416; PubMed Central PMCID: PMC2933901.

Thaxton JE, Sharma S. [Interleukin-10: a multi-faceted agent of pregnancy](#). Am J Reprod Immunol. 2010 Jun;63(6):482-91. doi: 10.1111/j.1600-0897.2010.00810.x. Epub 2010 Feb 16. Review. PubMed PMID: 20163400; PubMed Central PMCID: PMC3628686.

Thaxton JE, Romero R, Sharma S. [TLR9 activation coupled to IL-10 deficiency induces adverse pregnancy outcomes](#). J Immunol. 2009 Jul 15;183(2):1144-54. doi: 10.4049/jimmunol.0900788. Epub 2009 Jun 26. PubMed PMID: 19561095; PubMed Central PMCID: PMC2785500.

Walters S, Webster KE, Sutherland A, Gardam S, Groom J, Liuwantara D, Mariño E, **Thaxton JE**, Weinberg A, Mackay F, Brink R, Sprent J, Grey ST. [Increased CD4+Foxp3+ T cells in BAFF-transgenic mice suppress T cell effector responses](#). J Immunol. 2009 Jan 15;182(2):793-801. doi: 10.4049/jimmunol.182.2.793. PubMed PMID: 19124722.

Invited Oral Presentations

Regulating ER Biology to Improve T Cell Immunotherapies

Department of Cell Biology & Physiology, Research Day
University of North Carolina, Chapel Hill NC, February 2021

Stress-mediated translation attenuation undermines T cell tumor control

Dana Farber Cancer Institute, Boston, MA, November 2021

Endoplasmic Reticulum Distress Underlies CD8 TIL Dysfunction

Lineberger Cancer Center, University of North Carolina, Chapel Hill NC, February 2021

What's Next for Cancer Immunotherapy?

Society for Immunotherapy of Cancer
Annual Course, Subject Matter Expert, 2021

Metabolic Requirements for T Cell Protein Translation in Tumors

Preston Robert Tisch Brain Tumor Center, Duke University, Durham NC
November 2020

Metabolic Requirements for T Cell Protein Translation in Tumors

iChem Conferences in Cancer Immunotherapy, October 2020

Metabolic Regulation of T Cell Translation in Tumors

University of New Mexico Comprehensive Cancer Center, Albuquerque NM, April 2020

Metabolic Regulation of T Cell Translation in Tumors

Department of Regenerative Medicine, Medical University of South Carolina, Charleston, SC, February 2020

What's Next for Cancer Immunotherapy?

Society for Immunotherapy of Cancer
Annual Course, Subject Matter Expert, Southeast Series, USA, January 2020

Immunotherapy for Solid Tumors

Perfect Day Podcast with Cokie Berenyi, Charleston, SC, July 2019

Remodeling Translation Primes T Cell Antitumor Immunity

Cancer Research Symposium, Hollings Cancer, Danielle Island, SC, May 2019

Remodeling Translation Primes T Cell Antitumor Immunity

Southeastern Immunology Symposium, Emory University, Atlanta, GA, March 2019

Chronic ER Stress Programs T Cell Mitochondrial Exhaustion in Tumors

SITC 33rd National Meeting, Metabolism & Microenvironment Session, Washington DC, November 2018

Mitochondrial Reactive Oxygen Species in T cells in Tumors

Southeastern Immunology Conference, Georgia Regents Cancer Center, Augusta GA, May 2018

ER Stress Sensor PERK in Antitumor Immunity

Immune-oncology Young Investigators' Forum, MD Anderson Cancer Center, Houston, TX, May 2017

Teaching

2022-2023 **Cell Biology and Physiology of Health and Disease**, Course Co-Leader, UNC

2018-2021 **Introduction to Immunology**, Course Co-Leader, MUSC

2016-2020 **Basic Orthopaedic Science for Clinicians**, Lecturer, Department of Orthopedics, MUSC

2016-2021 **Translation: Bench to Bedside**, Lecturer, Masters of Clinical Research, MUSC

2015-2018 **Advanced Immunology**, Lecturer, Graduate School, MUSC

2007-2009 **Introduction to Immunology**, TA, Warren Alpert School of Medicine, Brown University

2005-2010 **The Princeton Review**, Premiere Tutor, MCAT, GRE, SAT

2005-2009 **Teaching Certificates I, II, III**, Sheridan Center for Teaching and Learning, Brown University

Mentoring

Andrew Kennedy Graduate Student, University of North Carolina-Chapel Hill, Lab Member
2022-Present

Coral del Mar Pauneto Graduate Student, University of North Carolina-Chapel Hill, Lab Member
2022-Present

Brian Riesenber, PhD Postdoctoral Fellow, University of North Carolina-Chapel Hill, Lab Member
2021-Present

Ellie Hunt Graduate Student, University of North Carolina-Chapel Hill, Lab Member
2020-Present

Sydney Larsen Summer Undergraduate Research Program Mentee, Amherst College
2021

Guillermo Rangel Rivera MD/ PhD Student, Medical University of South Carolina, Committee Member
2018-Present

Parker Dryja Graduate Student, Medical University of South Carolina, Committee Member
2017-Present

Catherine Mills Graduate Student, Medical University of South Carolina, Committee Member
2018-2022, Currently Postdoctoral Fellow

Aubrey Smith Graduate Student, Medical University of South Carolina, Committee Member
2017-2022, Currently Industry Scientist

Katie Hurst, MPH Research Specialist, Masters of Public Health Student, Lab Member
2016-Present, MPH Completed

Megan Tennant, MS Graduate Student, Medical University of South Carolina, Lab Member
2019-2021, Currently 4th year graduate student

Alexander Andrews, PhD Postdoctoral Fellow, Medical University of South Carolina, Lab Member
2019-2021, Currently Scientist at Precision Biosciences

Thomas Benton Graduate Student, Medical University of South Carolina, Committee Member
2017-2021, PhD Obtained, Currently Scientist at RTP Therapeutics

Rob Robino Undergraduate Student, College of Charleston, Lab Member
2019-2020

Christopher Leem, MS Masters Student, Medical University of South Carolina, Committee Chair
2018-2020, MS Completed

Sophia Traven, MD PGY5, Resident, Medical University of South Carolina, Lab Member
2017-2020, Attending, US Navy

Kiley Lawrence Medical Student, Medical University of South Carolina, Lab Member
2017-2019, Currently 2nd year medical student

Molly Sekar Medical Student, Medical University of South Carolina, Lab Member
2017-2019, Currently 5th year medical student

Grants

Active Grants:

LCCC Tier 2 Innovation Award <i>Remodeling Th/Tc17 CAR-T Cell Biology to Enhance Efficacy in Solid Cancers</i> Role: Co-Principal Investigator	01/01/23 – 12/31/24 \$150,000
R01CA244361-01A1, NIH/NCI <i>Targeting Chronic ER Stress in T Cells to Improve Immunotherapy</i> Role: Principal Investigator	07/01/2020-06/30/2025 1,143,750\$
R01 CA248359-01, NIH/NCI Cancer Moonshot Initiative on Immunometabolism <i>Exploitation of ER Stress Induced Immune Dysfunction to Improve Immunotherapy</i> Role: Principal Investigator	04/01/2020-03/31/2025 1,140,605\$
R01CA226086-01A1, NIH/NCI The Immune Contexture of Colorectal Adenomas and Serrated Polyps PI: Wallace Role: Co-Investigator	04/19/2019 - 03/31/2024 \$75,752
R37 CA269499-01, NIH/NCI <i>Immunometabolic pathways enabled by PARP inhibition in breast cancer</i> PI: Guerriero Role: Co-Investigator	04/01/22 – 03/31/27 \$196,847

Completed Grants:

MUSC Foundation for Research Development <i>Development of ER Stress Inhibitors to augment cancer immunotherapy</i> Role: Principal Investigator, 5% Effort	01/01/2020-05/31/2021 49,538\$
TEVA Pharmaceuticals <i>Combination Therapy with Omacetaxine for Treatment of Solid Tumors.</i> Role: Principal Investigator, 5% Effort	11/01/2019-10/31/2020 37,500\$
South Carolina Stress & Anti-Oxidants NIH COBRE Pilot <i>Targeting ERO1a to Restore CD8 TIL Proteostasis</i> Role: Project Leader, 5% Effort	07/01/2019-08/31/2020 40,000\$
Hollings Cancer Center Clinical Concept Award <i>Combination Therapy with Omacetaxine for Treatment of Solid Tumors</i> Role: Principal Investigator	04/01/2019-03/31/2020 50,000\$
NIH/NCI K12 Paul Calabresi Clinical Oncology Fellowship <i>Targeting ER Stress for Cancer Immunotherapy</i> Role: Trainee, 85% Effort	01/01/2016-12/31/2018 431,000\$
American Cancer Society Institutional Research Grant, Renewal <i>Lone Survivor: Stressful Role of the ER in CD8+ T cell metabolism</i> Role: Project Leader, 5% Effort	01/01/2017-12/31/2017 35,000\$
American Cancer Society Institutional Research Grant <i>Lone Survivor: Stressful Role of the ER in CD8+ T cell metabolism</i> Role: Project Leader, 5% Effort	01/01/2016-12/31/2016 30,000\$
Department of Defense Breast Cancer Research Post-Doctoral Fellowship	06/01/2012-05/31/2015

Chemotherapy necessitates increased immune control of chronic HHVs Role: Principal Investigator, 100% Effort	450,000\$
Early Clinical Investigator Award, Oregon Health & Sciences University Chemotherapy necessitates increased immune control of chronic HHVs Role: Principal Investigator, 5% Effort	01/01/2011-12/31/2011 35,000\$
Environmental Toxicology National Training Grant, Brown University Department of Microbiology & Immunology Immunity in Fetal Tolerance and Loss	2007-2009
GAANN National Training Grant, Brown University Department of Microbiology & Immunology Immunity in Fetal Tolerance and Loss	2005-2007

Service

Career Development & Leadership

2023	Graduate Course Co-Leader, Cell Biology & Physiology Health/ Disease	UNC
2022	Faculty Mentor Training for Biomedical Researchers	UNC
2020	Graduate Course Co-Leader, Introduction to Immunology	MUSC
2020	Co-Leader Program Project Application (P01), Cancer Immunology	MUSC
2019	SITC Sparkathon, Blue Cross Blue Shield Initiative, Group Leader	SITC
2018	Women Scholars Initiative Career Development Program	MUSC
2018	SITC Sparkathon Participant	SITC
2015-2018	K to R Grant Development Program	MUSC
2017	Immune-oncology Young Investigators' Forum, Presentation Skills Workshop	SITC
2017	AAMC Young Female Faculty Leadership Series	AAMC

Departmental & Institutional Service

2022-2023	BBSP Human Disease and Translational Science Admissions, UNC	Committee Member
2022	Gillings School of Public Health, Grant Study Section, UNC	Member
2021-2022	BBSP Human Disease and Translational Science Admissions, UNC	Committee Member
2020	Hollings Cancer Center, Grants Review Committee	Committee Member
2020	Elected, College of Medicine Faculty Council, MUSC	Council Member
2020	Microbiology & Immunology Faculty Search Committee, MUSC	Committee Member
2019	Microbiology & Immunology Chair Search Committee, MUSC	Committee Member
2019	Orthopaedic Resident Match Rankings, MUSC	Committee Member
2019	Graduate School Faculty, MUSC	Full Member
2019	Hollings Cancer Center, Grants Review Committee	Committee Member
2019	Hollings Cancer Center, LowVELO Fundraising	Keynote Speaker

National Grant Review

FY22 NCI/NIH, P50 SPORE Review Panel
 FY22 NCI/NIH, Oncological Science F09C Fellowship Review Panel
 FY21 DOD, Ovarian Cancer Research Program
 FY20 DOD, Peer Reviewed Cancer Research Program
 FY20 DOD, Ovarian Cancer Research Program

Editorial Activities

Frontiers in Immunology, Cancer Immunology & Immunology, <i>Review Editorial Board</i>	2022-Present
eLife, <i>Ad Hoc Reviewer</i>	2021
Cell Reports, <i>Ad Hoc Reviewer</i>	2021

Cellular and Molecular Life Sciences, <i>Ad Hoc Reviewer</i>	2020
Cells MDPI, <i>Ad Hoc Reviewer</i>	2019
Breast Cancer Research & Treatment, <i>Ad Hoc Reviewer</i>	2015
Journal of Immunology, <i>Ad Hoc Reviewer</i>	2012

Industry Sponsorship & Collaborations

GlaxoSmithKline
Combination Therapy with PERK Inhibitors for Treatment of Solid Tumors

TEVA Pharmaceuticals
Combination Therapy with Omacetaxine for Treatment of Solid Tumors

Intellectual Patents

Modulation of the proteasome to improve tumor immunotherapy
Provisional Patent

Targeting ER dynamics to improve tumor immunotherapy
Provisional Patent