Callie Kwartler, Ph.D.

Present title: Assistant Professor
University of Texas Health Science Center at Houston (UTHealth)

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Education and Professional Training

2016-2021 Postdoctoral Researcher UTHealth, laboratory of Dianna Milewicz, M.D., Ph.D., Department of Internal Medicine (Medical Genetics)

- Developed a model system to study novel pathogenic genetic variants by deriving smooth muscle cells from genetically modified induced pluripotent stem cells
- Assessed the role of nuclear smooth muscle α-actin in smooth muscle cell differentiation

2013-2015 Postdoctoral Fellow UT Southwestern Medical Center, laboratory of Thomas Carroll, Ph.D., Depts of Internal Medicine (Nephrology) and Molecular Biology

- Studied the role of beta-catenin in the pathogenesis of Wilms tumor using mouse models
- Designed a screen to search for novel molecules involved in kidney development

2008-2013 Ph.D. in Cell and Regulatory Biology, 4.0 GPA, MD Anderson UTHealth Graduate School of Biomedical Sciences, Houston, TX
Doctoral research in the laboratory of Dianna Milewicz, M.D., Ph.D., Department of Internal Medicine (Medical Genetics), dissertation entitled "Molecular mechanisms of vascular disease in patients with rare variants in *Myh11*."

- Characterized role of autophagy, small G protein signaling, and other pathways in phenotype of mouse and human smooth muscle cells
- Developed a protocol to induce hypertension in genetically altered mice leading to aortic dissection and proved that the combination of two individually benign genetic variants can produce deleterious effects

2003-2007 B.A. in Biology and Women's and Gender Studies, Cum Laude, 3.65 GPA; Amherst College, Amherst, MA
Undergraduate thesis in the laboratory of Caroline Goutte, Ph.D., thesis entitled "Investigating the potential role of *sel-10*, a member of the E3 ubiquitin ligase complex, in the regulation of *aph-1"*

- Demonstrated genetic interactions between three genes involved in Notch signaling during *C. elegans* early development
- Nominated for honors of Magna Cum Laude

Research Interests

Induced pluripotent stem cells • Genetic basis of vascular disease • Smooth muscle cell phenotype regulation • Cell fate specification of muscle cells • Nuclear functions of actin

Awards

2025	Winner, Irvine H. Page Junior Faculty Research Award 2025, American Heart Association
2024	UTHealth Institutional nominee for Blavatnik Award, Life Sciences category, 2025 award
2024	UTHealth Institutional nominee for Pew Biomedical Scholars program, 2025 award
2022	Finalist, Irvine H. Page Junior Faculty Research Award 2022, American Heart Association
2022	NAVBO Travel Award for Gulf Coast Vascular Research Consortium 2022, North American Vascular Biology Organization

2019	NAVBO Travel Award for Vascular Biology 2019, North American Vascular Biology Organization
2019	Winner, Deans' Excellence in Postdoctoral Research Award, University of Texas Health Science Center
2018	Winner, Best Mentor Award Postdoc Category, Proteintech (International)
2016	NAVBO Travel award for International Vascular Biology Meeting, North American Vascular Biology Organization
2014	Third place, Basic Science Research at the National Nephrology Young Investigators' Forum
2014	First place, Basic Science Research at the Nephrology Young Investigators' Forum, Southern Society for Clinical Investigation
2013	ATVB conference travel award, American Heart Association
2013	Presidents' Research Scholar, MD Anderson UTHealth Graduate School of Biomedical Sciences
2012	Dean's Research Award, MD Anderson UTHealth Graduate School of Biomedical Sciences
2012	GSBS Travel Award, MD Anderson UTHealth Graduate School of Biomedical Sciences
2012	Finalist for John P. McGovern Award for Presentation Skills
2009	Travel award for Days in Molecular Medicine conference
2008-2012	Alumni Merit Fellowship Award, Graduate School of Biomedical Sciences

Research Support

07/2025-06/2028	AHA 25TPA1479652 (PI: Kwartler), "A molecular link between smooth muscle cell metabolism and differentiation
08/2024-06/2028	NHLBI 1R01HL175148-01 (PI: Kwartler), "A novel nuclear role for smooth muscle alpha-actin"
07/2024-06/2029	NIAMS 1R01AR084437-01 (PI: Kwartler), "Nuclear skeletal muscle alpha-actin and intranuclear rod myopathy"
08/2023-07/2025	NCATS 1R03TR004580-01 (PI: Kwartler), "Role of SETD5 in Moyamoya Disease Pathogenesis"
01/1023	UT System Rising STAR Award
03/2021-08/2024	AHA Career Development Award (PI: Kwartler), "The role of the INO80 chromatin remodeling complex in development of vascular smooth muscle cells"
02/2022-06/2022	Center for Clinical and Translational Sciences Pilot Project Award (PI: Kwartler), "Characterizing Incomplete Smooth Muscle Differentiation in Pediatric Stroke Patients"
08/2017-06/2019	AHA Postdoctoral Fellowship (PI: Kwartler), "The role of YY1AP1 in the Pathogenesis of Fibromuscular Dysplasia"
03/2013-10/2015	NIH T32 Postdoctoral Training Grant through Nephrology, UT Southwestern
04/2010-03/2012	NIH TL1 Predoctoral Clinical Research Training Grant through the Center for Clinical and Translational Sciences (CCTS), UTHealth

Service to Profession

Member, *Arterioscler, Thromb, Vasc Biol.* Editorial Board, beginning 2023

Panelist for session "Developing your Mentoring Skills" at Texas Medical Center Academic Research Career Symposium July 2019

Speaker and panelist, talk titled "Getting the Mentorship You Need" at Baylor College of Medicine Program *Preparing for Your Future Postdoc* September 2020

Speaker in patient community webinar, "Insights from Basic Science Research" for the John Ritter Foundation for Aortic Health, March 2023
Member, Education Committee for North American Vascular Biology Organization (NAVBO), July 2023-June 2026
Member, Diversity Committee for the Council on Arteriosclerosis, Thrombosis, and Vascular Biology, American Heart Association, July 2023-June 2025
Reviewer, American Heart Association (Cardiac biology study section, Career Development Award, 2024 and 2025; Fellowship Vascular 2 study section, 2024)
Member, NAVBO Council, elected 2025

Institutional Service

09/2024-08/2027	Member, Animal Welfare Committee
09/2023-08/2026	Member, MMS Graduate Student Education Committee
08/2017-05/2019	Chair, UTHealth Postdoc Association
08/2016-07/2017	Travel Award Organizer, UTHealth Postdoc Association
07/2014-10/2015	Member, planning committee for Women in Science Mentoring Series
08/2013-08/2015	Co-Chair, Outreach committee, UTSouthwestern Postdoctoral Association
02/2012	Student coordinator, Graduate School Admissions weekend
08/2011-08/2012	Student Representative, Graduate School Curriculum Committee
05/2010-05/2012	President, Program in Cell and Regulatory Biology Student Council
2009-2011	Member, Committee on the Status of Women UTHealth

Teaching Experience

Feb 2024	Lecturer, UTH Postdoctoral Training Course, Topic: "Recommendation Letters"
Fall 2023, 2024	Faculty Discussion Group Leader- Ethical Dimensions of the Biomedical Sciences
2007	Laboratory Teaching Assistant- Cell Structure and Function, Amherst College
2006-2007	Student tutor for Cell Structure and Function, Amherst College
2006	Laboratory Teaching Assistant for Animal Behavior, Amherst College
2006	Lecture Teaching Assistant for Adaptation and the Organism, Amherst College
2004-2005	Student tutor for Chemical Principles, Amherst College
2004	Lecture Teaching Assistant- Chemical Principles, Amherst College

Mentoring Experience

Current mentees in the lab (year joined)
Jeison Garcia-Serrano (Postdoctoral Fellow) 2024
Kiara Bornes (PhD student, MD Anderson UTHealth GSBS) 2024
Yan Zhang (PhD student, MD Anderson UTHealth GSBS) 2025
Shuvra Roy (Postdoctoral Fellow) 2025
Yu-Kuan Pan (Master's student, UTHealth School of Public Health) 2024
Kennedy Zinn (Master's student, UTHealth School of Public Health, now full-time Data Analyst) 2024
Angie Gonzalez (Post-bac research assistant) 2024
Jose Emiliano Esparza Pinelo (Post-bac research assistant) 2022

Current mentees outside the lab
Amr Salem (*Arterioscler Thromb Vasc Biol*. Early Career Editorial Board) 2024-present

Past mentees

2023-2025	Jacob Barham, part-time researcher (Undergraduate student, Houston Community College)
2024, 2025	Jessica Chen, summer student (Undergraduate student, UT Austin)
2023, 2024	Hannah Krenz, summer student (Undergraduate student, Texas A&M)

2021	Supervised Haley Dostalik, an undergraduate student through the UTHealth GradSURP, she is currently a graduate student at Baylor College of Medicine
2020	Supervised Nick Newkirk, a graduate student doing their rotation in the Milewicz lab, they are currently a PhD student in the laboratory of Dr. Swathi Arur
2019, 2022	Supervised Caroline Kernell, a student from the UTHealth Summer Undergraduate Research Program, she graduated with her degree from Wake Forest University matriculated at UT Southwestern Medical School in Fall 2022
2018-2019	Supervised Sajel Dutt, an undergraduate student from Rice University for course credit, she graduated from Rice University
2017-2018	Supervised Charis Wang, an undergraduate student from Rice University for course credit, she has graduated from Rice University, and is currently a medical student at Mayo Clinic in Phoenix, AZ
2017	Supervised Mikayla Bowen, an MD/PhD student during rotation, she has completed the PhD portion of her training in the laboratory of Dr. Melinda Yates and returned to medical school
2014	Supervised Eki Olumese, a high school student from the PSTP program through Southern Methodist University (SMU), she has since graduated from SMU and is a medical student at Vanderbilt University
2012	Supervised Grant Fischer, an MD/PhD student during his rotation, he has completed his degrees and is now a resident in Pathology at Brigham and Women's Hospital
2011-2012	Supervised John Pham, a medical student first during the Medical Student Summer Research Program and again for a research rotation on AOA research fellowship, he has completed residency in Radiology at the University of Florida
2008	Supervised Vida Chitsazzadeh and Ryan Fortune, both MD/PhD students during their rotations, Vida has completed her residency in Dermatology and Ryan is currently a resident in Family Medicine, both at the University of Texas McGovern Medical School

Scientific Publications (most recent listed first)

Peer-reviewed research articles

1. Kaw A, Majumder S, Esparza Pinelo JE, Wu T, Starosolski Z, Zhou Z, Pedroza AJ, Duan X, Kaw K, Gonzalez AD, Sarkar R, Fischbein MP, Lorenzi PL, Tan L, Martinez SA, Mahmud I, Devkota L, Buja LM, Taegtmeyer H, Ghaghada KB, Marrelli SP, **Kwartler CS***, Milewicz DM*. Immature *Acta2*$^{R179C/+}$ smooth muscle cells cause moyamoya-like cerebrovascular lesions in mice prevented by boosting OXPHOS. *Nat Commun*. 2025 Jul 2;16(1):6105. doi: 10.1038/s41467-025-61042-3. ***Co-senior/corresponding authors**
2. Zhou Z, Sarkar R, Esparza Pinelo JE, Richard A, Dunn J, Ren Z, **Kwartler CS***, Milewicz DM*. Measurement of oxygen consumption rate in mouse aortic tissue. *Biol Methods Protoc*. 2025;10(1):bpaf031. Published 2025 Apr 24. doi:10.1093/biomethods/bpaf031 ***co-senior/corresponding author**
3. **Kwartler CS**, Wang S, Zhou Z, et al. Inducing hypertension in *Myh11*$^{R247C/R247C}$ mice triggers aortic dissections with increased focal adhesion kinase signaling. *Front Cardiovasc Med*. 2025;12:1492768. Published 2025 Feb 14. doi:10.3389/fcvm.2025.1492768
4. Majumder S, Chattopadhyay A, Wright JM, Guan P, Buja LM, **Kwartler CS**, Milewicz DM. Pericentrin deficiency in smooth muscle cells augments atherosclerosis through HSF1-driven cholesterol biosynthesis and PERK activation. *JCI Insight*. 2023 Nov 8;8(21):e173247. doi: 10.1172/jci.insight.173247.
5. **Kwartler CS**, Pedroza A, Kaw A, Guan P, Ma S, Duan XY, Kernell C, Wang C, Pinelo JE, Borthwick M, Chen J, Zhong Y, Sinha S, Shen X, Fischbein M, Milewicz D. Nuclear Smooth Muscle α-actin participates in Vascular Smooth Muscle Cell Differentiation. *Nature*

Cardiovascular Research. 2023 Oct; 2: 937–955. https://doi.org/10.1038/s44161-023-00337-4. ***co-corresponding author**

6. Kaw K, Chattopadhyay A, Guan P, Chen J, Majumder S, Duan XY, Ma S, Zhang C, **Kwartler CS**, Milewicz DM. Smooth muscle α-actin missense variant promotes atherosclerosis through modulation of intracellular cholesterol in smooth muscle cells. *European Heart Journal*, 2023; ehad373, https://doi.org/10.1093/eurheartj/ehad373
7. Kaw A, Pedroza AJ, Chattopadhyay A, Pinard A, Guo D, Kaw K, Zhou Z, Shad R, Fischbein MP, **Kwartler CS**, Milewicz DM. Mosaicism for the smooth muscle cell (SMC)-specific knock-in of the Acta2 R179C pathogenic variant: Implications for gene editing therapies. *J Mol Cell Cardiol*. 2022 Jul 21;171:102-104.
8. Chattopadhyay A, Guan P, Majumder S, Kaw K, Zhou Z, Zhang C, Prakash SK, Kaw A, Buja LM, **Kwartler CS**, Milewicz DM. Preventing Cholesterol-Induced Perk (Protein Kinase RNA-Like Endoplasmic Reticulum Kinase) Signaling in Smooth Muscle Cells Blocks Atherosclerotic Plaque Formation. *Arterioscler Thromb Vasc Biol*. 2022 Jun 16:101161ATVBAHA121317451.
9. Kaw A, Kaw K, Hostetler EM, Beleza-Meireles A, Smith-Collins A, Armstrong A, Scurr I, Cotts T, Aatre R, Bamshad MJ, Earl D, Groner A, Agre K, Raveh Y, **Kwartler CS**, Montalcino Aortic Consortium, Milewicz DM. Expanding ACTA2 Genotypes with Corresponding Phenotypes Overlapping with Smooth Muscle Dysfunction Syndrome. *Am J Med Genet A*. 2022 May 14. doi: 10.1002/ajmg.a.62775.
10. Cecchi AC, Haidar A, Marin I, **Kwartler CS**, Prakash SK, Milewicz DM. Aortic root dilatation and dilated cardiomyopathy in an adult with Tatton-Brown-Rahman syndrome. *Am J Med Genet A*. 2022 Feb;188(2):628-634.
11. Chen J, Kaw K, Lu H, Fagnant PM, Chattopadhyay A, Duan XY, Zhou Z, Ma S, Liu Z, Huang J, Kamm K, Stull JT, **Kwartler CS**, Trybus KM, Milewicz DM. Resistance of $Acta2^{R149C/+}$ mice to aortic disease is associated with defective release of mutant smooth muscle α-actin from the chaperonin-containing TCP1 folding complex. *J Biol Chem*. 2021 Dec;297(6):101228.
12. Chattopadhyay A, **Kwartler CS**, Kaw K, Li Y, Kaw A, Chen J, LeMaire SA, Shen YH, Milewicz DM. Cholesterol-Induced Phenotypic Modulation of Smooth Muscle Cells to Macrophage/Fibroblast-like Cells is Driven by an Unfolded Protein Response. *Arterioscler Thromb Vasc Biol*, 2021 Jan;41(1):302-316.
13. Drake KA, Chaney CP, Das A, Roy P, **Kwartler CS**, Rakheja D, Carroll TJ. Stromal β-catenin activation impacts nephron progenitor differentiation in the developing kidney and may contribute to Wilms tumor. *Development*. 2020 Jul 31;147(21):dev189597.
14. Ciuffetelli Alamo IV, **Kwartler CS**, Regalado ER, Afifi RO, Parkash S, Rideout A, Guo DC, Milewicz DM. Grange syndrome due to homozygous YY1AP1 missense rare variants. *Am J Med Genet A.* 2019 Oct 21.
15. Zhou Z, Peters AM, Wang S, Janda A, Chen J, Zhou P, Arthur E, **Kwartler CS**, Milewicz DM. Reversal of Aortic Enlargement Because of Increased Biomechanical Forces Requires AT1R (Angiotensin II Type 1 Receptor) Inhibition in Conjunction With AT2R (Angiotensin II Type 2 Receptor) Activation. *Arterioscler Thromb Vasc Biol*. 2019 Jan 3:ATVBAHA118312158.
16. **Kwartler CS**, Gong L, Chen J, Wang S, Kulmacz R, Duan XY, Janda A, Huang J, Kamm KE, Stull JT, Guo D, Milewicz DM. Variants of Unknown Significance in Genes Associated with Heritable Thoracic Aortic Disease Can Be Low Penetrant "Risk Variants". *Am J Hum Genet*. 2018 Jul 5;103(1):138-143.
17. Tan KL, Haelterman NA, **Kwartler CS**, Regalado ES, Lee PT, Nagarkar-Jaiswal S, Guo DC, Duraine L, Wangler MF; University of Washington Center for Mendelian Genomics, Bamshad MJ, Nickerson DA, Lin G, Milewicz DM, Bellen HJ. Ari-1 Regulates Myonuclear Organization Together with Parkin and Is Associated with Aortic Aneurysms. *Dev Cell*. 2018 Apr 23;45(2):226-244.

18. Chen J, Peters A, Papke CL, Villamizar C, Ringuette LJ, Cao J, Wang S, Ma S, Gong L, Byanova KL, Xiong J, Zhu MX, Madonna R, Kee P, Geng YJ, Brasier AR, Davis EC, Prakash S, **Kwartler CS**, Milewicz DM. Loss of Smooth Muscle α-Actin Leads to NF-κB-Dependent Increased Sensitivity to Angiotensin II in Smooth Muscle Cells and Aortic Enlargement. *Circ Res*. 2017 Jun 9;120(12):1903-1915.
19. Guo DC, Duan XY, Regalado ES, Mellor-Crummey L, **Kwartler CS**, Kim D, Lieberman K, de Vries BB, Pfundt R, Schinzel A, Kotzot D, Shen X, Yang ML; University of Washington Center for Mendelian Genomics, Bamshad MJ, Nickerson DA, Gornik HL, Ganesh SK, Braverman AC, Grange DK, Milewicz DM. "Loss-of-Function Mutations in YY1AP1 Lead to Grange Syndrome and a Fibromuscular Dysplasia-Like Vascular Disease." *Am J Hum Genet*. 2017 Jan 5;100(1):21-30.
20. **Kwartler CS**, Zhou P, Kuang S, Duan X, Gong L and Milewicz DM. "Vascular Smooth Muscle Cell Isolation and Culture from Mouse Aorta." *Bio-protocol* 2016 Dec;6(23): e2045.
21. Kuang SQ, Medina-Martinez O, Guo DC, Gong L, Regalado ES, Reynolds CL, Boileau C, Jondeau G, Prakash SK, **Kwartler CS**, Zhu LY, Peters AM, Duan XY, Bamshad MJ, Shendure J, Nickerson DA, Santos-Cortez RL, Dong X, Leal SM, Majesky MW, Swindell EC, Jamrich M, Milewicz DM. "FOXE3 mutations predispose to thoracic aortic aneurysms and dissections." *J Clin Invest.* 2016 Mar 1;126(3):948-61.
22. **Kwartler CS**, Chen J, Thakur D, Li S, Baskin KK, Wang S, Wang ZV, Walker L, Hill JA, Epstein HF, Taegtmeyer H, Milewicz DM. "Overexpression of smooth muscle myosin heavy chain leads to activation of the unfolded protein response and autophagic turnover of contractile proteins in vascular smooth muscle cells." *J Biol Chem.* 2014 Apr 7; Epub.
23. Kuang SQ, Geng L, Prakash SK, Cao JM, Guo S, Villamizar C, **Kwartler CS**, Peters AM, Brasier AR, Milewicz DM. "Aortic remodeling after transverse aortic constriction in mice is attenuated with AT1 receptor blockade." *Arterioscler Thromb Vasc Biol.* 2013 Sep;33(9):2172-9.
24. Papke CL*, Cao J*, **Kwartler CS***, Villamizar C, Byanova K, Lim S, Sreenivasappa H, Fischer G, Pham J, Rees M, Wang M, Chaponnier C, Gabbiani G, Khakoo AY, Chandra J, Trache A, Zimmer W, Milewicz DM. "Smooth muscle hyperplasia due to loss of smooth muscle α-actin is driven by activation of focal adhesion kinase, altered p53 localization and increased levels of platelet-derived growth factor receptor-β." *Human Mol Genet*. 2013 Aug1;22(15):3123-37. ***Co-first authors**
25. Boileau C, Guo D, Hanna N, Regalado E, Detaint D, Gong L, Varret M, Prakash S, Li AH, d'Indy H, Braverman AC, Grandchamp B, **Kwartler CS**, Gouya L, Santos-Cortez RL, Abifadel M, Leal S, Muti C, Shendure J, Gross M, Rieder M, Vahanian A, Nickerson D, Michel JB, NHLBI Go Exome Sequencing Project, Jondeau G, Milewicz DM. "*TGFB2* loss of function mutations cause familial thoracic aortic aneurysms and acute aortic dissections associated with mild systemic features of the Marfan syndrome. *Nature Genetics*. 2012 Jul 8;44(8):916-921.
26. Kuang SQ*, **Kwartler CS***, Byanova KL, Pham J, Gong L, Prakash S, Huang J, Kamm KE, Stull JT, Sweeney HL, Milewicz DM. "Rare, Non-synonymous Variant in the Smooth Muscle-specific Isoform of Myosin heavy Chain, *MYH11*, R247C, Alters Force Generation in the Aorta and Phenotype of Smooth Muscle Cells." *Circulation Research*. 2012 May 25;110(11):1411-22. ***Co-first authors**
27. Hale VA, Guiney EL, Goldberg LY, Haduong JH, **Kwartler CS**, Scangos KW, Goutte C. "Notch Signaling is Antagonized by SAO-1, a Novel GYF Protein that Interacts with the E3 Ubiquitin Ligase SEL-10 in Caenorhabditis elegans." *Genetics*. Epub: 2012 Jan 10.
28. Kuang SQ, Guo D, Prakash S, McDonald MN, Johnson R, Wang M, Regalado E, Russell L, Cao J, **Kwartler CS,** Fraivillig K, Coselli J, Safi H, Estrera A, Leal S, LeMaire S, Belmont J, Milewicz DM. "Recurrent Chromosome 16p13.1 Duplications are a Risk Factor for Aortic Dissections." *PLoS Genetics.* 2011, June 16; 7(6): e1002118

29. Inamoto S*, **Kwartler CS*,** Lafont AL, Liang YY, Fadulu VT, Duraisamy S, Willing M, Estrera A, Safi H, Hannibal MC, Carey J, Wiktorowicz J, Tan FK, Feng XH, Pannu H, Milewicz DM. "TGFBR2 mutations alter smooth muscle cell phenotype and predispose to thoracic aortic aneurysms and dissections." *Cardiovasc Res.* 2010 Dec 1;88(3):520-9. ***Co-first authors**
30. Cao J, Gong L, Guo DC, Mietzsch U, Kuang SQ, **Kwartler CS**, Safi H, Estrera A, Gambello MJ, Milewicz DM. "Thoracic aortic disease in tuberous sclerosis complex: molecular pathogenesis and potential therapies in Tsc2+/- mice." *Hum Mol Genet.* 2010 May 15;19(10):1908-20.

Invited review articles

1. **Kwartler CS** and Esparza Pinelo JE. "Use of iPSC-Derived Smooth Muscle Cells to Model Physiology and Pathology." *Arterioscler Thromb Vasc Biol.* 2024 Jul;44(7):1523-1536
2. Milewicz DM, **Kwartler CS,** Papke CL, Regalado ES, Cao J, Reid AJ.. "Genetic Variants Promoting Smooth Muscle Cell Proliferation Can Result in Diffuse and Diverse Vascular Diseases: Evidence for a Hyperplastic Vasculomyopathy." *Genet Med.* 2010 Apr;12(4):196-203
3. Milewicz DM, Guo DC, Tran-Fadulu V, Lafont AL, Papke CL, Inamoto S, **Kwartler CS,** Pannu H. "Genetic basis of thoracic aortic aneurysms and dissections: focus on smooth muscle cell contractile dysfunction." *Annu Rev Genomics Hum Genet.* 2008;9:283-302.

Invited book chapters

1. Carroll, T and **Kwartler, CS.** "Developmental Roles of the Stroma." In Little MH (Ed), *Kidney Development, Disease, Repair, and Regeneration*. Elsevier, 2016.
2. Milewicz, DM and **Kwartler, CS**. "Genetic Variants in Smooth Muscle Contraction and Adhesion Genes Cause Thoracic Aortic Aneurysms and Dissections and Other Vascular Diseases." In Hill JA and Olson EN (Ed), *Muscle: Fundamental Biology and Mechanisms of Disease.* Elsevier, 2012.
3. **Kwartler CS** and Khakoo AY. "Cardiovascular Complications of Cancer and Radiation Therapy." In Azoulay E (Ed), *Pulmonary Involvement in Patients with Hematological Malignancies.* Springer, April 29, 2011.
4. Khakoo AY and **Kwartler CS**. "Cardiovascular Complications of Cancer Therapeutics." In Azoulay E (Ed), *Pulmonary Involvement in Patients with Hematological Malignancies.* Springer, April 29, 2011.

Invited Lectures

1. "Epigenetic Control of Smooth Muscle Differentiation: Insights from Smooth Muscle Dysfunction Syndrome." Wayne State University, March 2025.

Participation at Major Scientific Conferences

Oral presentations

1. **Callie S. Kwartler.** *Epigenetic Control of Smooth Muscle Differentiation: Insights from Smooth Muscle Dysfunction Syndrome.* Gordon Research Conference in Vascular Cell Biology, July 2025.
2. **Callie S. Kwartler**. *Epigenetic Control of Smooth Muscle Differentiation: Insights from Smooth Muscle Dysfunction Syndrome.* Vascular Discovery 2025, April 2025.
3. **Callie S. Kwartler**. *Targeting metabolic alterations to prevent moyamoya-like cerebrovascular disease*. Vascular Biology 2023, October 2023.
4. **Callie S. Kwartler**. *Nuclear smooth muscle α-actin is critical for smooth muscle cell differentiation and to prevent cerebrovascular disease.* Vascular Discovery: From Genes to Medicine 2022, May 2022.

5. **Callie S. Kwartler**. *Nuclear smooth muscle α-actin is critical for smooth muscle cell differentiation and to prevent cerebrovascular disease.* Gulf Coast Vascular Research Consortium 2022, March 2022.
6. **Callie S. Kwartler**. *Nuclear smooth muscle α-actin is critical for smooth muscle cell differentiation and to prevent cerebrovascular disease.* Vascular Biology 2021, October 2021.
7. **Callie S. Kwartler**. *Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters.* Nano-talk. Vascular Biology 2019, October 2019.
8. **Callie S. Kwartler**. *Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters.* Vascular Discovery: From Genes to Medicine Scientific Sessions 2019, May 2019.
9. **Callie Kwartler**. *Using Genetics to Identify the Molecular Pathways Leading to Pediatric Onset Strokes*. International Stroke Genetics Consortium Meeting, May 2017.
10. **Callie Kwartler**. *Loss of* YY1AP1 *alters smooth muscle cell phenotype and leads to fibromuscular dysplasia in Grange syndrome.* International Vascular Biology Meeting, November 2016.
11. **Callie Kwartler**. *Activation of beta-catenin in the kidney stroma may play a causal role in Wilms' tumor.* National Nephrology Young Investigators' Forum at the National Kidney Foundation Spring Clinical meeting, April 2014.
12. **Callie Kwartler**. *Activation of beta-catenin in the developing kidney stroma reveals novel roles for the stroma in regulating organ patterning and cell fate.* Nephrology Young Investigators' Forum at the Southern Society for Clinical Investigation meeting, February 2014.
13. **Callie Kwartler**. *Myh11 R247C is a modifier allele for vascular disease.* Arteriosclerosis, Thrombosis, and Vascular Biology, May 2013.

Poster presentations

1. Shuvra Roy, Jose Emiliano Esparza Pinelo, Jacob Barham, Radbod Darabi, **Callie S. Kwartler**. *Nuclear Skeletal Muscle α-actin: a novel epigenetic regulator of myocyte differentiation?* Gordon Research Conference in Myogenesis, June 2025.
2. Anita Kaw, Jose Emiliano Esparza Pinelo, Suravi Majumder, Hannah Krenz, Jessica Chen, Angie Gonzalez, Dianna M. Milewicz, **Callie S. Kwartler.** *An epigenetic link between metabolism and smooth muscle cell differentiation in Acta2 p.R179 cells.* Vascular Biology 2024, October 2024.
3. **Callie S. Kwartler**, Anita Kaw, Suravi Majumder, Ting Wu, Zbigniew Starosolski, Amelie Pinard, Caroline Kernell, Zhen Zhou, Ketan Ghaghada, Sean Marrelli, Dianna M. Milewicz. *Augmenting Mitochondrial Respiration in Immature Smooth Muscle Cells is a Therapeutic Target for Moyamoya-like Cerebrovascular Disease*. Vascular Discovery 2024, May 2024.
4. **Callie S. Kwartler**, Anita Kaw, Suravi Majumder, Amelie Pinard, Jamie Wright, Caroline Kernell, Dianna M. Milewicz. *Targeting metabolic alterations to boost smooth muscle cell differentiation and prevent moyamoya-like cerebrovascular disease*. Vascular Discovery 2023: From Genes to Medicine, May 2023.
5. **Callie S. Kwartler**, Albert J. Pedroza, Anita Kaw, Pujun Guan, Shuangtao Ma, Xue-yan Duan, Caroline Kernell, Jiyuan Chen, Michael Fischbein, Dianna M. Milewicz. *Nuclear smooth muscle α-actin is critical for smooth muscle cell differentiation.* International Vascular Biology Meeting 2022, October 2022.
6. **Callie S. Kwartler**, Xue-yan Duan, Shuangtao Ma, Anita Kaw, Charis Wang, Caroline Kernell, Jiyuan Chen, Xuetong Shen, Dianna M. Milewicz. *Nuclear smooth muscle α-actin is critical for smooth muscle cell differentiation and to prevent cerebrovascular disease.* Vascular Discovery: From Genes to Medicine Scientific Sessions 2021, September 2021.

7. **Callie S. Kwartler**, Shuangtao Ma, Caroline Kernell, Xue-yan Duan, Charis Wang, Jiyuan Chen, Xuetong Shen, Dianna M. Milewicz. *Nuclear Smooth Muscle α-actin Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters*. American Heart Association Scientific Sessions 2020, November 2020.
8. **Callie S. Kwartler**, Caroline Kernell, Xue-yan Duan, Shuangtao Ma, Charis Wang, Jiyuan Chen, Dianna M. Milewicz. *Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters.* Vascular Biology 2019, October 2019.
9. **Callie S. Kwartler**, Caroline Kernell, Jiyuan Chen, Xue-yan Duan, Shuangtao Ma, Charis Wang, Dianna M. Milewicz. *Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters.* Gulf Coast Vascular Research Consortium, August 2019.
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