

# MONICA Y. LEE, PH.D.

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*Citizenship* U.S.A.

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## EDUCATION & TRAINING

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**UNIVERSITY OF ILLINOIS AT CHICAGO (CHICAGO, ILLINOIS) FEB 2019 – PRESENT**

- *Assistant Professor, Physiology & Biophysics*
  - *Affiliate, Biomedical Engineering*
- Research Area: Elucidating the role of endothelial nucleoporins in vascular pathophysiology; characterizing novel Akt substrates in endothelial biology

**YALE UNIVERSITY (NEW HAVEN, CONNECTICUT) OCT 2011-JAN 2019**

- *Associate Research Scientist/Postdoctoral Fellow, Pharmacology*
- Research Area: Characterizing the endothelial role of the Akt kinases in vascular function
- Principal Investigator/Advisor: William C. Sessa, Ph.D.

**UNIVERSITY OF VIRGINIA (CHARLOTTESVILLE, VIRGINIA) AUG 2007-APR 2011**

- *Doctorate of Philosophy (Ph.D.), Biomedical Engineering*
- Dissertation Title: Nuclear Factor of Activated T-Cells (NFAT)-Mediated Regulation of Vascular Smooth Muscle Cell Phenotypic Modulation
- Principal Investigator/Advisor: Brian R. Wamhoff, Ph.D.

**UNIVERSITY OF VIRGINIA (CHARLOTTESVILLE, VIRGINIA) AUG 2006-MAY 2007**

- *Masters of Engineering (M.E.), Biomedical Engineering*
- Thesis Title: Phenotypic Modulation of Human Umbilical Vein Smooth Muscle Cells
- Principal Investigator/Advisor: Brian R. Wamhoff, Ph.D.

**UNIVERSITY OF VIRGINIA (CHARLOTTESVILLE, VIRGINIA) AUG 2002-MAY 2006**

- *Bachelor of Science (B.S.), Biomedical Engineering, With Distinction*
- 2<sup>nd</sup> Major in Psychology
- Thesis Title: Metabolic Network Reconstruction of *Leishmania major* Parasites
- Principal Investigator/Advisor: Jason A. Papin, Ph.D.

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## TEACHING EXPERIENCE

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**Cardiac & Vascular Pathophysiology**, PHYB 518, University of Illinois at Chicago (Fall 2020-2025)

- *Director/Lecturer*
- Graduate course focused on fundamental mechanisms and the pathogenesis of impaired cardiac and vascular performance
- Lecture series from faculty comprised of clinicians (MD) and scientists (PhD)
- Grade student presentations and written assignments

**Human Physiology II**, PHYB 551, University of Illinois at Chicago (Fall 2020-2025)

- *Lecturer*
- Graduate human physiology course, module on basic renal function
- Guide entire renal block and generate final exam

**Cell Physiology**, PHYB 586, University of Illinois at Chicago (Spring 2020-2026)

- *Lecturer*

- Graduate course, module on endothelial health and atherosclerosis
- Graduate student presentations and written assignments

**Foundations of Biomedical Sciences II**, GEMS 522, Univ. of Illinois at Chicago (Spring 2020-2026)

- *Lecturer*
- Graduate course, module on endothelial health and atherosclerosis
- Graduate student presentations and written assignments

**Cell & Molecular Biology**, BIOM 204, University of Virginia (Spring 2008)

- *Graduate Teaching Assistant*
- An introduction to molecular biology for undergraduate students
- Mentored ~80 students, instructed weekly review sessions

**Integrative Design and Experimental Analysis (IDEAS) Lab**, BME 3080, University of Virginia (Fall 2009)

- *Graduate Teaching Assistant*
- An integration of concepts and skills from prior courses in order to formulate and solve problems in biomedical systems, including experimental design, performance, and analysis
- Aided ~80 students in basic molecular biology techniques (*i.e.* qRT-PCR), held review sessions, graded student-written lab reports

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### ADVISING & MENTORSHIP

- *Undergraduate Students*: Tudor Cisu (Univ. of Virginia), M. Drew Scott (Yale), Mikaela Aquino (UIC), Mihir Rao (UIC), Shaiva Dhyani (UIC), Justin Banks (UIC), Yumna Khan (UIC), Riya Makim (UIC), Amir Patel (UIC), Amy Ren (UIC), Arya Dalal (UIC), Siri Chintala (UIC)
- *Graduate Students*: Paola Perrotta (Yale), Kohei Ashina (Univ. of Toyko), Zari Dumanian (UIC), Tung Nguyen (UIC), Julka Michalkiewicz (UIC), Miles Eckrich (UIC), Barbara Szynal (UIC), Chen Han (UIC), Cody Justice (UIC), Dianicha Santana (UIC), James Hyun (UIC), Olamide Olayinka (UIC), Phoenix Toboz (UIC), Ritika Adhikari (UIC), Heidi Yuan (UIC), Destiny Ogbu (UIC), Jorgan Jesse (UIC), Christie Kang (UIC)
- *Postdoctoral Associates*: Hannah Durr (UIC), Ana Gamez-Mendez, M.D., Ph.D. (Yale), Alan He (Yale)

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### AREAS OF EXPERTISE

- *Mouse Biology/Models*: retinal angiogenesis model, atherosclerosis (high-fat diet models), adult hind-limb ischemia, Cre/loxP conditional deletions, whole-mount tissue imaging (blood vasculature, lymphatic vasculature), wire myography, Miles permeability assay, dermal wound healing
- *Molecular Biology*: cloning, quantitative real-time PCR, immunoblotting, immunofluorescence, cell culture, RNA interference technology, CRISPR technology, proliferation assays (EdU, BrdU), migration assays, viability assays, network formation assay, bead sprouting assay
- *Bioinformatics*: primer design, sequence analysis, mRNA & miRNA expression array analysis (NanoString), bulk RNAseq, Ingenuity Pathway Analysis, QluCore
- *Systems Biology*: metabolic network reconstructions, computational modeling, agent-based modeling
- *Computing Languages*: MS Excel, MATLAB, NetLogo

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### ACCOMPLISHMENTS & HONORS

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|---|------|
| ▫ Philip L. Hawley Distinguished Faculty Award, <i>University of Illinois at Chicago</i>          | 2022 |
| ▫ NAVBO Vascular Biology Postdoctoral Travel Award, <i>Yale University</i>                        | 2018 |
| ▫ International Vascular Biology Meeting (IVBM) Postdoctoral Travel Award, <i>Yale University</i> | 2018 |
| ▫ Vascular Biology & Therapeutics (VBT) Best Poster Award, <i>Yale University</i>                 | 2013 |
| ▫ BIMS Outstanding Graduate Student, <i>Dept. of Biomedical Engineering, Univ. of Virginia</i>    | 2011 |
| ▫ VPRGS Award for Excellence in Scholarship in Sciences & Engineering, <i>Univ. of Virginia</i>   | 2011 |
| ▫ ATVB Graduate Student Travel Award, <i>Univ. of Virginia</i>                                    | 2008 |
| ▫ Summer Research Internship Program, <i>Univ. of Virginia</i>                                    | 2007 |
| ▫ Best Presentation Award, Vascular Biology Course, <i>Univ. of Virginia</i>                      | 2007 |

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**PROFESSIONAL AFFILIATIONS**


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▫ American Physiological Society (APS)	2019-present
▫ American Heart Association (AHA)	2008-present
▫ North American Vascular Biology Organization (NAVBO)	2007-present
▫ Biomedical Engineering Society (BMES)	2003-2011

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**PUBLICATIONS**


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1. Nguyen TD, Gamez-Mendez A, Aryal B, Rotllan N, Fernandez-Hernando C, Sessa WC., **Lee MY**. Endothelial-specific Akt1 deficiency exacerbates atherosclerotic lesion formation. (*in preparation*)
2. Nguyen TD, Khan YZ, Hossen F, Makim R, Banks JM, Michalkiewicz J, Winek MA, de Moraes LHO, Lee JC, Phillips SA, **Lee MY**. Nucleoporin93 (Nup93) Prevents Vascular Endothelial Stiffening and Dysfunction through Sun1-RhoA Signal Regulation. (*under review*)
3. Nguyen TD, Winek MA, Rao MK, Dhyani SP, **Lee MY**. Nuclear envelope components in vascular mechanotransduction: emerging roles in vascular health and disease. *Nucleus*. 2025 Dec;16(1):2453752. doi: 10.1080/19491034.2025.2453752. Epub 2025 Jan 19. PMID: 39827403.
4. Chen S, Lian J, Mathew R, Lu M, Chen T, Sarwar AI, Levitan I, **Lee MY**, Chen J. Vascular Aging: Implications, Mechanisms, and Interventions. *Aging Research*. 2024, 2(4): 9340039. <https://doi.org/10.26599/AGR.2025.9340039>
5. Michalkiewicz J, Nguyen TD, **Lee MY**. The silent protector: Nucleoporin93's role in vascular health. *Aging* (Albany NY). 2024 Aug 21;16(17):12105-12107. doi: 10.18632/aging.206097. Epub 2024 Aug 21. PMID: 39172116; PMCID: PMC11424575.
6. Nguyen TD, Rao MK, Dhyani SP, Banks JM, Winek MA, Michalkiewicz J, **Lee MY**. Nucleoporin93 limits Yap activity to prevent endothelial cell senescence. *Aging Cell*. 2024 Feb 13:e14095. doi: 10.1111/acel.14095. Epub ahead of print. PMID: 38348753.
7. Boutagy NE, Gamez-Mendez A, Fowler JWM, Zhang H, Chaube BK, Esplugues E, Kuo A, Lee S, Horikami D, Zhang J, Citrin KM, Singh AK, Coon BG, **Lee MY**, Suarez Y, Fernandez-Hernando C, Sessa WC. Dynamic metabolism of endothelial triglycerides protects against atherosclerosis in mice. *J Clin Invest* 2024 Jan 4. e170453. doi: 10.1172/JCI1170453.
8. Nguyen TD, Rahman N, Sessa WC, **Lee MY**. Endothelial Nitric Oxide Synthase (eNOS) S1176 phosphorylation status governs atherosclerotic lesion formation. *Front Cardiovasc Med*. 2023 October 11. doi: 10.3389/fcvm.2023.1279868
9. Hyun J, **Lee MY**, Rehman J, Pajcini KV, Malik AB. Notch1 Promotes Revascularization through Modulation of Downstream Vascular Patterning Signaling. *J Physiol*. 2021 Dec 17; doi: 10.1113/JP282286. PMID: 34921404
10. **Lee MY**, Gamez-Mendez A, Zhang J, Zhuang Z, Vinyard DJ, Kraehling J, Velazquez H, Brudvig GW, Kyriakides TR, Simons M, Sessa WC. Endothelial Akt1-dependent activation of eNOS is critical for vascular tone regulation and vessel remodeling. *Arterioscler Thromb Vasc Biol*. 2018 Apr;38(4):870-879. doi: 10.1161/ATVBAHA.118.310748. PMID: 29449333
11. Kuo A, **Lee MY**, Yang K, Gross, RW, Sessa, WC. Caveolin-1 regulates lipid droplet metabolism in endothelial cells via autocrine prostacyclin stimulated cAMP-mediated lipolysis. *J Biol Chem*. 2018 Jan 19;293(3):973-983. doi: 10.1074/jbc.RA117.000980. PMID: 29203526
12. Protack C, Foster T, Hashimoto T, Yamamoto K, **Lee MY**, Kraehling J, Bai H, Hu H, Santana J, Wang M, Sessa WC, and Dardik A. Eph-B4 regulates flow dependent venous remodeling and improves arteriovenous fistula patency. *Sci Rep*. 2017 Nov 13;7(1):15386. doi: 10.1038/s41598-017-13071-2. PMID: 29133876
13. JinY, Xie Y, Ostriker AC, Zhang X, Liu R, **Lee MY**, Leslie KL, Tang W, Du J, Lee SH, Wang Y, Sessa WC, Hwa J, Yu J, Martin KA. Opposing actions of AKT isoforms in vascular smooth muscle injury and therapeutic response. *Arterioscler Thromb Vasc Biol*. 2017 Oct 12. pii: ATVBAHA.117.310053. doi: 10.1161/ATVBAHA.117.310053 [Epub ahead of print] PMID: 29025710

14. Nakamura T, Fujiwara Y, Yamada R, Fujii W, Hamabata T, **Lee MY**, Maeda S, Aritake K, Roers A, Sessa WC, Nakamura M, Urade Y, Murata T. Mast cell-derived prostaglandin D2 attenuates anaphylactic reactions in mice. *J Allergy Clin Immunol*. 2017 Apr 22. pii: S0091-6749(17)30476-1. doi: 10.1016/j.jaci.2017.02.030. [Epub ahead of print] PMID: 28457595
15. Kuo A, **Lee MY**, Sessa WC. Lipid Droplet Biogenesis and Function in the Endothelium. *Circ Res*. 2017 Apr 14;120(8):1289-1297. doi: 10.1161/CIRCRESAHA.116.310498. Epub 2017 Jan 24. PMID: 28119423
16. Ola R, Dubrac A, Han J, Zhang F, Fang JS, Larrivé B, **Lee MY**, Urarte AA, Kraehling JR, Genet G, Hirschi KK, Sessa WC, Canals FV, Graupera M, Yan M, Young LH, Oh PS, Eichmann A. PI3 kinase inhibition improves vascular malformations in mouse models of hereditary haemorrhagic telangiectasia. *Nat Commun*. 2016 Nov 29;7:13650. doi: 10.1038/ncomms13650. PMID: 27897192
17. Kraehling JR, Chidlow JH, Rajagopal C, Sugiyama MG, Fowler JW, **Lee MY**, Zhang X, Ramírez CM, Park EJ, Tao B, Chen K, Kuruvilla L, Larrivé B, Folta-Stogniew E, Ola R, Rotllan N, Zhou W, Nagle MW, Herz J, Williams KJ, Eichmann A, Lee WL, Fernández-Hernando C, Sessa WC. Genome-wide RNAi screen reveals ALK1 mediates LDL uptake and transcytosis in endothelial cells. *Nat Commun*. 2016 Nov 21;7:13516. doi: 10.1038/ncomms13516. PMID: 27869117
18. Kraehling JR, Hao Z, **Lee MY**, Vinyard DJ, Velazquez H, Liu X, Stan RV, Brudvig GW, Sessa WC. Uncoupling Caveolae From Intracellular Signaling In Vivo. *Circ Res*. 2016 Jan 8;118(1):48-55. doi: 10.1161/CIRCRESAHA.115.307767. PMID: 26602865
19. Chamorro-Jorganes A, **Lee MY**, Araldi E, Landskroner-Eiger S, Fernández-Fuertes M, Sahraei M, Quiles Del Rey M, van Solingen C, Yu J, Fernández-Hernando C, Sessa WC, Suárez Y. VEGF-Induced Expression of miR-17-92 Cluster in Endothelial Cells Is Mediated by ERK/ELK1 Activation and Regulates Angiogenesis. *Circ Res*. 2016 Jan 8;118(1):38-47. doi: 10.1161/CIRCRESAHA.115.307408. PMID: 26472816
20. Landskroner-Eiger S, Qiu C, Perrotta P, Siragusa M, **Lee MY**, Ulrich V, Luciano AK, Zhuang ZW, Corti F, Simons M, Montgomery RL, Wu D, Yu J, Sessa WC. Endothelial miR-17~92 cluster negatively regulates arteriogenesis via miRNA-19 repression of WNT signaling. *Proc Natl Acad Sci*. 2015 Oct 13;112(41):12812-7. doi: 10.1073/pnas.1507094112. PMID: 26417068
21. Bancroft T, Bouaouina M, Roberts S, **Lee MY**, Calderwood DA, Schwartz M, Simons M, Sessa WC, Kyriakides TR. Upregulation of Thrombospondin-2 in Akt1-null Mice Contributes to Compromised Tissue Repair due to Abnormalities in Fibroblast Function. *J Biol Chem*. 2015 Jan 2;290(1):409-22. doi: 10.1074/jbc.M114.618421. PMID: 25389299
22. **Lee MY**, Luciano AK, Ackah E, Rodriguez-Vita J, Bancroft TA, Eichmann A, Simons M, Kyriakides TR, Morales-Ruiz M, Sessa WC. Endothelial Akt1 mediates angiogenesis by phosphorylating multiple angiogenic substrates. *Proc Natl Acad Sci*. 2014 Sep 2;111(35):12865-70. doi: 10.1073/pnas.1408472111. PMID: 25136137
23. **Lee MY**, Skoura A, Park EJ, Landskroner-Eiger S, Jozsef L, Luciano AK, Murata T, Pasula S, Dong Y, Bouaouina M, Ferguson SM, Calderwood DA, De Camilli P, Sessa WC. Dynamin2 regulation of integrin endocytosis, but not VEGF signaling, is crucial for developmental angiogenesis. *Development*. 2014. 141, 1465-1472. doi: 10.1242/dev.104539. PMID: 24598168
24. Lohman AW, Billaud M, Straub AC, Johnstone SR, Best AK, **Lee MY**, Barr K, Penuela S, Laird DW, Isakson BE. Expression of pannexin isoforms in the systemic murine arterial network. *J Vasc Res*. 2012; 49:405-416. doi: 10.1159/000338758. PMID: 22739252
25. Straub AC, Lohman AW, Billaud M, Johnstone SR, Dwyer ST, **Lee MY**, Shoppee Bortz P, Best AK, Columbus L, Gaston B, Isakson BE. Endothelial cell expression of hemoglobin  $\alpha$  regulates nitric oxide signaling. *Nature*. 2012; 491, 473-477. doi: 10.1038/nature11626. PMID: 23123858
26. **Lee MY**, Garvey SM, Ripley ML, Wamhoff BR. Genome-wide microarray analyses identify the Protein C Receptor (PROCR/EPCR) as a novel Cn/NFAT-dependent gene in vascular smooth muscle cell phenotypic modulation. *Arterioscler Thromb Vasc Biol*. 2011 Nov; 31(11):2665-75. doi: 10.1161/ATVBAHA.111.235960. PMID: 21903947
27. Kadl A, Meher AK, Sharma PR, **Lee MY**, Doran AC, Elliot MR, Gruber F, Han J, Chen W, Kensler T, Ravichandran KS, Isakson BE, Wamhoff BR, Leitinger N. Identification of a novel macrophage

- phenotype that develops in response to atherogenic phospholipids via Nrf2. *Circ Res*. 2010 Sep 17; 107(6):737-46. doi: 10.1161/CIRCRESAHA.109.215715. PMID: 20651288
28. Lee MY, Garvey SM, Baras AS, Lemmon JA, Gomez MF, Daum G, LeBoeuf RC, Schoppee Bortz PD, Wamhoff BR. Integrative genomics identifies DSCR1 (RCAN1) as a novel NFAT-dependent mediator of phenotypic modulation in vascular smooth muscle cells. *Hum Mol Genet*. 2010 Feb 1;19(3):468-79. doi: 10.1093/hmg/ddp511. PMID: 19926569
29. Long X, Tharp DL, Georger MA, Slivano OJ, Lee MY, Wamhoff BR, Bowles DK, Miano JM. The smooth muscle cell-restricted KCNMB1 ion channel subunit is a direct transcriptional target of serum response factor and myocardin. *J Biol Chem*. 2009 Nov 27;284(48):33671-82. doi: 10.1074/jbc.M109.050419. PMID: 19801679
30. Hastings NE, Feaver RE, Lee MY, Wamhoff BR, Blackman BR. Human IL-8 regulates smooth muscle cell VCAM-1 expression in response to endothelial cells exposed to atheroprone flow. *Arterioscler Thromb Vasc Biol*. 2009 May;29(5):725-31. doi: 10.1161/ATVBAHA.109.184382. PMID: 19229069
31. Orr AW, Lee MY, Lemmon JA, Yurdagul A Jr, Gomez MF, Schoppee-Bortz PD, Wamhoff BR. Molecular mechanisms of collagen isotype-specific modulation of smooth muscle cell phenotype. *Arterioscler Thromb Vasc Biol*. 2009 Feb;29(2):225-31. doi: 10.1161/ATVBAHA.108.178749. PMID: 19023090

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### BOOK CHAPTERS

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1. Lee MY, Wamhoff BR. (2011) Down Syndrome & Vascular Disease: DSCR1 and NFAT signaling. *Genetics and Etiology of Down Syndrome*, Subrata Dey (Ed.), InTech; ISBN 978-953-307-631-7. Available from: <http://www.intechopen.com/articles/show/title/down-syndrome-and-vascular-disease-dscr1-and-nfat-signaling>

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### SEMINARS & INVITED LECTURESHIPS

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#### LOCAL:

- Apr 2023:** Chicago Area Undergraduate Research Symposium (CAURS) – Chicago, IL, ‘Endothelial Nup93 Limits RhoA Activity to Regulate Cellular Adhesion and Migration’  
\*mentored student presentation
- Jan 2023:** Northwestern University, *Department of Cell and Developmental Biology* – Chicago, IL, ‘Identifying the role of nuclear pore components in endothelial function’
- Oct 2022:** Chicago Cytoskeleton Meeting – Chicago, IL, ‘Identifying the role of nuclear pore components in endothelial function’
- Apr 2022:** Chicago Area Undergraduate Research Symposium (CAURS) – Chicago, IL, ‘Nup93 deletion impairs endothelial cell migration through decreased re-adhesion to the extracellular matrix’  
\*mentored student presentation
- Nov 2019:** University of Illinois at Chicago, *Department of Pharmacology: Lung and Vascular Biology and Signaling Seminars* – Chicago, IL, ‘Akt-mediated regulation of endothelial and vascular functions’

#### NATIONAL:

- Oct 2025:** NAVBO Vascular Biology, Cape Cod, MA, ‘Endothelial Nucleoporin93 maintains Sun1 expression for proper flow-induced cellular alignment’  
\*mentored student presentation
- Sept 2025:** University of North Carolina at Chapel Hill, *McAllister Heart Institute Seminar Series* – Chapel Hill, NC, ‘Deciphering the role of Nup93 in endothelial and vascular function’
- Aug 2025:** NAVBO InFocus Session – Virtual Meeting, ‘Deciphering the role of Nup93 in endothelial and vascular function’
- May 2025:** Northeast Nuclear Envelope (NENE) Meeting, Columbia University, New York, NY. ‘Laminar shear flow induces endothelial Actin/LINC/Lamin nuclear line formation’

- Feb 2025:** NAVBO Mechanotransduction Workshop – Virtual Meeting, ‘Nup93 prevents endothelial stiffening via Sun1-RhoA signal regulation’  
\*mentored student presentation
- May 2024:** Northeast Nuclear Envelope (NENE) Meeting, Yale University, New Haven, CT. ‘Nup93 prevents endothelial stiffening through Sun1-RhoA signal regulation’
- Oct 2023:** NAVBO Vascular Biology, Newport, RI, ‘Nup93 limits YAP activity to prevent endothelial cell senescence and dysfunction’  
\*mentored student presentation
- Dec 2022:** University of South Carolina School of Medicine, *Department of Cell Biology & Anatomy, Cardiovascular Translational Research Center Seminar Series* – Columbia, SC, ‘Akt-mediated regulation of endothelial and vascular function’
- Apr 2022:** NAVBO Vascular Biology, InFocus Session – Virtual Meeting, *Endothelium and Inflammatory Cells*  
\*mentored student presentation
- Mar 2022:** American Heart Association (AHA) EPI/Lifestyle Scientific Sessions – Chicago, IL, ‘Nup93 deletion impairs endothelial barrier integrity and cell migration through induced cellular senescence’  
\*mentored student presentation
- Oct 2020:** NAVBO Vascular Biology, Virtual Meeting, ‘Loss of endothelial Akt1 function exacerbates atherosclerotic plaque formation’
- Nov 2019:** University of Chicago, *Department of Medicine: Cardiovascular Sciences* – Chicago, IL, ‘Akt-mediated regulation of endothelial and vascular function’
- Oct 2018:** NAVBO Vascular Biology, Newport, RI, ‘Endothelial-specific Akt1 deficiency enhances atherosclerotic plaque progression’
- Jun 2018:** University of Pittsburgh, *Department of Medicine, Vascular Medicine Institute* – Pittsburg, PA, ‘Akt-mediated regulation of endothelial and vascular function’
- Apr 2018:** Columbia University, *Department of Physiology & Cellular Biophysics, Cardiovascular Research Institute* – New York, NY, ‘Akt-mediated regulation of endothelial and vascular function’
- Feb 2018:** Washington University in St. Louis, *Department of Cell Biology & Physiology* – St. Louis, MO, ‘Akt-mediated regulation of endothelial and vascular function’
- Feb 2018:** Rutgers University, *Department of Pharmacology* – New Brunswick, NJ, ‘Akt-mediated regulation of endothelial and vascular function’
- Feb 2018:** University of Illinois at Chicago, *Department of Physiology & Biophysics* – Chicago, IL, ‘Akt-mediated regulation of endothelial and vascular function’
- Feb 2018:** Vanderbilt University, *Department of Pharmacology* – Nashville, TN, ‘Akt-mediated regulation of endothelial and vascular function’
- Jan 2018:** Thomas Jefferson University, *Department of Medicine* – Philadelphia, PA, ‘Akt-mediated regulation of endothelial and vascular function’
- Dec 2017:** LSU-Health Shreveport, *Department of Pathology* – Shreveport, LA, ‘Akt-mediated regulation of endothelial and vascular function’
- Nov 2017:** University of Virginia, *The Robert M. Berne Cardiovascular Research Center* – Charlottesville, VA, ‘Akt-mediated regulation of endothelial and vascular function’

**INTERNATIONAL:**

- Oct 2026:** International Conference on Nucleocytoplasmic Transport – Awaji Island, Japan, (*invitation accepted, title pending*)

- Feb 2026:** Integrating Nucleocytoplasmic Transport and Mechanotransduction at the Nuclear Envelope – Ticino, Switzerland, ‘Laminar shear flow induces endothelial Actin/LINC/Lamin nuclear line formation’
- Oct 2024:** International Conference on Nucleocytoplasmic Transport – Presqu’île de Giens, France, ‘Identifying the role of nuclear pore components in endothelial function’
- Sept 2022:** International Conference on Nucleocytoplasmic Transport – Quebec, Canada, ‘Identifying the role of nuclear pore components in endothelial function’
- Oct 2016:** International Vascular Biology Meeting – Boston, MA ‘Endothelial Akt1-dependent activation of eNOS is critical for vascular tone regulation and vessel remodeling’
- Apr 2011:** Experimental Biology – Washington, D.C. ‘The Endothelial Protein C Receptor (PROCR/EPCR) is regulated by NFAT in vascular smooth muscle cell phenotypic modulation’
- Jul 2009:** US-Korea Conference on Science, Technology and Entrepreneurship – Raleigh, NC. ‘Integrative genomics identifies DSCR1(RCAN1) as a novel NFAT-dependent mediator of phenotypic modulation in vascular smooth muscle cells’

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### INVITED PANELIST

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| ▫ NAVBO Vasc. Biology 2023, <i>Panel Discussion: ‘Managing Career Transitions’</i>          | Oct. 18, 2023 |
| ▫ IVBM 2022, <i>Panel Discussion: ‘Working together for Success’</i>                        | Oct. 15, 2022 |
| ▫ University of Virginia: BME Capstone Faculty Life Panel                                   | Mar 4, 2021   |
| ▫ Yale University CVRC: Meet the Professor Happy Hour                                       | Nov. 13, 2020 |
| ▫ NAVBO Vasc. Biology 2020, <i>Panel Discussion: ‘Pre-Conference Meeting for Trainees’</i>  | Oct. 23, 2020 |
| ▫ NAVBO Vasc. Biology 2019, <i>Panel Discussion: ‘Taking the Next Steps in Your Career’</i> | Oct. 27, 2019 |

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### REVIEWER

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| ▫ Review Editor – Frontiers in Cardiovasc. Med. [Atherosclerosis & Vasc. Med.] | Dec. 2020-present   |
| ▫ Review Editor – Frontiers in Physiology [Vascular Physiology]                | Mar 2021-present    |
| ▫ Review Editor – Frontiers in Physiology [Cell Physiology]                    | Dec 2021-present    |
| ▫ Review Editor – Microcirculation   | Jun 2021 - present  |
| ▫ Review Editor – PLOS ONE   | Aug 2022 - present  |
| ▫ Reviewer – Cardiovascular Research   | Feb 2025-present    |
| ▫ Ad Hoc Reviewer – Stem Cell Research   | July 2020-present   |
| ▫ Ad Hoc Reviewer – American Journal of Physiology (AJP)                       | May 2021 – present  |
| ▫ Ad Hoc Reviewer – Cellular and Molecular Life Sciences (CMLS)                | Aug 2021- present   |
| ▫ Ad Hoc Reviewer – Communications Biology                                     | Sept 2021 – present |
| ▫ Ad Hoc Reviewer – MDPI   | Feb 2022 - present  |
| ▫ Ad Hoc Reviewer – Geriatrics   | May 2023 – present  |
| ▫ Ad Hoc Reviewer – Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB)  | Aug 2023 – present  |
| ▫ Ad Hoc Reviewer – Diagnosis  | Oct 2023 - present  |
| ▫ Ad Hoc Reviewer – Nucleus  | Jul 2025 - present  |

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### SERVICE

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|---|------------------------|
| ▫ Senior Editor – NAVBO Vascular Biology Publications Alert (VBPA)                | Feb 2025-present       |
| ▫ NAVBO Vascular Biology Meeting 2026, <i>Co-organizer</i>                        | Jan 2025-present       |
| ▫ NAVBO Vascular Biology Meeting 2027, <i>Organizer</i>                           | Dec 2025-present       |
| ▫ American Heart Association (AHA) Early Career Committee, <i>Member</i>          | Nov 2024-present       |
| ▫ Chicago Regional Cardiovascular Research Symposium (CRCRS), <i>Co-organizer</i> | 2024, 2025             |
| ▫ Editor – NAVBO Vascular Biology Publications Alert (VBPA)                       | Feb 2022-Jan 2024      |
| ▫ NSF Graduate Research Fellowship Program (GRFP), <i>Reviewer</i>                | 2021, 2022, 2023       |
| ▫ American Heart Association (AHA) Fellowship, <i>Reviewer</i>                    | 2020, 2021, 2022, 2025 |

- NIH NHLBI IVPP Early Career Reviewer (ECR) Program, *Ad hoc Reviewer* 2022

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### POSTER PRESENTATIONS

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1. Eckrich M, Nguyen TD, Khan YZ, Hossen F, Makim R, Banks JM, Michalkiewicz J, Winek MA, Lee JC, **Lee MY**. Nucleoporin93 Regulates Endothelial Cytoskeletal Properties via Sun1. *Center for Cardiovascular Research (CCVR) Day 2025 (UIC)*. Chicago, IL, 2025.
2. Durr HA, Nguyen TD, Winek MA, Michalkiewicz J, **Lee MY**. Nucleoporin93 phosphorylation is necessary for endothelial and vascular barrier function. *CCVR Day 2025 (UIC)*. Chicago, IL, 2025.
3. Khan YZ, Nguyen TD, Winek MA, de Moraes LH, Michalkiewicz J, Phillips SA, **Lee MY**. Nuclear Envelope Proteins Regulate Endothelial Cell and Vessel Function. *Chicago Area Undergraduate Research Symposium (CAURS)*, Chicago, IL, 2025.
4. Makim R, Nguyen TD, Winek MA, Michalkiewicz J, Banks JM, **Lee MY**. The Role of Nuclear Yap Protein in Nup93-BMP4 Regulation. *CAURS*, Chicago, IL, 2025.
5. Nguyen TD, Khan YZ, Hossen F, Makim R, Banks JM, Michalkiewicz J, Winek MA, de Moraes LHO, Lee JC, Phillips SA, **Lee MY**. Nup93 limits Sun1-RhoA signaling to promote eNOS function and vessel homeostasis. Poster, *FASEB: Vasoregulation*. Tuscon, AZ. Aug 2024.
6. Nguyen TD, Khan YZ, Hossen F, Michalkiewicz J, Makim R, Winek MA, Lee JC, **Lee MY**. Nup93 prevents endothelial stiffening and permeability through Sun1-RhoA signal regulation. Poster, *International Vascular Biology Meeting (IVBM)*. Amsterdam, NL. Jul 2024.
7. Nguyen TD, Khan YZ, Hossen F, Michalkiewicz J, Makim R, Winek MA, Lee JC, **Lee MY**. Nup93 prevents endothelial stiffening via Sun1-RhoA signal regulation. Poster, *Ibidi International Flow Meeting*. Chicago, IL. Jul 2024.
8. Banks J, Nguyen TD, Winek MA, Michalkiewicz J, **Lee MY**. Nuclear Envelope Proteins in Endothelial Cell Senescence. *CAURS*, Chicago, IL. 2024.
9. Khan YZ, Nguyen TD, Winek MA, de Moraes LH, Michalkiewicz J, Phillips SA, Lee MY. Nup93 regulates eNOS expression and NO production through limited Sun1-RhoA signaling. *CAURS*, Chicago, IL, 2024.
10. Michalkiewicz, J, Nguyen TD, Winek MA, **Lee, MY**. Loss of Nucleoporin93 Phosphorylation Impairs Endothelial Cell Function. Poster, *CCVR Day 2023 (UIC)*. Chicago, IL, 2023.
11. Dhyani SP, Nguyen TD, Rao MK, Winek MA, **Lee MY**. Loss of Nup93 Activates the Senescence-Associated Secretory Phenotype to Promote Endothelial Inflammation. Poster, *CAURS*. Chicago, IL. 2023.
12. Nguyen TD, Rao MK, Dhyani S, Winek MA, **Lee MY**. Endothelial Nup93 Regulates YAP Activity to Limit Features of Endothelial Cell Senescence. Poster, *IVBM*. Oakland, CA. 2022.
13. Nguyen TD, Rao MK, Winek MA, Horne MG, Dhyani S, **Lee MY**. Endothelial Nup93 Limits Cellular Senescence and Consequence Endothelial Dysfunction. Poster, *AHA BCVS*. Chicago, IL. 2022.
14. Nguyen TD, Horne MG, Winek MA, **Lee MY**. Nup93 deletion promotes endothelial inflammation and impairs barrier function. Poster, *NAVBO Vascular Biology*. Virtual, 2021.
15. Nguyen TD, Winek MA, Horne MG, Aquino M, **Lee MY**. Endothelial Nup93 deletion impairs aspects of endothelial function. Poster, *CCVR Day 2020 (UIC)*. Chicago, IL, 2020.
16. **Lee MY**, Gamez-Mendez A, Aryal B, Rotllan N, Fernandez-Hernando C, Sessa WC. Endothelial-specific Akt1 deficiency exacerbates atherosclerotic lesion formation. Poster, *Gordon Conference – Atherosclerosis*. Newry, ME, 2019.
17. **Lee MY**, Gamez-Mendez A, Aryal B, Rotllan N, Fernandez-Hernando C, Sessa WC. Endothelial-specific Akt1 deficiency exacerbates atherosclerotic lesion formation. Poster, *International Vascular Biology Meeting*. Helsinki, Finland, 2018.
18. **Lee MY**, Gamez-Mendez A, Rotllan N, Fernandez-Hernando C, Sessa WC. Endothelial-specific Akt1 deficiency exacerbates atherosclerotic lesion formation. Poster, *Gordon Conference – Atherosclerosis*. Newry, ME, 2017.
19. Kuo A, **Lee MY**, Harrison K, Sessa WC. Characterization of lipid droplets and their regulation by caveolin-1 in endothelial cells. Poster, *FASEB*, Saxton Rivers, VT, 2014.
20. **Lee MY**, Skoura A, Park EJ, Landskroner-Eiger S, Jozsef L, Luciano AK, Murata T, Pasula S, Dong Y, Bouaouina M, Ferguson SM, Calderwood DA, De Camilli P, Sessa WC. Dynamin 2 regulation of integrin

- turnover is necessary for endocytosis and developmental angiogenesis. Poster, NAVBO Annual Meeting, Cape Cod, MA, 2013.
21. **Lee MY**, Skoura A, Park EJ, Bouaouina M, Murata T, Jozsef L, Luciano AK, Ferguson SM, Calderwood DA, De Camilli P, Sessa WC. Dynamin 2 regulates integrin endocytosis and angiogenesis. Poster, Gordon Conference – Vascular Cell Biology. Ventura, CA. 2013.
  22. Kuo A, **Lee MY**, Harrison KD, Sessa WC. Characterization of Lipid Droplets and Their Regulation by Caveolin-1 in Endothelial Cells. Poster, FASEB J. 26: A597.1 2012.
  23. **Lee MY**, Garvey SM, Cisu T, Wamhoff BR. The Endothelial Protein C Receptor (PROCR/EPCR) is regulated by NFAT in vascular smooth muscle cell phenotypic modulation. Poster, ATVB Annual Meeting, Chicago, IL, 2011.
  24. **Lee MY**, Garvey SM, Wamhoff BR. Genomics approach using calcineurin/NFAT inhibitors to identify novel effectors of vascular smooth muscle phenotypic modulation. Poster, EB Annual Meeting, Anaheim, CA, 2010.
  25. Garvey SM, **Lee MY**, Miano JM, Wamhoff BR. Expression analysis of microRNAs associated with vascular smooth muscle cell phenotypic modulation. Poster. Joint Meeting of the Scandinavian and German Physiological Societies. Copenhagen, Denmark. 2010.
  26. **Lee MY**, Garvey SM, Baras AS, Lemmon JA, Gomez MF, Daum G, LeBoeuf RC, Schoppee Bortz PD, Wamhoff BR. Integrative genomics identifies DSCR1(RCAN1) as a novel NFAT-dependent mediator of phenotypic modulation in vascular smooth muscle cells. Poster, ATVB Annual Meeting, Washington D.C., 2009.
  27. Agrawal R, Sharma PR, **Lee MY**, Wamhoff BR, Leitinger N. The JNK signaling pathway mediates cross-talk between dying adipocytes and macrophages. Poster, ATVB Annual Meeting, Washington D.C., 2009.
  28. **Lee MY**, Baras AS, Garvey SM, Mika MD, Wamhoff BR. Unmasking the transcriptional genomics of NFAT in smooth muscle cell phenotypic modulation. Poster, ATVB Annual Meeting, Atlanta, GA, 2008.
  29. Hastings NE, **Lee MY**, Orr AW, Wamhoff BR, Blackman BR. A Hemodynamic Role for Endothelial-derived Interleukin-8 to Limit an Inflammatory Smooth Muscle Cell Phenotype. Poster, ATVB Annual Meeting, Atlanta, GA, 2008.
  30. Garvey SM, Lemmon JA, **Lee MY**, Sanders JM, Wamhoff BR. Calcineurin signaling is upregulated in smooth muscle cell phenotypic modulation and vascular disease. Poster, ATVB Annual Meeting, Atlanta, GA, 2008.
  31. Orr AW, **Lee MY**, Lemmon JA, Schoppee-Bortz PD, Wamhoff BR. Molecular mechanisms of collagen isotype-specific modulation of smooth muscle cell phenotype. Poster, ATVB Annual Meeting, Atlanta, GA, 2008.

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## RESEARCH SUPPORT

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Active/Pending/Completed:	<b>Active</b>
Project Number/PI:	1R01HL164406-01A1 / MY Lee
Source:	NIH / NHLBI
Title of Project:	<i>Identifying the role of nuclear pore components in vascular function</i>
Dates of Approved Project:	01/01/2025-11/30/2029
Total Cost:	\$3,323,572
Active/Pending/Completed:	<b>Active</b>
Project Number/PI:	-- / A Kazlauskas
Source:	UIC Department of Ophthalmology and Visual Sciences Collaborative Pilot Grant
Title of Project:	<i>The role of diabetes-induced senescence in diabetic retinopathy</i>
Dates of Approved Project:	10/01/2025-09/30/2026
Total Cost:	\$59,400

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Active/Pending/Completed: **Completed**  
Project Number/PI: 941057/ MY Lee  
Source: AHA Career Development Award  
Title of Project: *Deciphering the role of nuclear pore components in vascular function*  
Dates of Approved Project: 04/01/2022-03/31/2025  
Total Cost: \$231,000

Active/Pending/Completed: **Completed**  
Project Number/PI: -- / MY Lee  
Source: CCTS KL2 CATS Affiliate Scholars Program  
Title of Project: *Deciphering the role of nuclear pore components in vascular function*  
Dates of Approved Project: 06/01/2022-05/31/2023  
Total Cost: \$10,000

Active/Pending/Completed: **Completed**  
Project Number/PI: R00HL130581/ MY Lee  
Source: NIH/NHLBI – Pathway to Independence Award  
Title of Project: *Akt-mediated regulation of endothelial functions*  
Dates of Approved Project: 07/01/2019-06/30/2022  
Total Cost: \$746,998

Active/Pending/Completed: **Completed**  
Project Number/PI: K99HL130581/ MY Lee  
Source: NIH/NHLBI – Pathway to Independence Award  
Title of Project: *Akt-mediated regulation of endothelial functions*  
Dates of Approved Project: 07/01/2016-01/31/2019

Active/Pending/Completed: **Completed**  
Project Number/PI: F32HL119147/ MY Lee  
Source: NIH/NHLBI – NRSA/F32 Postdoctoral Fellowship  
Title of Project: *An isoform-specific, conditional deletion approach to decipher Akt1 and Akt2 func*  
Dates of Approved Project: 07/01/2013-06/30/2016

Active/Pending/Completed: **Completed**  
Project Number/PI: 09PRE2060381 / MY Lee  
Source: American Heart Association – Predoctoral Fellowship  
Title of Project: *DSCR1-mediated negative regulation of vascular smooth muscle cell phenotypic modulation*  
Dates of Approved Project: 07/01/2009-06/31/2011

Active/Pending/Completed: **Completed**  
Project Number/PI: T32 HL007284-32 / BR Duling  
Source: NIH/NHLBI – Cardiovascular Training Grant  
Title of Project: *NFAT-mediated regulation of vascular smooth muscle cell phenotype*  
Dates of Approved Project: 07/01/2008-06/30/2009