

Curriculum Vitae

Dexter L. Lee, BS, MS, Ph.D.

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Howard University College of Medicine
Department of Physiology and Biophysics
Washington, DC 20059
Phone: 202-806-6330
Fax: 202-806-4479
E-mail: dllee@Howard.edu

Title: Associate Professor

Education

<u>Year</u>	<u>Institution and Location</u>	<u>Degree</u>	<u>Field of Study</u>
2000	University of Missouri-Columbia Columbia, MO	Ph.D.	Physiology
1994	University of Akron Akron, OH	MS	Biology
1992	Jackson State University Jackson, MS	BS	Biology

Research and Professional Experience

Employment

2013-	Associate Professor, Department of Physiology and Biophysics, Howard University College of Medicine
2006-2013	Assistant Professor, Department of Physiology and Biophysics, Howard University, College of Medicine
2003-2006	Postdoctoral Fellowship: Medical College of Georgia, Department of Physiology (Mentor: Michael W. Brands, Ph.D.)
2003-2006	Postdoctoral Fellowship: Medical College of Georgia, Department of Physiology (Mentor: R. Clinton Webb, Ph.D.)
2000-2002	Postdoctoral Fellowship: Medical College of Georgia, Vascular Biology Center (Mentor: Jennifer S. Pollock, Ph.D.)
1996-2000	Graduate Research Assistant, Department of Physiology and Dalton Cardiovascular Research Center, University of Missouri-Columbia (Advisor: Michael Sturek, Ph.D.)
1998-1999	American Heart Association Missouri Affiliate Pre-doctoral Fellow
1997	Anatomy and Physiology Tutor for Total Person Program, Athletic Department, University of Missouri (Total Person Supervisor: Chris Favazza, Ph.D.)
1994-1996	Teaching Assistant, Department of Physiology, University of Missouri

- (TA Supervisor: Marvin Zatzman, Ph.D.)
 1992-1994 Teaching Assistant, Department of Biology, University of Akron
 (TA Supervisor: Richard Mostardi, Ph.D.)
 1992-1994 Research Assistant, Department of Biology, University of Akron
 (Advisor: Ronald Salisbury, Ph.D.)
 1992 Howard Hughes Fellow, Department of Biology, Jackson State University
 (Mentor: Charles Rhyne, Ph.D.)

Additional Professional Experience and Training

- 2006 Reviewer for American Journal of Physiology: Heart and Circulatory
 2006 Abstract Judge for the National Association of Medical Minority Educators
 2006 Poster Presentation Judge for the National Association of Medical
 Minority Educators
 2006 Poster Presentation Judge for the David R. Bruce Award
 2000-2001 Vascular Biology Center Seminar Committee
 2000-2001 Vascular Biology Center Postdoctoral Association Career Seminar
 Coordinator
 1998 Workshop on Humane Care and Use of Animals in Research and
 Teaching

Professional Affiliations

- 1994-present American Physiological Society
 2002-present American Heart Association Council of High Blood Pressure Research
 2003-2006 Society of Experimental Biology and Medicine

Honors

- 2026 Howard University College of Medicine LCME Curriculum Committee
 2026 Howard University College of Medicine LCME Governance Committee
 2024 American Physiological Society Governance Transition Task Force.
 2024 Howard University Liaison Committee on Medical Education Standard 9
 Committee (Teaching, Supervision, Assessment, and Student and Patient
 Safety)
 2024 College of Medicine Committee on Accreditation and Standards and
 Compliance
 2024 Co-Chair of the Clinical and Translational Sciences WG Schnaper Visiting
 Scientist Program Committee
 2023 Howard University College of Medicine – The Excellence in Teaching
 Award (Pre-Clinical)
 2023 Clinical and Translational Sciences TL1/T32 Executive Committee of
 TL1 Directors
 2023 American Physiological Society Governance Task Force
 2023 American Physiological Society Task Force on Sexual Misconduct
 2022-2023 Artificial Intelligence/Machine Learning Consortium to Advance Health
 Equity and Researcher Diversity Mentor to Dr. Michael Ortega
 2022-2023 American Physiological Society Task Force on Sexual Misconduct
 2022-2023 American Physiological Society Governance Task Force
 2022-2023 Chair of Committee on Committees, American Physiological Society
 2022-2023 Women in Science Working Group, American Physiological Society

2021-2024	Councilor of the American Physiological Society
2021-	American Heart Association Reviewer: 2021 Fellowships Organ Studies 1
2020	Co-Founder of Black in Physiology, Inc.
2020	Editorial Board of Renal and Epithelial Physiology
2020	Office of the Provost Faculty Leads Committee, Howard University
2019	Faculty, Harvard Macy Institute Program for Educators in Health Sciences, Harvard University, Boston, MA
2018	Scholar, Harvard Macy Institute Program for Educators in Health Sciences, Harvard University, Boston, MA
2018-	Co-Coordinator of Structure and Function: Unit 3
2018	Co-Chair of Water, Electrolyte & Homeostasis "Inflammation and Sodium Reabsorption" Symposium
2017	Guest Editor: Nephropathy and Retinopathy as Major Diabetic Complications
2017-	Howard University College of Medicine Curriculum Committee
2017-18	Howard University College of Medicine Committee on Accreditation, Standards and Compliance
2017-2018	American Heart Association <i>Vascular Biology & Blood Pressure</i> Fellowship committee
2017	Guest Editor: Nephropathy and Retinopathy as Major Diabetic Complications
2017	Chair of the Organizing Committee for an APS Conference titled, "Physiological and Pathophysiological Consequences of Sickle Cell Disease."
2017	Office of the Provost, Scholarly Production Workshop Panelist
2017-	Office of the Provost, Faculty Development Mentoring Working Group
2018	Invited Seminar Speaker in Department of Physiology at Baylor University
2018-	Structure and Function: Unit 3 Co- Coordinator
2018-	Faculty Advisory Planning Committee – College of Medicine
2017	Invited Panelist for the Howard University Scholarly Production Workshop: "How to Use the Summer to Maintain Your Scholarly Production." Sponsored by the Howard University Office of Faculty Development, Office of the Provost
2017	Invited Speaker for Experimental Biology: The Renal Thick Ascending Limb and Obesity-Associated Sodium Retention: Culpit or Innocent By-Stander?
2017	Invited Speaker for Experimental Biology: Teaching Research Balance in the Changing Classroom
2016-	Howard University Leadership Alliance First Year Research Experience – Institutional Coordinator
2016-2018	Director of the Education, Mentoring, and Resources to Generate Excellence Consortium
2016	Co-Chair of American Heart Association's Cardiorenal 1 Peer Review Study Group
2016	National Research Mentoring Network Grant Writing Coach
2015-2016	Diversity Leadership Committee of the American Heart Association/American Stroke Association.
2015-	Howard University Leadership Alliance Summer Research Program – Institutional Coordinator
2015	University of New Hampshire Writing Academy Coach

2015-2017	Director of Undergraduate and Graduate Training for the Howard University Center for Hemoglobin Research in Minorities (CHaRM)
2014-2019	Georgetown-Howard Universities Center for Clinical and Translational Science Co-Director, KL2 Scholars Program
2014-	Georgetown-Howard Universities Center for Clinical and Translational Science Co-Director, TL1 Program
2014-	Howard University - Research Centers at Minority Institutions Co-Director, Professional Development Key Activity
2014	American Physiological Society's Porter Committee Minority Travel Fellow Keynote Speaker
2014-2015	President of the Greater Washington DC Area Chapter of the American Physiological Society
2013-2019	Director of Graduate Studies, Department of Physiology and Biophysics Howard University College of Medicine
2013	American Heart Association Continuing Medical Education (CME) Peer Review Training Program Taskforce – Journals.
2012	Fellow of the American Heart Association Council of High Blood Pressure Research
2012	Early Career Reviewer (ECR) program at the Center for Scientific Review (CSR), National Institute of Health.
2012-2015	American Heart Association's Cardiorenal 1 Peer Review Study Group
2011-	Howard University Institutional Animal Care and Use Committee (HU-IACUC)
2011	American Physiological Society Task Force focusing on the key area of <i>"Actively working to attract, meet the needs of, engage, and retain membership subgroups."</i>
2011	Representative for the American Physiological Society to the Broadening Participation Workshop. October 16 – 18 th , Leesburg, VA
2011-2013	Chair of the American Physiological Society Porter Physiology Development Committee
2011-2019	Coordinator for Cellular and Molecular Physiology Course (PHSI 252-01), Howard University College of Medicine, Department of Physiology
2011-2013	Advisory Board for the American Physiological Society's proposed SEPA project, "PhUn Week for Early Elementary Learning."
2011-2012	Howard University College of Medicine Student Grievance Committee
2010-2012	Howard University College of Medicine Research Day Planning Committee
2010	Invited Speaker to International Conference on Fixed Combination, Brisbane, Australia.
2010-	Honor, Professionalism and Ethics Committee, Howard University College of Medicine
2010-	Organ Systems Unit Four Faculty
2009-	Renal Unit Leader, Department of Physiology and Biophysics, Howard University College of Medicine
2009-2011	The American Physiological Society's Porter Committee Liaison to the Careers Committee
2009-2010	Health Sciences Faculty Seed Grant
2009	Grant Reviewer for the American Recovery & Reinvestment Act of 2009 Research and Research Infrastructure "Grand Opportunities" RC2 in Heart, Lung, Blood, and Sleep.

2009	Howard University College of Medicine Summer Directed Study Program co-coordinator for Unit 3B.
2009	Howard University College of Medicine Small Group Facilitator for Structure and Function
2009	Experimental Biology Careers Panel discussion speaker for the High School Teacher and Student Workshop, New Orleans, LA
2008-2010	The American Physiological Society's Porter Physiology Development Committee
2008-2008	College of Medicine Research Committee, Howard University American Society for Cell Biology Minorities Affairs Committee (ASCB MAC) and by the American Society for the Advancement of Science (AAAS) 3rd Annual Junior Faculty/Postdoctoral Fellows Workshop, Washington, DC
2007-2008	Executive Committee Member of the Department of Physiology and Biophysics – Howard University
2007	American Physiological Society Research Career Enhancement Award
2007-2009	Howard University Medical Alumni Association Endowed Co-Chair in the Basic Sciences
2004-2006	American Physiological Society/NIDDK Minority Travel Fellowship Award
2004	Minority Research Training Forum Travel Award
2003	Merck New Investigator Award: 57 th Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research
2003	Postdoctoral Fellow on the NIH Training program of Integrative Cardiovascular Biology at the Medical College of Georgia
2003	American Physiological Society/NIDDK Minority Travel Fellowship Award
2001	New Investigator Award for the Renal Microcirculatory Hemodynamics: Molecular, Cellular, Physiologic, Clinical and Integrative Mechanisms
2000	New Investigator Award for the Jackson Cardiovascular Meeting
1998	Second Place- Student Research Day, University of Missouri School of Medicine
1998-1999	American Heart Association Missouri Affiliate Pre-doctoral Fellowship
1998	University of Missouri, Molecular Biology Travel Award
1996	International Vascular Biology Travel Award
1992	Graduated Cum Laude from Jackson State University
1992	National Science Foundation Summer Program: University of Missouri (Mentor: Tom Zoeller, Ph.D.)
1991	Summer Research Opportunity Program: Indiana University, Bloomington, IN (Mentor: Alan Bender, Ph.D.)
1991-1992	Who's Who Among American Universities and Colleges
1988-1992	Jackson State University Honors College
1988	Co-Salutatorian of Prentiss High School

Publications:

Emathinger, JM, Nelson, JW, Hagen, MW, Xiang, Z, Ortiz-Melo, DI, Mattocks, NK, Giani, JF, **Lee, D.**, Hartman, H., Ralph, DL, McDonough, AA, Coffman, TM, Gurley, SB. [Proximal tubule-derived ACE2 mitigates hypertension by attenuating intrarenal renin angiotensin system activation and preserving sodium homeostasis.](#) JCI Insight. Accepted: August 6, 2026.

Frei, CR, Brunfeldt, AT, McIntosh, S, Spike, AE, Moglen, DJ, **Lee, DL**, Sandberg, KL. [National Grand Rounds for Predoctoral and Postdoctoral Translational Science Trainees: The William Schnaper Visiting Scientist Grand Rounds \(WSVS-GR\) Program.](#) Journal of Clinical and Translational Science. Decision Received: July 28, 2026

Brunfeldt, AT, Hufft-Martinez, BM, Hatfield, JS, Nguyen-Novotny, MLH, Sandberg, K, **Lee, DL**, Sigala, DM. [NCATS TL1/T32 William Schnaper Visiting Scientist Program: Trainee Driven Mini-symposium.](#) Journal of Clinical and Translational Science. Accepted: July 10, 2026

Masenga SK, Desta S, Hatcher M, Kirabo A, **Lee DL**. How PPAR-alpha mediated inflammation may affect the pathophysiology of chronic kidney disease. Curr Res Physiol. 2024 Nov 14;8:100133. doi: 10.1016/j.crphys.2024.100133. PMID: 39665027; PMCID: PMC11629568.

Jain, A, Jung, HJ, Aubee, J, O'Neil, JN, Muhammad, LA, Khan, S, Thompson, K, Fluitt, MB, **Lee, DL**, Klinge, CM, Khundmiri SJ. Role of NHERF1 in MicroRNA Landscape Changes in Aging Mouse Kidneys. Biomolecules 2024, 14(9), 1048

Lee, DL, Williams, CR, Mathis, KW, Williams, JM, Reynolds, C, King AL. Tips on navigating the first year of graduate school for individuals from historically excluded backgrounds. American Journal of Physiology-Renal Physiology 2024 327:2, F245-F248

Mays A, Byars-Winston A, Hinton A Jr, Marshall AG, Kirabo A, August A, Marlin BJ, Riggs B, Tolbert B, Wanjalla C, Womack C, Evans CS, Barnes C, Starbird C, Williams C, Reynolds C, Taabazuing C, Cameron CE, Murray DD, Applewhite D, Morton DJ, **Lee DL**, Williams DW, Lynch D, Brady D, Lynch E, Rutaganira FUN, Silva GM, Shuler H, Saboor IA, Davis J, Dzirasa K, Hammonds-Odie L, Reyes L, Sweetwyne MT, McReynolds MR, Johnson MDL, Smith NA, Pittman N, Ajijola OA, Smith Q, Robinson RAS, Lewis SC, Murray SA, Black S, Neal SE, Andrisse S, Townsend S, Damo SM, Griffith TN, Lambert WM, Clemons WM Jr. [Juneteenth in STEMM and the barriers to equitable science.](#) Cell. 2023 Jun 8;186(12):2510-2517. doi: 10.1016/j.cell.2023.05.016. Epub 2023 Jun 8. Review. PubMed PMID: 37295396.

Austin Robinson, Nathaniel Jenkins, Sofia Sanchez, Karla Haack, **Dexter Lee**, Keisa Mathis, and Junie Warrington. Supporting and promoting Black physiologists: How can the APS help? American Journal of Physiology-Heart and Circulatory Physiology 2023 Jun 1;324(6):H782-H785. doi: 10.1152/ajpheart.00082.2023. Epub 2023 Mar 31. PubMed PMID: 37000608; PubMed Central PMCID: PMC10191122.

Martha D. Gay, Kimberly A. Bell, Emily A. Bujold, Marilla Geraci, **Dexter L Lee**, Kathryn Sandberg, Robert C. Speth. Educational initiative in an NCATS TL1 training program to address the impact of systemic racism on human health, biomedical research, and the translational scientist. *J Clin Transl Sci*. 2022 Nov 14;6(1):e145. doi: 10.1017/cts.2022.500. PMID: 36756075; PMCID: PMC9879894.

Haysetta D. Shuler, Elsie C. Spencer, Jamaine S. Davis, Steven Damo, Teresa I. Shakespere, Sandra A. Murray, **Dexter L. Lee**, Antentor Hinton, Jr. Learning from HBCUs: How to produce Black professionals in STEMM. *Cell*. 2022 Jun 15;S0092-8674(22)00718-8.doi: 10.1016/j.cell.2022.06.013. Online ahead of print. PMID: 35716668 DOI: [10.1016/j.cell.2022.06.013](https://doi.org/10.1016/j.cell.2022.06.013)

Syed J. Khundmiri, Carolyn M. Ecelbarger, Joycemary Amponsem, Hong Ji, Kathryn Sandberg, **Dexter L Lee**. [PPAR- \$\alpha\$ knockout leads to elevated blood pressure response to angiotensin II infusion associated with an increase in renal \$\alpha\$ -1 Na⁺/K⁺ ATPase protein expression and activity](#). *Life Sci*. 2022 May 1;296:120444. doi: 10.1016/j.lfs.2022.120444. Epub 2022 Mar 1. PubMed PMID: 35245523; PubMed Central PMCID: PMC8969884.

Sanjana Kurup, Regan Burgess, Fatou Tine, Ann Chahroudi, **Dexter L. Lee**. SARS-CoV-2 Infection and Racial Disparities in Children: Protective Mechanisms and Severe Complications Related to MIS-C. *J Racial Ethn Health Disparities*. 2021 Jul 13 : 1–7. doi: [10.1007/s40615-021-01092-7](https://doi.org/10.1007/s40615-021-01092-7) [Epub ahead of print]

Xiping Zhan, Sharon Dowell, Ying Shen, **Dexter L. Lee**. Chloroquine to fight COVID-19: A consideration of mechanisms and adverse effects? *Heliyon*. 2020 Sep;6(9):e04900.doi:10.1016/j.heliyon.2020.e04900. Epub 2020 Sep 9.

Glenda V Campos, Aline MA de Souza, Hong Ji, Crystal A West, Xie Wu, **Dexter L. Lee**, Brittany L Aguilar, Patrick A Forcelli, Rodrigo C deMenezes, K Sandberg. The Angiotensin Type 1 Receptor Antagonist Losartan Prevents. Ovariectomy-Induced Cognitive Dysfunction and Anxiety-Like Behavior in Long Evans Rats. *Cell Mol Neurobiol*. 2020 Apr;40(3):407-420.doi: 10.1007/s10571-019-00744-x. Epub 2019 Oct 21.

Aryana S. Jacobs, Hakeem O. Ayinde and **Dexter L. Lee**. **Inflammatory Biomarkers and Cardiovascular Complications in Sickle Cell Disease: A Review.** *Current Cardiovascular Risk Reports*. October 2013, Volume 7, Issue 5, pp 368-377. DOI 10.1007/s12170-013-0325-x

Katherine D LaClair, Kebreten F Manaye, **Dexter L Lee**, Joanne S Allard, Alena V Savonenko, Juan C Troncoso and Philip C Wong **Treatment with bexarotene, a compound that increases apolipoprotein-E, provides no cognitive benefit in mutant APP/PS1 mice.** *Molecular Neurodegeneration* June 2013, 8:18

- Dexter L. Lee**, Tracy Bell, Jenny Bhupatkar, Glenn Solis and William J. Welch, **Adenosine A1-Receptor Knockout Mice have a Decreased Blood Pressure Response to a low dose of Angiotensin II infusion.** American Journal of Physiology - Regulatory, Integrative and Comparative Physiology 2012 Sep 15;303(6):R683-8. doi: 10.1152/ajpregu.00116.2012. Epub 2012 Aug 8., PMID: 22874421
- Justin L. Wilson, Rong Duan, Ahmed El-Marakby, Abdulmohsin Alhashim and **Dexter L. Lee**. **Peroxisome Proliferator Activated Receptor- α agonist slows the progression of hypertension, attenuates plasma interleukin-6 levels and renal inflammatory markers in Angiotensin II infused mice.** PPAR Research vol. 2012; 2012 Manuscript: 645969, PMC3405818, PMID: 22848208
- Dexter L. Lee** and Justin L. Wilson. **Urine from Sexually Mature Intact Male Mice Contributes to Increased Cardiovascular Responses during Free-Roaming and Restrained Conditions.** ISRN Veterinary Science, vol. 2012, Article ID 185461, 7 pages, 2012. doi:10.5402/2012/185461, PMC3400049, PMID: 22822459
- Dexter L. Lee**, Justin L. Wilson, Rong Duan, Tamaro Hudson, and Ahmed El-Marakby. **Peroxisome Proliferator-Activated Receptor- α Activation Decreases Mean Arterial Pressure, Plasma Interleukin-6, and COX-2 While Increasing Renal CYP4A Expression in an Acute Model of DOCA-Salt Hypertension.** PPAR Research, vol. 2011, Article ID 502631, 7 pages, 2011. doi:10.1155/2011/502631, PMID:22190908
- M. Rojas, W. Zhang, **D. Lee**, M. Romero, D.T. Nguyen, M. Al-Shabrawey, N.T. Tsai, G. Liou, M.W. Brands, R.W. Caldwell, R.B. Caldwell. **Role of IL-6 in Angiotensin II-induced Retinal Vascular Inflammation.** Invest Ophthalmol Vis Sci. 2010;51:1709–1718) DOI:10.1167/iovs.09-3375, PMC2868419, PMID: **19834028**
- Dexter L. Lee**, Sturgis LC, Labazi H, Osborne JB, Fleming C, Pollock JS, Manhiani M, Imig JD, Brands MW. **Attenuated Mean Arterial Pressure in Interleukin-6 Knockout Mice during Angiotensin II Hypertension and a high-salt diet.** Am J Physiol Heart Circ Physiol. 2006 Mar;290(3):H935-40. Epub 2005 Nov 11.
- Dexter L. Lee**, Amy Boriskie, Janet A Hobbs, Jennifer M. Sasser, David M. Pollock, Pamela K. Carmines and Jennifer S. Pollock. **Post-translational regulation of NO synthase in the renal medulla of diabetic rats.** Am J Physiol Renal Physiol. 2005 Jan;288(1):F82-90.
- Dexter L. Lee**, Webb, R.C., Brands, M.W. **Sympathetic and Angiotensin Dependent Hypertension During Cage-Switch Stress in Mice.** American Journal of Physiology, Regulatory, Integrative and Comparative Physiology. 2004; 287(6):R1394-8.
- Dexter L. Lee**, Romulo Leite, Cassandra Fleming, Jennifer S. Pollock, Webb, R.C., Brands, M.W. **The Hypertensive Response to Acute Stress is Attenuated in Interleukin-6 Knockout Mice.** Hypertension. 2004; 44(3):259-63.
- Dexter L. Lee**, Webb, R.C. Jin L. **Hypertension and RhoA/Rho-kinase Signaling in**

the Vasculature: Highlight from the Recent Literature. Hypertension
2004 Dec;44(6):796-9. Epub 2004 Nov 1. Review.

Dexter L. Lee, Wamhoff, B., Katwa, L., Reddy, H.K., Voelker, J.L., Dixon, J., Sturek, M.
**Increased Endothelin-Induced Ca^{2+} Signaling, Tyrosine Phosphorylation,
and Coronary Artery Disease in Diabetic Dyslipidemic Swine Are Prevented
by Atorvastatin.** JPET Jul; 306(1): 132-140, 2003.

Dexter L. Lee and Sturek, M. **Endothelin-induced myoplasmic Ca^{2+} responses and
tyrosine phosphorylation in coronary smooth muscle.** Journal of
Cardiovascular Pharmacology 2002, 40(1):18-27.

Book Chapter:

Brands MW, **Lee DL**: Psychosocial stress and hypertension. Chapter 42. In Lip GYH,
Hall JE (eds): Comprehensive Hypertension. Philadelphia, Elsevier, 2007, pp. 501-511.

Abstracts (selected):

Bouchelion, M., Mervin, A., **Lee, D.L.**, Allard, J.S., **Effect of Fenofibrate and Apocynin
on SOD and NOX Expression in the Brains of Mice with Ang II-induced
Hypertension.** Experimental Biology 2014.

Doh, K., Hudson, T. **Lee, D.L.**, **Peroxisome proliferator activated receptor – alpha
regulation of sodium transport mechanisms in human primary renal
proximal tubule epithelial cells during acute Angiotensin II treatment.**
Experimental Biology 2013.

Wang, D., Aslam, S., Hu, H., Malencon, J.K., Verbesey, J., **Lee, D.L.**, Young, M. and
Wilcox, C.S. **Microvascular Endothelial Dysfunction and Reduced Arginine:
ADMA in Women with HIV.** XIX International AIDS Conference
2012.

Ongele, M., Duan, R. and **Lee, D.L.** **The role of plasma IL-6 and IL-10 during DOCA-
salt Hypertension.** Experimental Biology 2012

Wilson, J.L., Duan, R. and **Lee, D.L.** **Peroxisome Proliferating Activated Receptor-
 α regulates NOX-2 and SOD expression in the heart during Angiotensin II
Hypertension.** Experimental Biology 2012

Wilson, J.L., Duan, R. and **Lee, D.L.** **Alpha₁ Adrenergic-mediated Vasoconstriction
is Attenuated in Peroxisome Proliferator Activated Receptor- α knockout
mice during Angiotensin II Hypertension.** FASEB J March 17, 2011
25:1027.19. Experimental Biology 2011.

Lee, D.L., Wilson, J.L., Duan, R., Hudson, T. and El-Marakby, A. **PPAR- α Activation
Decreases Pro-Inflammatory Cytokines in the Plasma, while increasing
Renal Expression of CYP4A and Decreasing COX2.** FASEB J March 17,
2011 25:640.41. Experimental Biology 2011.

Wilson, J.L., Duan, R. and **Lee, D.L.** **PPAR-alpha attenuates alpha-1 adrenergic mediated vasoconstriction during Angiotensin II induced hypertension in mice.** Howard University College of Medicine Research Day 2011.

Lee, D.L., Wilson, J.L., Duan, R., Hudson, T., El-Marakby, A. **PPAR-alpha decreases pro-inflammatory cytokines in the plasma, while Increasing renal expression of CYP4A and decreasing COX2.** Howard University College of Medicine Research Day 2011.

Wilson, J.L., Duan, R., Hudson, T., **Lee, D.L.** **Fibrate Reduces Mean Arterial Pressure and Inflammatory Mediators in the Plasma during DOCA-Salt Hypertension.** American Heart Association Council for High Blood Pressure Research 2010.

Wilson, J.L. and **Lee, D.L.**, **Interleukin-10 Attenuates the Pressor Response to a Low-Dose Angiotensin II.** American Physiological Society: Inflammation, Immunity and Cardiovascular Disease Meeting 2010

Wilson, J.L. and **Lee, D.L.** **Peroxisome proliferator-activated receptor- α Reduces Mean Arterial Pressure by Renal-Dependent Mechanisms during a Slow Pressor Dose of Angiotensin II.** Experimental Biology Meeting 2010.

Lee, D.L. **Mean arterial pressure is increased by interleukin-6 during a model of reduced renal mass.** Howard University College of Medicine Research Day 2010

Wilson, J.L. and **Lee, D.L.** **Peroxisome proliferator activated receptor – alpha reduces mean arterial pressure by renal-dependent mechanisms during a slow pressor dose of Angiotensin II.** Howard University College of Medicine Research Day 2010.

Wilson, J.L. and **Lee, D.L.** **Pheromones Produced by the Intact Male Mouse causes a Hypertensive Response during Restrained and Free-Roaming conditions.** Experimental Biology Meeting 2009.

Lee, D.L. and Welch, W. **Adenosine A1-receptor knockout mice have a decreased blood pressure response to low dose Angiotensin II (Ang II) infusion.** Experimental Biology Meeting 2007.

Lee, D.L., Solis G.E. and Welch, W.J. **Interleukin-6 Regulates Renal Hemodynamics During Salt-Sensitive Hypertension.** American Heart Association Council for High Blood Pressure Research Meeting 2007.

Banes-Berceli, A , Ketsawatsomkron, P, Marrero, M.B., **Lee, D.L.**, Brands, M.W. **Characterization of the expression and activation of the members of the JAK**

- family in medulla, cortex and glomerular mesangial cells (GMC) in PPAR α knock-out (KO) and wild-type (WT) mice. Experimental Biology 2006.
- Lee, D.L.**, Lane K, Labazi H, Fleming C, Brands M.W. IL-6 Knockout Significantly Attenuates AngII Hypertension, but not its Salt Sensitivity. Experimental Biology 2006.
- Lee, D.L.**, Sturgis LC, Pollock JS, Brands MW. IL-6 Infusion Increases Mean Arterial Pressure in Mice with Reduced Renal Mass. Experimental Biology 2006.
- Lee, D.L.**, Lane K, Brands MW. Reduced Pressor Response to L-NAME in Interleukin-6 Knockout Mice. Experimental Biology 2005
- Lee, D.L.**, J.S. Pollock, M.W. Brands. Chronic AngII Infusion Causes Greater Hypertension and Increased IL-6 in Mice with Knockout of Peroxisome Proliferator Activated Receptor- α . Accepted in the American Heart Association Council of High Blood Pressure Research Meeting, September 2005.
- Lee, D.L.**, J.B. Osborne, Jr, C. Fleming, H. Labazi, R. C. Webb, M. W. Brands. Attenuated Mean Arterial Pressure in Interleukin-6 Knockout Mice during Angiotensin II hypertension and a high-salt diet. Submitted to the American Heart Association Council of High Blood Pressure Research, July 2004.
- Lee, D.L.**, R.C. Webb, M.W. Brands. Angiotensin II-induced Hypertension Attenuates the Pressor Response to Psychosocial Stress in Cytokine Knockout Mice. Experimental Biology, April 2004.
- Lee, D.L.**, T. Cooney, T.M. Mills R.C. Webb, M.W. Brands. The Hypertensive Response to the Cage-Switch Model of Acute Psychosocial Stress in Male Mice depends on Male Sex Hormones. Experimental Biology, April 2004.
- Danielly, D., **D. Lee**, L. James, R.C. Webb. Rosiglitazone, A Peroxisome Proliferator Activated Receptor-Gamma (PPAR- γ) Inhibits Contractile Activity in Mouse Aortic Rings. Undergraduate Consortium, University of Maryland, October 2003
- Lee, D.L.**, R.C. Webb, M.W. Brands. Attenuated Pressor Response to Psychosocial Stress in Cytokine Knockout Mice. Council for High Blood Pressure Research, September 2003.
- Lee, D.L.**, R.C. Webb, M.W. Brands. Knockout of interleukin-6 (IL-6) and not tumor necrosis factor- α (TNF- α) significantly attenuates the hypertensive response to acute psychosocial stress. American Physiological Society Conference: Understanding Renal and Cardiovascular Function through Physiological Genomics, October May 2003.
- Lee, D.L.**, R.C. Webb, M.W. Brands. Knockout of Interleukin-6 significantly attenuates the hypertensive response to psychosocial stress. Experimental Biology, April

2003.

Lee, D.L., R.C. Webb and M.W. Brands, A Novel Model of Cage-Switch-Induced Psychosocial Stress in Mice Causes Marked Hypertension that is Inhibited by Atenolol. Experimental Biology Meeting (April 2003).

Mehta, S.M., **D.L. Lee**, J.M. Oh, D. Marable, R.C. Webb, IL-6 is an endothelium-dependent vasoconstrictor and potentiates angiotensin II induced constriction in the rat aorta. Inter-American Society of Hypertension (April 2003).

Lee, D.L., J.C. Roscow, D.M. Pollock, P.K. Carmines, J.S. Pollock. Nitric Oxide Synthase (NOS) Activity in the Renal Medulla of Diabetic Rats. Experimental Biology Late Breaking Abstract, February 2002.

Lee, D.L., D.M. Pollock and J.S. Pollock. Endothelin-1 Stimulates Nitric Oxide Production in Cultured Inner Medullary Collecting Duct Cells. FASEB Renal Microcirculatory Hemodynamics Meeting, June 2001.

Grant/Research Support

Relevant Grant Support Current & Completed Support

Current:

NIH/NCATS 5TL1TR001431-10 (Contact PI: Sandberg, Multiple PI: Lee).

08/28/15 – 03/31/26

Translational Biomedical Science Training Grant

The Georgetown-Howard Universities Center for Clinical and Translational Science (GHUCCTS) institutional translational biomedical science (TBS) program capitalizes on the large diversity of potential mentorship in clinical and translational research offered through GHUCCTS institutions including faculty from Georgetown and Howard Universities and the GHUCCTS partnering institutions, MedStar Health Research Institute and the Washington, DC Veterans Administration. The overall goal of the TBS program is to prepare predoctoral students and postdoctoral fellows to serve as leaders in forming critical links in advancing the translation of basic science in to improved outcomes for health, aging, and disease.

NCATS/NIH UL1-TR001409 (MPI: Verbalis/Mellman/Gondré-Lewis)

08/28/15 – 03/31/26

Georgetown-Howard Universities Center for Clinical and Translational Science

The Georgetown-Howard Universities Center for Clinical and Translational Science (GHUCCTS) is a primary partnership of Georgetown University (GU) and Howard University (HU), with 3 affiliated institutions: MedStar Health Research Institute (MHRI), Oak Ridge National Laboratory (ORNL), and the Washington DC Veterans Affairs Medical Center (DCVAMC).

Role: Co-Investigator

NIH/NIMHD G12MD007597 (PI: Southerland)

07/01/19-06/30/26

Biomedical Infrastructure for Health Disparities Research

The Howard University (HU) biomedical research goals include the pursuit of the resolution of diseases that disproportionately affect African Americans and to encourage multidisciplinary approaches to research. Critical to achieving these goals is the availability of specialty core facilities, enhanced opportunities for collaborative research, and enhanced professional development opportunities for the HU investigator community. The goal of professional development key activity is to enhance research expertise, training and mentoring among the faculty and postdoctoral fellows engaged and interested in health disparities research.

Role: Co-Director

Completed

NCATS GHUCCTS Pilot Award UL1TR000101

08/01/15-06/01/24

Role of PPAR- α in Regulation of the Na⁺-K⁺2Cl⁻ Co-transporter (NKCC2) Activity and Excretion

The goal of this project is to utilize complementary approaches ranging from the cell level to human studies to determine whether PPAR- α agonism may be protective against over-activity of NKCC2, and if urinary NKCC2 is a marker for over-activity of NKCC2, and can be down-regulated by PPAR- α agonists.

Role: Multiple Principal Investigator

NCATS/NIH KL2-TR001432 (PI: Umans)

08/28/15 – 01/19/19

Mentored Research Career Development Program

A Mentored Career Development program, directed toward junior faculty from any department, school, or unit of Georgetown University, Howard University, or MedStar Health, all partners in the Georgetown-Howard Universities Center for Clinical and Translational Science (GHUCCTS), who seek to develop interdisciplinary research careers in translational team science. We request support for 3 scholar positions each year, in accord with our status as a “small” CTSA Hub. We draw upon a richly-qualified applicant pool that is diverse with respect to prior scientific and professional training, discipline, translational stage(s), research focus, gender, race, and ethnicity.

Role: Associate Director

NHLBI/NIH 5K01HL092593-05

(PI: Lee)

6/20/08–5/13/13

The Role of PPAR- α during Angiotensin II Hypertension

One out of every four adults in the United States have hypertension and is at increased risk for the development of end-stage renal disease. Although great strides have been made in providing more effective treatments for hypertension, chronic elevation in blood pressure still results in progressive renal damage. Recent reports indicate that the pro-inflammatory cytokine, interleukin-6 (IL-6), plays an important role in renal injury and

chronic hypertension. Peroxisome proliferator-activated receptor (PPAR)-alpha is a nuclear hormone-activated receptor and transcription factor that inhibits, IL-6 production, oxidative stress and has been implicated in blood pressure regulation. In the kidney, PPAR-alpha is expressed most abundantly in the proximal tubule segment of the nephron. However, the mechanism by which PPAR-alpha regulates renal-dependent chronic hypertension is not well-understood. We present new data in our PPAR-alpha knockout (KO) mouse model of chronic Angiotensin II (Ang II)-induced hypertension that shows an increased pressor response and plasma IL-6 when compared to wild-type (WT) controls.

NIH/NHLBI T32 HL066993 (PI: John D. Catravas)

07/01/2003-06/30/2006

Training Program in Integrative Cardiovascular Biology

This major goal of this grant was to support my stipend and related training costs for my postdoctoral research on interleukin-6 plays in stress-induced and long-term hypertensive responses and retinal vascular inflammation.

Role: Postdoctoral Fellow

Seminars and Presentations of Scientific Papers

2023	Vanderbilt University, Clinical Pharmacology Grand Rounds
2022	University South Carolina Cardiovascular Program
2022	Health Disparities in Cardiovascular Diseases, APS Summit
2021	Michigan State University, Department of Pharmacology
2021	University of Central Arkansas, Department of Biology
2020	Howard University, Department of Pharmacology, October 10, 2020
2019	Howard University, Department of Medicine, Grand Rounds, March 12, 2019
2016	Greater Washington D.C. area Chapter of the American Physiological Society, April 12, 2016
2013	Louisiana State University, Department of Physiology, September 14, 2013
2012	Office of Minority Health Research Coordination of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) undergraduate research symposium and high school symposium panelist August 9 th and 14 th , 2012
2012	Department of Medicine Grand Rounds Seminar, Howard University July 24, 2012
2010	Department of Pharmacology, Howard University College of Medicine
2009	College of Medicine Dean's Interdisciplinary Research Conference, September 21, 2009
2008	Department of Medicine Grand Rounds Seminar, Howard University September 30, 2008.
2008	The University of Akron, Department of Biology Seminar, March 6, 2008
2007	Invited plenary speaker for the American Physiological Society Professional Skills Training Making Scientific Presentations: Critical First Step March 8-11.
2006	Georgetown University, Nephrology and Hypertension, December 5, 2006
2006	Howard University, Department of Physiology and Biophysics, October 30, 2006
2006	Indiana University School of Medicine, Department of Cellular and

	Integrative Physiology Seminar to students in the T-35 Program, July 12, 2006
2006	Medical College of Georgia Department of Physiology: The Role of Interleukin-6 during Chronic Hypertension
2005	Auburn University-Montgomery Department of Biology: The Role of Interleukin-6 during Acute and Chronic Hypertension
2005	University of Southern Mississippi Department of Human Performance Recreational Studies: The Role of Interleukin-6 during Acute and Chronic Hypertension
2005	Xavier University-New Orleans Department of Biology: The Role of Interleukin-6 during Acute and Chronic Hypertension
2004	Medical College of Georgia Department of Physiology: The Role of Interleukin-6 during Acute and Chronic Hypertension
2004	Minority Research Training Forum. Title: Attenuated Pressor Response to Cytokine Knockout Mice.
2003	Medical College of Georgia Department of Physiology. Title: Attenuated Pressor Response to Cytokine Knockout Mice.
2003	North Carolina Central University Cardiovascular Research Center. Title: Attenuated Pressor Response to Cytokine Knockout Mice.
2002	Medical College of Georgia Vascular Biology Center. Title: Nitric Oxide Synthase Activity in the Renal Medulla of Diabetic Rats.
2002	Howard University Department of Physiology and Biophysics. Nitric Oxide Synthase Activity in the Renal Medulla of Diabetic Rats
2001	Medical College of Georgia Graduate Research Day Post-Doctoral Associate/Fellow Oral Presentations. Title: Endothelin-1 Increases Intracellular Ca^{2+} Concentration and Stimulates Nitric Oxide Production in Cultured Inner Medullary Collecting Duct Cells.
1999	Medical College of Georgia Seminar
1999	Vanderbilt University Seminar
1995-1999	University of Missouri Department of Physiology Seminars

Service

2007	Howard University College of Medicine Research Committee
2008	Howard University College of Medicine Research User Group Committee
2008	Judge for the 35 th Annual Student Research Symposium

Oral Presentation at National Meeting(s)

2003	Experimental Biology: Knockout of Interleukin-6 significantly attenuates the hypertensive response to psychosocial stress. Genetic Animal Models of Hypertension Symposium
2017	Experimental Biology: "The Many Facets of a Teaching Career", Sponsored by the Careers in Physiology Committee Symposium
2017	Experimental Biology: "Sodium retention in the metabolic syndrome- new and old players" symposium, Sponsored by WEH Committee.

Teaching Responsibilities

Howard University

Year	Role	Course	Course Level	Contact Hrs
2009-	Unit Leader for Renal	Dept. of Physiology taught courses	Allied Health, Nursing, Dental, Graduate and Medical	TBD
2006-	Lecture	General Physiology	Allied Health, Pharmacy & Undergraduate Students	34
2009	Reviewer	General Physiology	Allied Health, Pharmacy & Undergraduate Students	7
2007-2017	Lecture	Biomedical Science I	Pharmacy Students	13
2008-	Lecture	Medical Physiology	Medical Students	8
2008-	Lecture	Renal Physiology	Dental Students	8
2009	Co-Coordinator	Summer Directed Study Program for Unit 3B.	Medical Students	6
2009	Facilitator	Medical Physiology: Physiology of Motor Reflexes Laboratory	Medical Students	2
2009	Facilitator	Small Groups for Structure and Function	Medical Students	8
2010	Lecture	Homeostasis	Graduate Students	9

Students Mentored/Supervised**Mentored APS/NIDDK Minority Travel Fellows during Experimental Biology****Date**

Jessica M. Bryant, University of New Mexico

2004

Mesia Moore Steed, University of Louisville

2005

Javier A. Pagan Gutierrez, Ponce School of Medicine

2006

Name; Training Status, Training Support**Dates**Jerome Calloway; B.S. candidate
Undergraduate Honors Research Project

1/97-1/98

Raul Camacho; B.S. candidate;

Undergraduate Honors Research Project	1/99-8/99
Raul Camacho; B.S. candidate; McNairs Scholars Program	9/99-1/00
Danielle Danielly; B.S. candidate; Paine College	6/03-8/03
LaShon Sturgis; Ph.D. candidate: Medical College of Georgia	8/03-9/03
Thomas Cooney; M.D. candidate: Medical College of Georgia	6/03-9/03
James B. Osborne, Jr.; M.D. candidate: Medical College of Georgia	6/04-8/04
Eric Clark; B.S. candidate; Paine College	6/05-8/05
Praveen Pollaverapu; M.D. candidate: University of Georgia	10/05-04/06
Alanah Webb; B.S. candidate; Howard University	02/08-09/08
Jumoke Akinola; Oxon Hill High School Student; Research Practicum	01/08/09- 05/08/09
Laquetta Hawkins; McNair Research Program; Howard University	6/10 – 8/10
Justin L. Wilson, Ph.D. candidate; Howard University	11/08-8/11
Successfully completed and turned in all of the requirements for the Ph.D.	7/29/2011
Michael On'Gele; B.S. LSAMP Program Howard University Duke University Medical School Graduate	8/11- 5/13
Jasmine Blackmon, B.S. Howard University	8/11 – 5/13
Kwame Doh, B.S., M.S. STEP-UP University of Maryland-Baltimore County	7/12 – 9/12

Georgetown University

Abdul Ekiyoyo; B.S. Candidate
LSAMP Program
Howard University
8/12 – 8/13

Darah Wright; M.D. Candidate
Howard University
8/12 – 8/14

Kellie Hunnicut; B.S. Candidate
Howard University
8/12 – 8/14

Makeeva Walker; B.S. Candidate
Howard University
8/12 - 8/14

Shazzanne Pennant, B.S.
Howard University
8/12 – 8/14

Nia Williams; B.S. Candidate
Xavier University of New Orleans
6/15 – 8/15

Ugoeze Ananaba; B.S. Candidate
NIH Aging Grant Student Fellow
Howard University
6/15 – 8/17

Laura Campbell; B.S. Candidate
Howard University
8/15 – 8/17

Onyeomachi Iheanacho; B.S. Candidate
Howard University
8/15 – 8/16

Franklin Duruobasa; M.D. Candidate
Howard University
8/16 – 5/18

Brandon Albert; M.D. Candidate
Howard University
8/16 – 5/19

Michael Smith; M.D. Candidate
Howard University
8/17 – 5/20

Austin Sampson; B.S. Candidate
Howard University
8/18 – 8/19

Harvey Johnson; M.D. Candidate
Howard University
8/18 – 5/19

Nina Brown; B.S. Candidate
Howard University
8/18 –

Naima Batson; B.S. Candidate
Howard University
8/18 –

Nowah Afangbedji; Ph.D. Howard University	8/19 -11/23
Laiah Tate; B.S. Candidate Howard University	6/22 -05/24
Mark Hatcher; Ph.D. Candidate Howard University	8/21-
Zora Brantley; BS/MD Student Howard University	6/24-
Kinnon Ward; Medical Student Howard University	6/24-

References:

Kathryn L. Sandberg, PhD
Professor and Vice Chair for Research
Department of Medicine
Director, Center for the Study of Sex Differences
Department of Nephrology and Hypertension
Director, Predoc and Postdoc Program in
Translational Biomedical Science
Georgetown University Medical Center
Washington, DC 20057
e-mail: sandberg@georgetown.edu

R. Clinton Webb, PhD
Professor
Biomedical Engineering SmartState
Chair in Biofabrication
University of South Carolina
Columbia, SC 29208
e-mail: clinton.webb@uscmed.sc.edu

Stephanie Watts, PhD
Professor
Department of Pharmacology and Toxicology
Michigan State University
East Lansing, MI 48824
e-mail: wattss@msu.edu

Joyce M. Richey, PhD
Professor of Clinical Physiology & Neuroscience and Medical Education
Associate Dean for Student Engagement and Cultural Affairs

University of Southern California
Los Angeles, CA 90033
e-mail: jrichey@usc.edu

Jan M. Williams, PhD
Professor and Graduate Program Director
Department of Pharmacology and Toxicology
University of Mississippi Medical Center
Jackson, MS 39216
e-mail: JMWilliams5@umc.edu