

AARON J. TRASK, Ph.D., F.A.H.A.

Address **Business** Center for Cardiovascular Research,
The Research Institute at Nationwide Children's Hospital
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Columbus, Ohio 43205
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EDUCATION:

- 2009-2013 **Postdoctoral Fellowship – Cardiovascular Physiology & Pharmacology**
Center for Cardiovascular and Pulmonary Research
The Research Institute at Nationwide Children's Hospital
Columbus, Ohio
Pamela A. Lucchesi, Ph.D., Mentor
Project Title: "Coronary Arteriole Remodeling in Type 2 Diabetes"
- 2004-2008 **Doctor of Philosophy in Physiology & Pharmacology, December 2008**
Wake Forest University Graduate School of Arts and Sciences
Winston-Salem, North Carolina
Carlos M. Ferrario, M.D., Mentor
Dissertation Title: "New Advances on the Biochemical Pathways in the Renin-Angiotensin System in Hypertension and their Role in Cardiac Structure and Function"
- 1999-2003 **Bachelor of Science in Biology, with Minors in Biochemistry and Biomedical Sciences, with Distinction, May 2003**
Ohio Northern University
Ada, Ohio

ACADEMIC APPOINTMENTS:

- 2016-Present Adjunct Assistant Professor, Department of Physiology and Cell Biology
The Ohio State University College of Medicine
Columbus, Ohio
- 2016-Present Member, Graduate Faculty, Biomedical Engineering Graduate Program
The Ohio State University
Columbus, Ohio
- 2016-Present Assistant Professor (Tenure Track), Department of Pediatrics
The Ohio State University College of Medicine
Columbus, Ohio

- 2015-Present Member, Graduate Faculty, Integrated Biomedical Science Graduate Program
The Ohio State University
Columbus, Ohio
- 2015-Present Investigator, Dorothy M. Davis Heart & Lung Research Institute
The Ohio State University Wexner Medical Center
Columbus, Ohio
- 2013-Present Principal Investigator, Center for Cardiovascular Research and The Heart Center
The Research Institute at Nationwide Children's Hospital
Columbus, Ohio
- 2013-2016 Research Assistant Professor, Department of Pediatrics
The Ohio State University College of Medicine
Columbus, Ohio

HONORS AND AWARDS:

- 2016 APS-TPS Joint Meeting Award, Dublin, Ireland
- 2015 Junior Faculty Citizenship Award, Department of Pediatrics, The Ohio State University College of Medicine
- 2014 Elected Fellow, American Heart Association Council for High Blood Pressure Research (Barbara J. Alexander, Ph.D., F.A.H.A., nominator)
- 2012 Research Recognition Award, Cardiovascular Section, American Physiological Society
- 2012 Best Poster Award – Postdoctoral Fellow Category, The Research Institute at Nationwide Children's Hospital Research Day
- 2010 Caroline tum Suden/Frances A. Hellebrandt Professional Opportunity Award, American Physiological Society
- 2010 American Physiological Society Logo Design Award Winner
- 2009 WFU Department of Physiology & Pharmacology Sundberg Memorial Award
- 2009 Marquis Who's Who Among Executives and Professionals
- 2008 Merck New Investigator Award, American Heart Association Council for High Blood Pressure Research
- 2007 American Heart Association Hypertension Summer School Travel Award
- 2006-2007 Wake Forest University Graduate School Alumni Travel Award
- 2000-2003 Ohio Northern University Arts & Sciences Scholarship
- 1999-2003 Ohio Northern University Dean's List
- 1999-2003 Ohio Northern University Achievement/Leadership Award Scholarship
- 1999 Ohio Northern University Dean's Scholarship
- 1999 Tiffany Furgason Memorial Scholarship
- 1999 Arcanum Alumni Scholarship

PROFESSIONAL AFFILIATIONS:

- 2013-Present Microcirculatory Society
- 2011-Present American Association for the Advancement of Science
- 2009-Present American Society for Pharmacology and Experimental Therapeutics
Division of Cardiovascular Pharmacology

- 2009-2012: Public Relations/Communications Committee
2016-2017: Executive Committee
2016-2019: Benedict R. Lucchesi Young Scientist Award Committee
- 2005-Present American Heart Association
Council on Hypertension
2009-2013: Member, Trainee Advocacy Committee
2013-2016: Chair, Trainee Advocacy Committee
(Proposed, developed, and implemented Council on
Hypertension Advisory and Mentoring Program "CHAMP")
2013-2016: Member, Leadership Committee
2015: Programming Committee
National Committee on Committees
2014-2015: Early Career Subcommittee
AHA Scientific Meetings Summit Invitee/Participant, June 2014
- 2005-Present American Physiological Society (APS)
Cardiovascular Section
2009-2012: NIH-NHLBI Liaison Committee
2012-2015: Awards Committee
2016-2019: Nominating Committee (Elected)
- 2005-2009 Consortium for Southeastern Hypertension Control
2001-2003 Beta Beta Beta National Biology Honor Society
2001-2003 Omicron Delta Kappa National Leadership Honor Society

TEACHING EXPERIENCE:

- 2012-Present Course Director/Lecturer, Advanced Cardiac Physiology Module for T32 and Cardiology Fellows, The Heart Center at Nationwide Children's Hospital, Columbus, Ohio.
- 2010-2012 Course Coordinator/Lecturer, NCH Center for Cardiovascular and Pulmonary Research Summer Course in Cardiovascular Sciences, Columbus, Ohio. Lectured on diabetes, metabolic syndrome, and cardiovascular physiology.
- 2007-2008 Lecturer, Winston-Salem State University Physical Therapy Program, Winston-Salem, North Carolina. Lectured on cardiac output, cardiovascular exercise physiology, hemorrhagic shock, and heart failure.
- 2006 Graduate Tutor, Wake Forest University Department of Physiology and Pharmacology, Winston-Salem, North Carolina
- 2001-2003 Student Tutor, Ohio Northern University Interpersonal Communications Skills Center, Ada, Ohio

INSTITUTIONAL ORGANIZATIONS/ACTIVITIES:

- 2013-Present Faculty Representative, Finance and Sponsored Projects Advisory Group, The Research Institute at Nationwide Children's Hospital
- 2009-2013 Founding Member, Nationwide Children's Hospital Postdoctoral Association
- 2006 Student Member, Wake Forest University Department of Physiology and Pharmacology Curriculum Committee
- 2004-2008 Student Member, Wake Forest University Graduate Student Association
- 2001-2003 Chairman, Judicial Board, Ohio Northern University
- 2000-2003 Chairman, Judicial Committee, Ohio Northern University Student

Senate

MENTORING:

- 2016-Present Hicham Labazi, PhD, Postdoctoral Fellow, Center for Cardiovascular Research, The Research Institute at Nationwide Children's Hospital
- 2016-Present Ben Scandling, Graduate Student, Department of Biomedical Engineering, The Ohio State University, Columbus, Ohio (Co-mentor with Dr. Keith Gooch)
- 2016 Abby Wilson, Undergraduate Student, Kenyon College, Gambier, Ohio
- 2016 Ian Sunyecz, Undergraduate Student, Biomedical Engineering, The Ohio State University, Columbus, Ohio
- 2015 Mariko Kanai, American Heart Association Summer Undergraduate Research Fellow (SURF), Columbia University, New York, New York
- 2015-2016 Olivia Clark, American Heart Association Summer Undergraduate Research Fellow (SURF), Williams College, Williamstown, Massachusetts
- 2015-Present Rachel Childers, Graduate Student, Department of Biomedical Engineering, The Ohio State University, Columbus, Ohio (Co-mentor with Dr. Keith Gooch)
- 2014 Sarah Wilson, Summer Undergraduate Student, Massachusetts Institute of Technology, Boston, Massachusetts
- 2013 Kevin Wu, Summer High School Intern, New Albany High School, New Albany, Ohio
- 2012 Brian Gablaski, Summer Graduate Student, University of Massachusetts, Lowell, Massachusetts
- 2012 Tori Evans, Summer Undergraduate Student, Miami University, Oxford, Ohio
- 2011-2012 Karen Tiago dos Santos, Visiting Graduate Student, University of Sao Paulo, Sao Paulo, Brazil
- 2010-2011 John Weibel, Summer H.S./Undergraduate Student, Case Western Reserve University, Cleveland, Ohio
- 2009 Kayla Kontul, Summer Undergraduate Student, University of the Cumberlands, Williamsburg, Kentucky
- 2008 Juanita Perez, Summer Undergraduate Student, Florida International University, Miami, Florida
- 2007 Charles Hall, Summer Undergraduate Student
- 2005 Jasdeep Dhaliwal, Summer Undergraduate Student
- 2005 Alexis Bailey, Summer Undergraduate Student, High Point University, High Point, North Carolina

COMMUNITY SERVICE:

- 2014-Present Corporate Captain, NCH Team, American Heart Association Heart & Stroke Walk, Columbus, Ohio
- 2014 CoGo Bike Share Program Volunteer
- 2012-Present Professionals Board and Mission Volunteer, American Heart Association
- 2009-Present Team Captain, American Heart Association Heart & Stroke Walk, Columbus, Ohio
- 2006-2007 Team Captain, American Heart Association Heart & Stroke Walk, Tanglewood Park, Clemmons, North Carolina

EDITORIAL ACTIVITIES:

Editorial Board:

- 2015-Present Pharmacological Research

Ad Hoc Reviewer For:

2015 Circulation Journal
2015 British Journal of Pharmacology
2014-Present Journal of Vascular Research
2013-Present Experimental Physiology
2013-Present Cardiovascular Toxicology
2013-Present Pediatric Research
2012-Present PLoS One
2012-Present Mechanisms of Ageing and Development
2012-Present Journal of Cardiovascular Pharmacology
2011 Pediatrics
2011-Present Diabetes
2010-Present Arteriosclerosis, Thrombosis, and Vascular Biology
2010-Present Cardiovascular Research
2009-Present Hypertension
2009-Present Life Sciences
2009 American Journal of Physiology - RICP
2008 Heart and Vessels
2008 Neuropharmacology
2008-Present Pharmacological Research
2008 Physiological Genomics
2008 Regulatory Peptides
2006 Cardiovascular Drug Reviews
2006-Present Circulation Research
2006-Present American Journal of Physiology - Heart and Circulatory Physiology

ABSTRACT GRADER:

2015-Present American Heart Association Scientific Sessions

GRANT REVIEWS:

2016 South Plains Foundation
2015 Indiana University Diabetes Research Center Pilot & Feasibility Grant Reviewer
2015 Ohio State University College of Medicine Dean's Strategic Bridge Funding Reviewer
2015 American Heart Association Strategically-Focused Research Network on Hypertension
2013-Present Full Member, American Heart Association - Bioengineering BSc1
2012 Czech Science Foundation
2010 Serbian Ministry of Science

GRANTS:

Active:

R00 HL116769 **Trask (PI)** 6/1/2016 – 5/31/2019
NIH/NHLBI Pathway to Independence Award
"Differential Macro- and Micro-Vascular Remodeling in Type 2 Diabetes and Metabolic Syndrome"

Goals: The major goals of this project are to determine the contribution of ECM and cellular stiffness of macro- and micro-vessels in type 2 diabetes and their impact of vascular smooth muscle phenotype.

Role: PI

Institutional Funds

Trask (PI)

7/15/2014 – 7/14/2019

Nationwide Children's Hospital

Goals: These funds are intended to help start the laboratory during my transition from mentored junior faculty to independent junior faculty.

Role: PI

15GRNT25790003

Gooch (PI)

7/1/2015 – 6/30/2017

American Heart Association

"Matrix Stiffness and Cardiac Fibroblast Phenotype"

Goals: This study will test the mechanisms by which substrate stiffness regulates cardiac fibroblast phenotype under both normal conditions and volume-overload heart failure.

Role: Co-I

Completed:

K99 HL116769

Trask (PI)

6/1/2014 – 5/31/2016

NIH/NHLBI K99/R00 Pathway to Independence Award

"Differential Macro- and Micro-Vascular Remodeling in Type 2 Diabetes and Metabolic Syndrome"

Goals: The major goals of this project are to determine the contribution of ECM and cellular stiffness of macro- and micro-vessels in type 2 diabetes and their impact of vascular smooth muscle phenotype.

Role: PI

Heart Center Research Pilot

Trask (PI)

5/1/2014 – 12/31/2015

The Heart Center at Nationwide Children's Hospital

"Mechanisms of Restenosis of Ductus Arteriosus in Patients Undergoing Complex Cardiac Surgery"

Goals: The overarching goal of this project is to determine the proteome expression profile of stenotic neointima relative to native patent ductus arteriosus in patients with hypoplastic left heart syndrome.

Role: PI

13SDG16840035

Trask (PI)

7/1/2013 – 5/31/2014

American Heart Association Scientist Development Grant

"Differential Macro- and Micro-Vascular Remodeling in Type 2 Diabetes"

Goals: The major goals of this project were to determine the contribution of ECM and cellular stiffness of macro- and micro-vessels in type 2 diabetes and their impact of vascular smooth muscle phenotype.

Role: PI

(Relinquished remainder of award due to overlap with NIH K99/R00)

T32HL098039

Lucchesi (PI)

1/1/2010 – 6/30/2012

NIH/NHLBI

Grant Title: "Training in Congenital and Acquired Heart Disease"

Project Title: "AGE/RAGE Associated Coronary Artery Remodeling in Type 2 Diabetes."

Goals: The major goals of this NRSA fellowship were to determine the influence of advanced glycation end products and their receptor (RAGE) in diabetes-associated vascular remodeling.

Role: Postdoctoral Fellow

0715249U

Trask (PI)

7/1/2007 – 12/30/2008

American Heart Association Mid-Atlantic Affiliate Predoctoral Fellowship

"The ACE2/Angiotensin-(1-7) Axis in Heart Failure"

Role: PI

BIBLIOGRAPHY: *Dr. Trask has a current H-Index of 13, meaning 13 of his publications have been cited 13 or more times, His publications have been cumulatively cited 916 times.*

BOOK CHAPTERS:

1. **Trask AJ**, Ferrario CM. "The Renin-Angiotensin System and the Heart." Textbook of Nephro-Endocrinology. Ed. Singh A. & Williams G. San Diego: Elsevier, 2016, In Press.
2. Lucchesi PA, **Trask AJ**, Childers RL, Goodwin RL. "Development of Myocardial Structure and Function." Moss and Adams' Heart Disease in Infants, Children, and Adolescents. Ed. Allen HG, Driscoll DJ, Shaddy RE, Feltes TF. Philadelphia: Lippincott Williams & Wilkins, 2016. 52-68.
3. **Trask AJ**, Varagic J, Ahmad S, Ferrario CM. "Angiotensin-(1-7), Angiotensin Converting Enzyme 2, and New Components of the Renin-Angiotensin System." Renin-Angiotensin System and Cardiovascular Disease. Ed. De Mello W.C. & Frohlich E.D. Totowa: Humana Press, 2009. 121-132. **(Corresponding Author)**
4. **Trask AJ**, Ferrario CM. "The Renin-Angiotensin System and the Heart." Textbook of Nephro-Endocrinology. Ed. Singh A. & Williams G. San Diego: Elsevier, 2009. 181-188.
5. Ferrario CM, Jessup JA, **Trask AJ**, Varagic J. "Basic Science in Hypertension." The Year in Hypertension. Ed. Townsend R. Oxford: Clinical Publishing, 2008. 1-17.

INVITED EDITORIALS/MANUSCRIPTS:

1. Thompson MD, **Trask AJ**. Developmental Origins of Cardiovascular Dysfunction: Doomed from Birth? *Circ J* 2016; 80:818-820. **(Corresponding Author)**
2. Gooch KJ, **Trask AJ**. Tissue-Specific Vascular Remodeling and Stiffness Associated with Metabolic Diseases. *Am J Physiol Heart Circ Physiol* 2015; 309:H555-556. PMID: 26188025. **(Corresponding Author)**
3. Husarek K, Zhang X, Shamhart PE, Lucchesi PA, **Trask AJ**. Isolation of Murine Coronary Vascular Smooth Muscle Cells. *J Vis Exp* 2016; May 30 (111). doi: 10.3791/53983. **(Corresponding Author)**

JOURNAL ARTICLES:

1. Childers RC, **Trask AJ**, Liu J, Zhang X, Gooch, KJ, Lucchesi PA. Comparison of in vivo pressure-volume mechanics and ex vivo biaxial mechanics in pressure- and volume-overload heart failure. Submitted.
2. Tiago dos Santos K, Halleck KE, Katz PS, Galantowicz ML, *Lucchesi PA, ***Trask AJ**. Mitochondrially-Derived, but not NADPH Oxidase-Derived, Superoxide Promotes Coronary

Arteriolar Remodeling in Type 2 Diabetic Mice. In Preparation. (***Authors contributed equally to this work; Corresponding Author**)

3. Lucchesi PA, Shindhelm A, Ray WC, Cismowski MJ, West TA, Katz PS, Delbin MA, **Trask AJ**. Receptor for Advanced Glycation End Products Promotes Coronary Resistance Microvessel Remodeling in Type 2 Diabetic db/db Mice: Influence of the Vascular Proteome. In Preparation. (**Corresponding Author**)
4. Lee YU, Lee A, Angheliescu M, Wilson S, Breuer CK, Lincoln J, **Trask AJ**. Dissociation of Aortic Stiffness and Diastolic Dysfunction in Type 2 Diabetic db/db Mice. In Preparation. (**Corresponding Author**)
5. Koenig SN, Feller J, Rowland P, Hor K, **Trask AJ**, Radtke F, Lilly B, Garg V. Loss of Notch1 Causes Ascending Aortic Aneurysms in Mice. *JCI Insight*, In Revision.
6. Thompson MD, Cismowski MJ, **Trask AJ**, Lallier SE, Graf AE, Rogers LK, Lucchesi PA, Brigstock DR. Enhanced Steatosis and Fibrosis in Liver of Adult Offspring Exposed to Maternal High Fat Diet. *Gene Expr* 2016; 17:47-59.
7. Graf AE, Lallier SW, Waidyaratne G, Thompson MD, Tipple TE, Hester ME, **Trask AJ**, Rogers LK. Maternal High Fat Diet Exposure is Associated with Increased Hepcidin Levels, Decreased Myelination, and Neurobehavioral Changes in Male Offspring. *Brain Behav Immun* 2016; 58:369-378.
8. Liu L, Kashyap S, Murphy B, Hutson D, Budish RA, Trimmer EH, Zimmerman MA, **Trask AJ**, Miller KS, Chappell MC, Lindsey SH. GPER Activation Ameliorates Aortic Remodeling Induced by Salt-Sensitive Hypertension. *Am J Physiol Heart Circ Physiol* 2016; 310:H953-H961. PMID: 26873963.
9. Husarek K, Katz PS, **Trask AJ**, Galantowicz ML, Cismowski MJ, Lucchesi PA. The Angiotensin Receptor Blocker Losartan Reduces Coronary Arteriole Remodeling in Type 2 Diabetic Mice. *Vasc Pharm* 2016; 76:28-36. PMID: 26133668.
10. Angheliescu M, Tonniges JR, Calomeni E, Shamhart PE, Agarwal G, Gooch KJ, **Trask AJ**. Vascular Remodeling and Mechanics in Decellularized Aortas and Coronary Resistance Microvessels in Type 2 Diabetic db/db Mice. *Ann Biomed Eng* 2015; 43:2760-2770. PMID: 25986954. (**Corresponding Author; Featured in [Research Now](#) – a research publication of Nationwide Children’s Hospital – in September 2015**).
11. Hibino N, Cismowski MJ, Lilly B, McConnell PI, Shinoka T, Cheatham JP, Lucchesi PA, Galantowicz ME, **Trask AJ**. Potential Molecular Mechanism of Retrograde Aortic Arch Stenosis in the Hybrid Approach to Hypoplastic Left Heart Syndrome. *Ann Thorac Surg* 2015; 100:1013-1020. PMID: 26163359. (**Corresponding Author**)
12. James I, Yi T, Tara S, Best C, Stuber AJ, Shah KV, Sugiura T, Lee YU, **Trask AJ**, Shinoka T, Breuer CK. Decellularized Pulmonary Valve Neotissue Formation in Mouse Heterotopic Heart Transplant Model. *Tissue Eng Part C Methods* 2015; 21:987-994. PMID: 25915105.
13. Zhao N, Koenig SN, **Trask AJ**, Lin CH, Hans CP, Garg V, Lilly B. miR-145 Regulates TGF β R2 Expression and Matrix Synthesis in Vascular Smooth Muscle Cells. *Circ Res* 2015; 116:23-34. PMID: 25323858.
14. Wilson K, Guggilam A, West TA, Zhang X, **Trask AJ**, Cismowski MJ, de Tombe P, Sadayappan S, Lucchesi PA. Effects of Myofilament Calcium Sensitizer on Left Ventricular Systolic and Diastolic Function in Rats with Volume Overload Heart Failure. *Am J Physiol Heart Circ Physiol* 2014; 307:H1605-H1617. PMID: 25260618.

15. Delbin MA, **Trask AJ**. The Diabetic Vasculature: Physiological Mechanisms of Dysfunction and Influence of Aerobic Exercise Training in Animal Models. *Life Sciences* 2014; 1:1-9. PMID: 24583313. **(Featured in [Pediatrics Online](#) – a clinical publication of Nationwide Children’s Hospital – in May 2014).**
16. Groban L, Wang H, Machado FSM, **Trask AJ**, Kritchevsky SB, Ferrario CM, Diz DI. Low Glial Angiotensinogen Improves Body Habitus, Diastolic Function, and Exercise Tolerance in Aging Male Rats. *Cardiovasc Endocrinol* 2012; 1:49-58. PMID: 23795309.
17. **Trask AJ**, Delbin MA, Katz PS, Zanesco A, Lucchesi PA. Differential Coronary Resistance Microvessel Remodeling between Type 1 and Type 2 Diabetic Mice: Impact of Exercise Training. *Vascul Pharmacol* 2012; 57:187-193. PMID: 22885305. **(Corresponding Author)**
18. **Trask AJ**, Katz PS, Kelly AP, Galantowicz ML, Cismowski MJ, West TA, Neeb ZP, Berwick ZC, Goodwill AG, Alloosh M, Tune JD, Sturek M, Lucchesi PA. Dynamic Micro- and Macro-Vascular Remodeling in Coronary Circulation of Obese Ossabaw Pigs with Metabolic Syndrome. *J Applied Physiol* 2012; 113:1128-1140. PMID: 22837170. **(Corresponding Author)**
19. Souza-Smith FM, Katz PS, **Trask AJ**, Stewart Jr. JA, Lord KC, Varner KJ, Vassallo DV, Lucchesi PA. Mesenteric Resistance Arteries in Type 2 Diabetic Mice Undergo Outward Remodeling. *PLoS One* 2011; 6:e2337. PMID: 21829729.
20. Katz PS, **Trask AJ**, Souza-Smith FM, Hutchinson KR, Lord KC, Stewart Jr. JA, Cismowski MJ, Varner KJ, Lucchesi PA. Coronary Arterioles in Type 2 Diabetic (db/db) Mice Undergo a Distinct Pattern of Remodeling Associated with Decreased Vessel Stiffness. *Basic Res Cardiol* 2011; 106:1123-1134. PMID: 21744279.
21. *Egan MJ, ***Trask AJ**, Baker PB, Lawrence J, Ladich E, Virmani R, Lucchesi PA, Hill SL, Galantowicz M, Cheatham JP, Kovalchin JP. Histopathologic Evaluation of Patent Ductus Arteriosus Stents after Hybrid Palliation of Hypoplastic Left Heart Syndrome. *Pediatric Cardiol* 2011; 32: 413-417. PMID: 21298382. **(*Authors contributed equally to this work)**
22. **Trask AJ**, Groban L, Westwood BM, Varagic J, Ganten D, Gallagher PE, Chappell MC, Ferrario CM. Inhibition of Angiotensin Converting Enzyme 2 Exacerbates Cardiac Hypertrophy and Fibrosis in Ren-2 Hypertensive Rats. *Am J Hypertens* 2010; 23:687-693. PMID: 20300067. **(Corresponding Author)**
23. Katz PS, **Trask AJ**, Lucchesi PA. Curcuminoids: Spicing Up Sympathovagal Tone. *Nutrition* 2009; 25: 879-880. PMID: 19539177.
24. Ferrario CM, Varagic J, Habibi J, Nagata S, Kato J, Chappell MC, **Trask AJ**, Kitamura K, Whaley-Connell A, Sowers JR. Differential Regulation of Angiotensin-(1-12) in Plasma and Cardiac Tissue in Response to Bilateral Nephrectomy. *Am J Physiol Heart Circ Physiol* 2009; 296: H1184-1192. PMID: 19218503.
25. Jessup JA, **Trask AJ**, Chappell MC, Nagata S, Kato J, Kitamura K, Ferrario CM. Localization of the Novel Angiotensin Peptide, Angiotensin-(1-12), in Heart and Kidney of Hypertensive and Normotensive Rats. *Am J Physiol Heart Circ Physiol* 2008; 294: H2614-H2618. PMID: 18408132.
26. Varagic J, **Trask AJ**, Jessup JA, Chappell MC, Ferrario CM. New Angiotensins. *J Mol Med* 2008; 86: 663-71. PMID: 18437333.
27. **Trask AJ**, Jessup JA, Chappell MC, Ferrario CM. Angiotensin-(1-12) is an Alternate Substrate for Angiotensin Peptide Production in the Heart. *Am J Physiol Heart Circ Physiol* 2008; 294: H2242-H2247. PMID: 18359898. **(Corresponding Author)**

28. **Trask AJ**, Ferrario CM. Angiotensin-(1-7): Pharmacology and New Perspectives in Cardiovascular Treatments. *Cardiovascular Drug Reviews* 2007; 25(2): 162-174. PMID: 17614938. **(Corresponding Author)**
29. **Trask AJ**, Averill DB, Ganten D, Chappell MC, Ferrario CM. Primary Role of Angiotensin Converting Enzyme 2 in Cardiac Production of Angiotensin-(1-7) in Transgenic Ren-2 Hypertensive Rats. *Am J Physiol Heart Circ Physiol* 2007; 292: H3019-H3024. PMID: 17308000. **(Corresponding Author)**
30. Ferrario CM, **Trask AJ**, Jessup JA. Advances in Biochemical and Functional Roles of Angiotensin-Converting Enzyme 2 and Angiotensin-(1-7) in the Regulation of Cardiovascular Function. *Am J Physiol Heart Circ Physiol* 2005; 289: H2281-H2290. PMID: 16055515.

ABSTRACTS:

1. Sunyecz I, **Trask AJ**. Coronary Resistance Microvessel Mechanical Properties Correlate to Non-Invasive Doppler Echocardiographic Measurements, Accepted, Physiology 2016, Dublin, Ireland, 2016.
2. McCallinhart PE, Clark OE, Kanai M, Lilly B, **Trask AJ**. Coronary Microvascular Smooth Muscle-Endothelial Cell Communication and Notch 3 Signaling in Type 2 Diabetes. Oral Presentation, Experimental Biology, 2016.
3. **Trask AJ**. High Fat Diet Induces Metabolic Syndrome-Like Phenotype Associated with Adverse Micro- and Macro-Vascular Remodeling. AHA Council on Hypertension Scientific Sessions, 2015.
4. Anghelescu M, Gooch KJ, **Trask AJ**. Increased Aortic Pulse Wave Velocity in Type 2 Diabetic db/db mice is Dependent on Blood Pressure. NHLBI K Award Investigators Meeting, 2014.
5. Hibino N, Cismowski MJ, Lilly B, McConnell PI, Shinoka T, Cheatham JP, Lucchesi PA, Galantowicz ME, **Trask AJ**. Potential Molecular Mechanism of Retrograde Aortic Arch Stenosis in the Hybrid Approach to Hypoplastic Left Heart Syndrome. Accepted for Oral Presentation, Society of Thoracic Surgeons Annual Meeting, 2015.
6. Anghelescu M, Gooch KJ, **Trask AJ**. Increased Aortic Pulse Wave Velocity in Type 2 Diabetic db/db mice is Dependent on Blood Pressure. AHA Council on Hypertension Scientific Sessions, 2014.
7. Gooch KJ, **Trask AJ**. Vascular Mechanics in Intact and Decellularized Micro- and Macro-Vessels from Type 2 Diabetic db/db Mice. NAVBO 2013.
8. **Trask AJ**, Cismowski MJ, Halleck KE, Lucchesi PA. Proteomic Analysis of Aortic and Coronary Resistance Microvessel Tissue in Type 2 Diabetic db/db Mice. *FASEB J* 2013; 27:924.11.
9. Halleck KE, Katz PS, Tiago dos Santos K, **Trask AJ**, Lucchesi PA. Angiotensin II and Mitochondrially-Derived Oxidative Stress Play a Role in Coronary Arteriole Remodeling in Type 2 Diabetes. *FASEB J* 2013; 27:1185.6.
10. Lewis K, Guggilam A, **Trask AJ**, Cismowski MJ, Lucchesi PA. The Myofilament Ca²⁺ Sensitizer Levosimendan Maintains Systolic Function in Volume Overload Heart Failure in Rats. *FASEB J* 2013; 27:879.6.
11. **Trask AJ**, Katz PS, Kelly AP, Cismowski MJ, Galantowicz ML, Neeb ZP, Alloosh M, Sturek M, Lucchesi PA. Differential Stiffness between Resistance Microvessels and Conduit Arteries in the Coronary Circulation of Ossabaw Swine with Metabolic Syndrome. *FASEB J* 2012; 26:1055.8. **(APS Cardiovascular Section Research Recognition Award)**

12. **Trask AJ**, Delbin MA, Katz PS, Zanesco A, Lucchesi PA. Aerobic Exercise Training Partially Reverses Inward Hypertrophic Coronary Arteriole Remodeling in Type 2 Diabetic db/db Mice. *FASEB J* 2012; 26:1138.21.
13. **Trask AJ**, Katz PS, Kelly AP, Cismowski MJ, Galantowicz ML, Neeb ZP, Alloosh M, Sturek M, Lucchesi PA. Differential Stiffness between Resistance Microvessels and Conduit Arteries in the Coronary Circulation of Ossabaw Swine with Metabolic Syndrome. Research Day, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio, 2012.
14. Delbin MA, **Trask AJ**, Cismowski MJ, Zanesco A, Lucchesi PA. Aerobic Exercise Training Improves Endothelial Dysfunction in Type 2 Diabetic Mice by Advanced Glycation End-Products-Independent Pathway. *Free Radical Biology and Medicine* 2011; 51:S61.
15. **Trask AJ**, Katz PS, Stewart Jr JA, Lucchesi PA. Receptor for Advanced Glycation End Products is Involved in Remodeling of Diabetic Coronary Arterioles. *FASEB J* 2011; 25:1025.11.
16. West TA, Zhang X, Hutchinson KR, **Trask AJ**, Cismowski MJ, Lucchesi PA. AGE/RAGE Interplay in Fibroblast Mediated Diabetic ECM Remodeling Using 3D Collagen Matrices. Keystone Extracellular Matrix and Cardiovascular Remodeling Symposium, Tahoe City, California, 2011.
17. **Trask AJ**, Katz PS, Neeb ZP, Alloosh M, Sturek M, Lucchesi PA. Inward Coronary Artery Microvessel Remodeling in Ossabaw Swine with Metabolic Syndrome. *FASEB J* 2010; 24:789.3. **(Selected for oral presentation)**
18. **Trask AJ**, Katz PS, Neeb ZP, Alloosh M, Sturek M, Lucchesi PA. Coronary Artery Microvascular Narrowing Downstream of Stent Implantation. *FASEB J* 2010; 24:789.6.
19. Katz PS, **Trask AJ**, Lucchesi PA. Progressive Coronary Artery Remodeling in Diabetic db/db Mice. *FASEB J* 2010; 24:790.9.
20. Egan MJ, **Trask AJ**, Baker PB, Lawrence J, Ladich E, Virmani R, Hill SL, Galantowicz M, Cheatham JP, Kovalchin JP. Histopathologic Evaluation of Patent Ductus Arteriosus Stents after Hybrid Palliation of Hypoplastic Left Heart Syndrome. *J Am Col Cardiol* 2010; 55:A43.E417.
21. **Trask AJ**, Katz PS, Lucchesi PA. Inward Coronary Artery Remodeling in Established Type II Diabetic Mice. Ohio Physiological Association Annual Meeting, Columbus, Ohio, 2009.
22. **Trask AJ**, Katz PS, Lucchesi PA. Inward Coronary Artery Remodeling in Established Type II Diabetic Mice. *Hypertension* 2009; 54(4):e121.
23. Nagata S, Kato J, Kitamura K, Varagic J, Chappell MC, **Trask AJ**, Habibi J, Sowers JR, Ferrario CM. Augmented Cardiac Content of Proangiotensin-12, Ang-(1-12), in Nephrectomized Rats. 73rd Annual Scientific Meeting of the Japanese Circulation Society. (Selected for oral presentation).
24. **Trask AJ**, Groban L, Varagic J, Ferrario CM. Inhibition of Angiotensin Converting Enzyme 2 Aggravates Cardiac Hypertrophy in Ren-2 Hypertensive Rats. 16th Annual Wake Forest University Surgical Sciences Research Day, 2008.
25. **Trask AJ**, Groban L, Varagic J, Ferrario CM. Inhibition of Angiotensin Converting Enzyme 2 Aggravates Cardiac Hypertrophy in Ren-2 Hypertensive Rats. *Hypertension* 2008; 52(4):e126.
26. Ferrario CM, Varagic J, Chappell MC, **Trask AJ**, Nagata S, Kato J. Bilateral Nephrectomy Augments the Cardiac Content of Angiotensin-(1-12) and Angiotensin I in Wistar-Kyoto Rats. *Hypertension* 2008; 52(4): e126.

27. **Trask AJ**, Jessup JA, Tallant EA, Chappell MC, Ferrario CM. Renin-Independent Processing of Angiotensin-(1-12) in the Rat Heart and Isolated Myocytes. *Hypertension* 2008; 52(4):e45-e46 (**Selected for oral presentation and Merck New Investigator Award**).
28. **Trask AJ**, Jessup JA, Tallant EA, Chappell MC, Ferrario CM. Renin-Independent Processing of Angiotensin-(1-12) in the Rat Heart and Isolated Myocytes. Third Annual NIH National Graduate Student Research Festival, Bethesda, Maryland, 2008. (**Selected for presentation**)
29. Jessup JA, Habibi J, **Trask AJ**, Chappell MC, Nagata S, Kato J, Kitamura K, Sowers J, Ferrario CM. Experimental Hypertension is Associated with Differential Expression of Angiotensin-(1-12) in Heart of Hypertensive and Normotensive Rats. *FASEB J* 2008; 22:1210.20.
30. **Trask AJ**, Jessup JA, Ferrario CM. Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides. 8th Annual Wake Forest University Graduate Student Research Day, 2008.
31. **Trask AJ**, Jessup JA, Ferrario CM. Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides. 15th Annual Wake Forest University Surgical Sciences Research Day, 2007.
32. **Trask AJ**, Jessup JA, Ferrario CM. Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides. *Hypertension* 2007; 50(4): e154.
33. **Trask AJ**, Chappell MC, Ferrario CM. Major Role for Angiotensin Converting Enzyme 2 in Cardiac Angiotensin-(1-7) Production in the Congenic Hypertensive mRen2.Lewis Rat. *Hypertension* 2007; 50(4): e140.
34. **Trask AJ**, Averill DB, Chappell MC, Ferrario CM. Predominance of Angiotensin Converting Enzyme 2 to Cardiac Angiotensin-(1-7) Production in [mRen2]²⁷ Transgenic Hypertensive Rats. Inter-American Society of Hypertension/COSEHC Annual Scientific Meeting, Miami Beach, Florida, 2007.
35. **Trask AJ**, Averill DB, Chappell MC, Ferrario CM. Predominance of Angiotensin Converting Enzyme 2 to Cardiac Angiotensin-(1-7) Production in [mRen2]²⁷ Transgenic Hypertensive Rats. *Hypertension* 2006; 48(4): e72.
36. **Trask AJ**, Averill DB, Chappell MC, Ferrario CM. Cardiac Production of Angiotensin-(1-7) by Angiotensin Converting Enzyme 2. 13th Annual Wake Forest University Surgical Sciences Research Day, 2005.

CHAired/CO-CHAired CONFERENCE SESSIONS

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| April 2014 | Chair, APS Featured Topic on “Vascular Remodeling and Stiffening in Cardiovascular Pathology: Commonalities and Differences.” Experimental Biology, San Diego, California. |
| Sept. 2014 | Chair, American Heart Association Council on Hypertension Oral Session for Top Trainee Oral Abstracts, San Francisco, California. |
| Sept. 2015 | Chair, American Heart Association Council on Hypertension Oral Session for Top Trainee Oral Abstracts, Washington, D.C. |
| Sept. 2016 | Chair, American Heart Association Council on Hypertension Oral Session for Top Trainee Oral Abstracts, Orlando, Florida. |

INVITED LECTURES/ORAL PRESENTATIONS:

1. "Coronary Resistance Microvessels and Coronary Flow as Prognostic Indicators of Early Sub-Clinical Heart Disease." Research Retreat, The Research Institute at Nationwide Children's Hospital, November, 2016.
2. NCH Responsible Conduct of Research: "Data Acquisition and Laboratory Tools: Management, Sharing, and Ownership," May 2016.
3. "Novel Mechanisms of PDA Stenosis in the Hybrid Palliation of Hypoplastic Left Heart Syndrome." Heart Center Clinical & Translational Seminar Series, Nationwide Children's Hospital, March 2016.
4. "Coronary Microvascular Remodeling in Early Type 2 Diabetes and MetS: Evidence of Early Sub-Clinical Disease?" Department of Exercise Physiology and the Center for Cardiovascular and Respiratory Sciences, West Virginia University, October 2015.
5. NCH Responsible Conduct of Research: "Data Acquisition and Laboratory Tools: Management, Sharing, and Ownership," June 2015.
6. Featured Research Speaker, Central Ohio American Heart Association Ignite Research Reception, Columbus Museum of Art, October 2014.
7. "Macro- and Micro-Vascular Remodeling and Stiffness in Diabetes and Metabolic Syndrome." Experimental Biology, San Diego, California, 2014 **(APS Featured Topic Symposium Chair)**
8. "Coronary Micro- and Macro-Vascular Remodeling, Mechanics, and Cell-ECM Dynamics in Type 2 Diabetes." Department of Physiology, East Carolina University, 2014.
9. "The PhD Journey: Lessons Learned from Graduate School and Beyond." Ohio Northern University Department of Biological and Allied Health Sciences, Ada, Ohio, 2014.
10. "Coronary Micro- and Macro-Vascular Remodeling, Mechanics, and Cell-ECM Dynamics in Type 2 Diabetes." Davis Heart and Lung Research Institute, The Ohio State University Wexner Medical Center, 2014.
11. "Coronary Micro- and Macro-Vascular Remodeling, Mechanics, and Cell-ECM Dynamics in Type 2 Diabetes." Department of Biomedical Sciences and Dalton Cardiovascular Research Center, University of Missouri-Columbia, 2013.
12. "Coronary Micro- and Macro-Vascular Remodeling, Mechanics, and Cell-ECM Dynamics in Type 2 Diabetes." Department of Biomedical Engineering, The Ohio State University, 2013.
13. "The PhD Journey: Lessons Learned from Graduate School and Beyond." Ohio Northern University Department of Biological and Allied Health Sciences, Ada, Ohio, 2013.
14. "Coronary Arteriole Remodeling in Type 2 Diabetes and Metabolic Syndrome." Hypertension & Vascular Research Center, Wake Forest University, 2012.
15. "Coronary Arteriole Remodeling in Type 2 Diabetes." Experimental Biology, San Diego, California, 2012. **(APS Featured Topic Symposium)**
16. "The PhD Journey: Lessons Learned from Graduate School and Beyond." Ohio Northern University Department of Biological and Allied Health Sciences, Ada, Ohio, 2012.
17. "Mechanisms of Coronary Arteriole Remodeling in Type 2 Diabetes and Metabolic Syndrome." Department of Physical Education, Sao Paulo State University, Rio Claro, Brazil, 2011.
18. "New Advances on the Biochemical Pathways in the Renin-Angiotensin System and their Role in Cardiac Structure and Function." Department of Physical Education, Sao Paulo State University, Rio Claro, Brazil, 2011.

19. "Mechanisms of Coronary Arteriole Remodeling in Type 2 Diabetes and Metabolic Syndrome." Clinical and Translational Seminar Series, Center for Cardiovascular and Pulmonary Research, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio, 2011.
20. "The PhD Journey: Lessons Learned from Graduate School and Beyond." Ohio Northern University Department of Biological and Allied Health Sciences, Ada, Ohio, 2011.
21. "A Critical Conduit: Clinical and Physiological Implications of Ductus Arteriosus Restenosis." Bench-to-Outcomes Seminar Series, Nationwide Children's Hospital, Columbus, Ohio, 2010.
22. "Inward Coronary Artery Microvessel Remodeling in Ossabaw Swine with Metabolic Syndrome." Experimental Biology, Anaheim, California, 2010. (APS Featured Topic Symposium)
23. "The PhD Journey: Lessons Learned from Graduate School and Beyond." Ohio Northern University Department of Biological and Allied Health Sciences, Ada, Ohio, 2010.
24. "New Advances on the Biochemical Pathways in the Renin-Angiotensin System and their Role in Cardiac Structure and Function." Nationwide Children's Hospital, Columbus, Ohio, 2008.
25. "Renin-Independent Processing of Angiotensin-(1-12) in the Rat Heart and Isolated Myocytes." 62nd American Heart Association Council for High Blood Pressure Research, Atlanta, Georgia, 2008.
26. "New Advances on the Biochemical Pathways of the Cardiac Renin-Angiotensin System." Wake Forest University Department of Physiology and Pharmacology, Winston-Salem, North Carolina, 2007.
27. "The Cardioprotective Effects of the ACE2/Ang-(1-7) Axis in Heart Failure." Wake Forest University Department of Physiology and Pharmacology, Winston-Salem, North Carolina, 2006.

POSTER PRESENTATIONS:

1. "High Fat Diet Induces Metabolic Syndrome-Like Phenotype Associated with Adverse Micro- and Macro-Vascular Remodeling." AHA Council on Hypertension Scientific Sessions, 2015.
2. "Increased Aortic Pulse Wave Velocity in Type 2 Diabetic db/db mice is Dependent on Blood Pressure." NHLBI K Award Investigators Meeting, Bethesda, Maryland, 2014.
3. "Increased Aortic Pulse Wave Velocity in Type 2 Diabetic db/db mice is Dependent on Blood Pressure." AHA Council on Hypertension Scientific Sessions, San Francisco, California, 2014.
4. "Vascular Mechanics in Intact and Decellularized Micro- and Macro-Vessels from Type 2 Diabetic db/db Mice." NAVBO, Cape Cod, Massachusetts, 2013.
5. "Proteomic Analysis of Aortic and Coronary Resistance Microvessel Tissue in Type 2 Diabetic db/db Mice." Experimental Biology, Boston, Massachusetts, 2013.
6. "Aerobic Exercise Training Partially Reverses Inward Hypertrophic Coronary Arteriole Remodeling in Type 2 Diabetic db/db Mice." Experimental Biology, San Diego, California, 2012.
7. "Differential Stiffness between Resistance Microvessels and Conduit Arteries in the Coronary Circulation of Ossabaw Swine with Metabolic Syndrome." Experimental Biology, San Diego, California, 2012.

8. "Differential Stiffness between Resistance Microvessels and Conduit Arteries in the Coronary Circulation of Ossabaw Swine with Metabolic Syndrome." Research Day, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio, 2012. **(Best Poster Award)**
9. "Receptor for advanced glycation end products is involved in remodeling of diabetic coronary arterioles." Experimental Biology, Washington, D.C., 2011.
10. "Inward Coronary Artery Microvessel Remodeling in Ossabaw Swine with Metabolic Syndrome." Experimental Biology, Anaheim, California, 2010.
11. "Coronary Artery Microvascular Narrowing Downstream of Stent Implantation." Experimental Biology, Anaheim, California, 2010.
12. "Inward Coronary Artery Remodeling in Established Type II Diabetic Mice." Ohio Physiological Society Annual Meeting, Columbus, Ohio, 2009.
13. "Inward Coronary Artery Remodeling in Established Type II Diabetic Mice." 63rd American Heart Association Council for High Blood Pressure Annual Meeting, Chicago, Illinois, 2009.
14. "Inhibition of Angiotensin Converting Enzyme 2 Aggravates Cardiac Hypertrophy in Ren-2 Hypertensive Rats." 16th Annual Wake Forest University Surgical Sciences Day, Winston-Salem, North Carolina, 2008.
15. "Inhibition of Angiotensin Converting Enzyme 2 Aggravates Cardiac Hypertrophy in Ren-2 Hypertensive Rats." 62nd Council for High Blood Pressure Research, Atlanta, Georgia, 2008.
16. "Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides." 8th Annual Wake Forest University Graduate Student Research Day, 2008.
17. "Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides." 15th Annual Wake Forest University Surgical Sciences Day, Winston-Salem, North Carolina, 2007.
18. "Angiotensin-(1-12) is a Precursor for the Processing of Cardiac Tissue Angiotensin Peptides." 61st American Heart Association Council for High Blood Pressure Research, Tucson, Arizona, 2007.
19. "Major Role for Angiotensin Converting Enzyme 2 in Cardiac Angiotensin-(1-7) Production in the Congenic Hypertensive mRen2.Lewis Rat." 61st American Heart Association Council for High Blood Pressure Research, Tucson, Arizona, 2007.
20. "Predominance of Angiotensin Converting Enzyme 2 to Cardiac Angiotensin-(1-7) Production in [mRen2]27 Transgenic Hypertensive Rats." Inter-American Society of Hypertension/COSEHC Annual Scientific Meeting, Miami Beach, Florida, 2007.
21. "Predominance of Angiotensin Converting Enzyme 2 to Cardiac Angiotensin-(1-7) Production in [mRen2]27 Transgenic Hypertensive Rats." 60th American Heart Association Council for High Blood Pressure Research, San Antonio, Texas, 2006.
22. "Cardiac Production of Angiotensin-(1-7) by Angiotensin Converting Enzyme 2." 13th Annual Wake Forest University Surgical Sciences Day, Winston-Salem, North Carolina, 2005.