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EDUCATION

- 1999-2002 B.S. in Kinesiology (with distinction), Indiana University, Bloomington, IN
2002-2004 M.S. in Exercise Physiology, University of Louisville, Louisville, KY
2004-2008 Ph.D. in Exercise Physiology, West Virginia University, Morgantown, WV
2008-2009 Postdoctoral Fellow, Center for Cardiovascular and Respiratory Research, West Virginia University, Morgantown, WV
2009-2011 Postdoctoral Associate, Cardiovascular Innovation Institute, Jewish Hospital and University of Louisville, Louisville, KY

ACADEMIC APPOINTMENTS

- 2012-2014 Assistant Professor, Department of Obstetrics, Gynecology and Women's Health (Tenure-Track), Cardiovascular Innovation Institute, University of Louisville, Louisville, KY
2014-present Assistant Professor in Department of Physiology (Tenure-Track), University of Louisville, Louisville, KY
2014-present Associate appointment in Department of Biochemistry and Molecular Genetics, University of Louisville, Louisville, KY
2016-present Associate appointment in Department of Obstetrics, Gynecology and Women's Health, University of Louisville, Louisville, KY

OTHER POSITIONS AND EMPLOYMENT

- 1999-2002: Laboratory Technician, George Pfau Sons Co., Jeffersonville, Indiana

PROFESSIONAL MEMBERSHIP AND ACTIVITIES

- 2005-present The Microcirculatory Society Professional Member
2008-present American Heart Association Professional Member
2009-2011 Society of Toxicology
2010-present International Federation for Adipose Therapeutics and Science Professional Member
2013-present International Society for Heart Research Professional Member
2016-present American Physiological Society
2013-2016 Membership Committee of The Microcirculatory Society
2017-2019 Secretary of The Microcirculatory Society
2018-2020 Communication Committee Member of the American Physiological Society

Editorial Boards

2011-present Review Editor for *Frontiers in Vascular Physiology*
2015-present Editorial Board for *Microcirculation*

Manuscript Peer Review

Ad hoc Reviewer: Aging, Aging Cell, AJP- Heart and Circulatory Physiology, AJP - Lung Cellular and Molecular Physiology, BMC Physiology, Cardiovascular Pathology, Cardiovascular Pharmacology, Cardiovascular Translational Research, Environmental Health Perspectives, Experimental Gerontology, *Frontiers in Vascular Physiology*, Inhalation Toxicology, Journal of Gerontology: Biological Sciences, Journal of Visual Experiments, *Microcirculation*, Plos One, Science Signaling, Stem Cell Research and Therapy, Stem Cell Translational Medicine, Toxicological Sciences, Toxicology and Applied Pharmacology

2015 National recognition as a content expert on AJP- Heart and Circulatory Physiology podcast for “Cardiomyocyte specific Bmal1 deletion in mice triggers diastolic dysfunction, extracellular matrix response and impaired resolution of inflammation”

Conference Organization/Leadership

2011 Moderator; Session on “Cell Isolation, Culture, and Storage” - International Federation for Adipose Therapeutics and Science Meeting in Miami Beach, FL, October 2011
2016 Moderator; Session on “Proteomics/Biomarkers/Interactomes” – FASEB Conference on Matricellular Proteins in Development, Health and Disease, West Palm Beach, FL, July 2016
2017 Moderator; Session on “Countermeasures to Cardiovascular Aging” – APS Conference on “Cardiovascular Aging, New Frontiers and Old Friends”, Westminster CO August 11-14, 2017
2017 Conference Organizing Committee – “Cardiovascular Aging, New Frontiers and Old Friends” Westminster, CO, August 11-14, 2017

Community Outreach

Oct 2011 Louisville Science Center Invited Speaker; “Regenerative Medicine” - Grades 6-12 and teachers from Kentucky High Schools
April 2012 American Heart Association Invited Speaker for the Go Red For Women Campaign
April 2012 Junior Achievement of Kentucky, Presenter and Session Leader for “Women and Cardiovascular Disease” – 11th Graders from Shawnee High School
Oct 2012 American Heart Association Invited Speaker for Circle of Red/Red Tie Society
Jan 2013 Junior League of Louisville meeting Invited Speaker– “Cardiovascular Disease in Aging Women”
April 2013 Junior Achievement of Kentucky, Presenter and Session Leader for “Cardiovascular Disease in Men and Women” – 11th and 12th Graders from Moore Traditional High School

- June 2013 United Parcel Service (UPS) Women’s Leadership Development- “Lean In” Session
Invited Speaker
- Feb 2014 Oldham County High School Career Fair – STEM field invited speaker
- Feb 2015 American Heart Association Invited Speaker for Circle of Red/Red Tie Society event
“Flirt with Fashion”
- July 2016 Gear Up Summer Academy Career Symposium Speaker – rising HS juniors from state of
Kentucky

HONORS AND AWARDS

- 2007 Zweifach Student Travel Award for the 8th World Congress for Microcirculation
- 2007 3rd Place Oral Presentation, E.J. Van Liere Convocation, West Virginia University
- 2007 1st Place Poster Presentation, Basic Sciences III Division, E.J. Van Liere Research Day, West
Virginia University
- 2007 American Physiological Society CV Section Research Recognition Award
- 2009 1st Place Poster Presentation, Postdoctoral Fellow Division, E.J. Van Liere Research Day,
West Virginia University
- 2010 Postdoctoral Travel Award for the 9th World Congress for Microcirculation, Paris, France
- 2012 University of Louisville Faculty Excellence Award for contribution in patents, licenses, and
options
- 2012 20th Annual NIA Summer Training Course in Experimental Aging Research, Buck Institute
for Research on Aging, Novato, CA
*One of only 20 Early-Stage Investigator/Junior Faculty selected in the nation to
participate
- 2014 University of Louisville Faculty Excellence Award for contribution in patents, licenses, and
options
- 2016 Travel Grant from the European Society of Cardiology Council on Basic Cardiovascular
Sciences, Florence, Italy

COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

Grant Review

- 2013-present American Heart Association National Peer Review Committee – Vascular Endothelial
Biology 2
- 2016-present Early Career Reviewer for the Center for Scientific Review (CSR), National Institutes of
Health
- 2017- NIH Aging Systems and Geriatrics (ASG) study section member, in-person study section
meeting (February 13-14, San Diego, CA)
- 2017- AHA Vascular Disease Strategically Focused Research Network Review Committee
member, Phase I and Phase II (November-December, Dallas, TX)

University Service

- 2010-present Research Louisville Poster presentation judge

- 2013–present Institutional Animal Care and Use Committee
2013-2014 Director, Resident Research for the Department of Obstetrics, Gynecology and Women’s Health
2013-2014 Director, Research Day for the Department of Obstetrics, Gynecology and Women’s Health

EDUCATIONAL ACTIVITIES

Teaching Activities for Students

- 2000-2002: Undergraduate Teaching Assistant, Indiana University, Bloomington, Indiana
2001-2002: Undergraduate Research Assistant, Indiana University, Bloomington, Indiana
2004-2005: Graduate Teaching Assistant, Texas A&M University, College Station, Texas
Fall 2005 *Course organizer/lecturer*. Running, 1 credit; 120 undergraduate students
Spring 2005 *Course organizer/lecturer*. Running, 1 credit; 60 undergraduate students
Spring 2005 *Course organizer/lecturer*. Health and Fitness, 2 credits; 120 undergraduate students
Spring 2009 *Lecturer*. EXPH 365: Exercise Physiology I, 3 credits; 80 undergraduate students

Teaching Activities for Professionals

- Fall 2008 *Lecturer*. Fundamentals of Physiology, 3 credits; 100 professional students
Spring 2009 *Lecturer*. EXPH 567: Exercise Physiology II, 4 credits; 15 professional students
Spring 2015 Lecturer, PHZB 609: Integrated Systemic Physiology, session of “Exercise and Neural Control of the Heart and Lungs”, 6 professional students
Spring 2017 Lecturer, PHZB 611: Advanced Human Cardiovascular Physiology, “Microcirculation”, 3 professional students

Mentored students (date degree awarded, degree program, research area, current position)

Supervision of Graduate Students

- 2013-2015 Christopher Nevitt - Ph.D. current, Biochemistry and Molecular Biology, University of Louisville
2016-2017 Monika George – M.S. with research thesis.

Clinical Residents and Fellows, Medical Students

- 2011–2013 Quang Tung Nguyen, M.D. - Visiting Research Scholar (2Y Resident in Internal Medicine, St. Francis Hospital, Evanston, IL)
2013-2015 Robert Hunter, M.D. –Fellow in Reproductive Endocrinology and Infertility Division, current Director of Kentucky Fertility Institute
2015 Jeff Austin – 2Y Medical Student at University of Louisville, current 4Y

Undergraduate Research

- 2014-2015 Grant McKenzie –B.S. with research thesis “Thrombospondin-1 decreases NO-mediated vasodilation in coronary arterioles in advancing age”, University of Louisville, current 3Y Medical Student at UofL

2014-2016	Katelyn Christian – B.S., Georgetown College, Howard Hughes Medical Institute scholarship recipient
2015	Sarah Hencke – Undergraduate student in Biology, Georgetown College, Howard Hughes Medical Institute scholarship recipient
2016	Charles Shofner – B.S., University of Louisville

Service on Dissertation/Thesis Committee

2014-2017	Kathryn Deveau – Ph.D., Anatomical Sciences and Neurobiology, University of Louisville, Assistant Professor at George Washington University
2015-present	Joe Zakhari – M.D./Ph.D. current, Physiology, University of Louisville
2016-present	Logan Curtis Whitchurch – Ph.D. current, Physiology, University of Louisville

GRANTS AND CONTRACTS

Active Support

1. Jewish Heritage Foundation for Excellence – (LeBlanc, PI), Aug 1, 2016-July 31, 2018
 “Microvascular Dysfunction in Women’s Hearts:
 A Novel Diagnosis and Treatment Regime”
 \$350,000
 The major goal of this project is to develop a new diagnostic and cell-based therapy for patients with microvascular angina
2. R01 AG053585 (LeBlanc – PI) Mar 1, 2017 – Feb 28, 2022
 NIH/NIA \$1,886,659
 “Reversing microvascular dysfunction in advancing age” 20% effort
 The goal of this project is to explore the dynamics of autologous cell therapy for microvascular dysfunction in a model of advanced age
3. 1T32HL134644-01A1 (Mentor) 5/1/17 – 4/30/22
 NIH/NIGMS \$1,486,242
 “Current Trends in Stem Cell Therapies”
 The intent of this program is to provide focused post-doctoral training in the biology and application of cell-based therapies.

Completed Support

1. Kosair Charities Pediatric Heart Research Pilot Grant Nov 2011- Jan 2013
 (LeBlanc, PI) \$ 50,000
 “Age-related differences in SVF-assisted coronary microvascular repair”
 This study will determine the greatest source potential for creating a stromal vascular fraction construct and its ability to support microvascular repair in areas of coronary ischemia in the adolescent heart.
2. AHA Beginning Grant-in-Aid Jan. 1, 2012 – June 30, 2014
 (LeBlanc, PI, 50% effort) \$ 132,000

“Improving coronary microcirculation in advanced age through cell-based therapy”

The purpose of this grant is to promote the first independent step of a junior scientist. The primary goal of this study is to develop a cell-based therapy using age-specific adipose-derived stem cells to treat coronary microvascular dysfunction in a model of advanced age.

3. University of Louisville Intramural Research Incentive Grant Jan 2013- Dec 2013
(LeBlanc, PI) \$3,798
“Regenerative potential of adipose-derived stem cells during advancing age in women”
4. Undergraduate Research Grant Oct. 2014 – Oct. 2015
(LeBlanc, mentor)
“Aging Effects of Thrombospondin-1 in the Coronary Arterioles”
5. NIH R21 AG047474-01 Sept. 1, 2014 – June 30, 2015
(LeBlanc, co-PI, 15% effort).
“Dopamine-mediated regulation of blood pressure in aging: Role of NHERF-1”
6. VV Cooke Foundation Dec 1, 2015 – Nov 30, 2016
(LeBlanc – co-Investigator, 2% effort) \$10,000
“Studies in Women’s Heart Health”, Pilot program
The goal is to perform pilot studies in support of a pre-clinical investigation of cell therapy for microvascular angina.
7. Helmsley Restorative Medicine Center: Spinal Cord Injury and Cardiovascular Function
(LeBlanc, co-Investigator) Jan 1, 2016 – June 30, 2017

PATENTS AND DISCLOSURES

Non-provisional Patent Applications

- 2011 “Adipose Stromal Vascular Cell Constructs”, # 437783-079. There is also a foreign file related to this application - #437783-0093.
- 2011 # ULRF 11088 "Adipose Stromal Vascular Fraction Cell Epicardial Patch" – patent pending, license option to Tissue Genesis Inc., #437783-0077
- 2014 “Methods for Treating an Established Myocardial Infarction” – patent pending, license option to Tissue Genesis Inc. #437783-0102

ABSTRACTS AND PRESENTATIONS

Oral Presentations at National/International Meetings

Selected Abstracts Oral Presentations

1. A Special Transatlantic Meeting of The Microcirculatory Society, Inc. and The British Microcirculation Society, Durham, NH, “Age-induced impairment of nitric oxide-dependent

- vasodilation in coronary arterioles: Role of phosphatidylinositol 3-kinase signaling.*” Sep 2005 Abstracts of *Microcirculation* 2005: A Transatlantic Microcirculation Conference. *Microcirculation*, 12: 645–689
2. FASEB, Featured Topic Session on Control of Coronary Blood Flow, Washington D.C., “*Beyond Venus and Mars: The effect of gender and age on endothelial dysfunction in coronary arterioles.*” April 2007, *FASEB J.* 2007 21:900.4
 3. Society of Toxicology Annual Meeting, Baltimore, MD “*Calcium-dependent vasodilation is impaired in coronary arterioles after nanoparticle inhalation.*” Mar 2009. *Toxicological Sciences*, March 108 (1-S), 1350, 2009.
 4. International Federation of Adipose Therapeutics and Science Annual Meeting, Dallas TX, “*Adipose-derived Stromal Vascular Fraction Patch Improves Coronary Blood Flow after Myocardial Infarct*” Oct 2010
 5. International Federation of Adipose Therapeutics and Science Annual Meeting, Miami Beach, FL, “*Adipose Stromal Vascular Fraction cells preserve coronary perfusion when used immediately after ischemia*” Oct 2011
 6. Joint Meeting of the British Microcirculation Society and The Microcirculatory Society, University of Oxford, UK, “*Delayed Treatment of MI with Adipose-Derived Regenerative Cells Halts Deteriorating LV Function and is Associated with Increased Capillary Perfusion*” July 2012
 7. North American Vascular Biology Organization meeting featuring the Microcirculation Society, Monterey, CA, “*Microvascular network maturation but not vasculogenesis is decreased in adipose-derived stromal vascular fraction with advanced donor age*” October 2014
 8. American Heart Association Scientific Sessions, Chicago IL, “*Adipose-derived cell treatment improves coronary blood flow reserve in aged females and is associated with altered ROS production in coronary arterioles*” November 2014
 9. Frontiers in Cardiovascular Biology, Florence Italy, “*Circulating thrombospondin-1 inhibits coronary blood flow reserve in aging hearts through a CD-47-dependent decrease in NO in coronary arterioles*”, July 2016

Invited Seminars

1. WVU School of Medicine, E.J. Van Liere Convocation “*Beyond Venus and Mars: The effect of gender and age on endothelial dysfunction in coronary arterioles.*” April 2007
2. University of New Mexico and Lovelace Respiratory Research Institute “*Nanoparticle Inhalation Impairs Endothelium-Dependent Vasoreactivity in Coronary Arterioles.*” Oct 2008
3. Indiana University Department of Cellular and Integrative Physiology, “*Aging and Gender effects on the Vasoreactivity of Coronary Arterioles.*” Mar 2009
4. West Virginia University Department of Physiology and Pharmacology Seminar Series, “*Using a novel 3D microcirculation support construct to treat myocardial infarction.*” Oct 2012
5. Texas A&M Health Sciences Center, Medical Physiology Seminar Series, Temple, Texas “*CVD in women and the implications for a microcirculation support therapy.*” March 2013
6. 10th World Congress for Microcirculation, Kyoto, Japan, “*Microvascular Plasticity in Health and Disease*” September 2015
7. Keynote Speaker for American Society for Extracorporeal Technology, San Antonio TX, “*The Microcirculation: From the Research Bench to the Operating Room*” October 2015

8. Keynote Speaker for American Society for Extracorporeal Technology, San Antonio TX, “Myocardial Protection: The Science and Pathophysiology of Myocardial Ischemic Injury”, October 2015
9. Tulane University Center for Aging, New Orleans LA, “Reversing Coronary Microvascular Dysfunction in Aging: Role of Thrombospondin-1”, January 2016
10. FASEB Matricellular Proteins in Development, Health, and Disease, West Palm Beach FL, “Physiological Levels of Thrombospondin-1 Decrease NO-Dependent Vasodilation in Coronary Microvessels from Aged Rats”, July 2016
11. East Tennessee State University, Biological Sciences/ Health Sciences Seminar Series, Johnson City, TN “Myocardial regeneration in aging: a plumbing-first approach”, September 2016
12. University of Mississippi Medical Center, Department of Physiology & Biophysics Seminar Series, Jackson, MS “Myocardial regeneration in aging: a plumbing-first approach”, November 2016
13. Medical College of Wisconsin, Cardiovascular Center Seminar Series, Milwaukee WI, “Myocardial regeneration in aging: a plumbing-first approach”, November 2016
14. APS Specialty Meeting - Cardiovascular Aging, New Frontiers and Old Friends, “Intravenous adipose-derived cell therapy improves cardiovascular performance in aged rats”, Westminster, CO, August 11-14, 2017

Invited Oral Presentations at Local/Regional Meetings

1. Department of Obstetrics, Gynecology and Women’s Health, University of Louisville “*Cardiovascular Disease and the Role of Microvessels in Aging Women.*” January 2013
2. Department of Physiology and Biophysics Seminar Series, University of Louisville “*CVD and the implications for a microcirculation support therapy.*” March 2013
3. Department of Anatomical Sciences and Neurobiology, University of Louisville “*Restoration of Coronary Microvascular Function by Adipose-derived Cellular Therapy.*” September 2013
4. Department of Medicine, Division of Nephrology and Hypertension Research Group, University of Louisville “*Restoration of Coronary Microvascular Function by Adipose-derived Cellular Therapy.*” October 2013
5. District 5 American Association for Laboratory Animal Science, Lexington KY, “*Epicardial Cell Therapy for Heart Disease in Rats: the Science, Surgery, and Related Animal Care.*” May 2014
6. Department of Family Medicine Grand Rounds, University of Louisville “Myocardial regeneration in aging: a plumbing-first approach”, January 2017
7. Alpha Epsilon Delta Forum Speaker for pre-health professional honors society undergraduates, University of Louisville, February 2017

Poster Abstracts

1. **LeBlanc AJ**, Shipley RD, and Muller-Delp JM. Experimental Biology, San Francisco, CA. Effect of aging on nitric oxide signaling in coronary arterioles: Role of phosphoinositol 3-kinase. *FASEB J* 20: A1397, 2006.

2. **LeBlanc AJ**, Nichol KE, Woodman CR, Shipley RD, Prisby RD, and Muller-Delp JM. Experimental Biology, San Francisco, CA, NOS expression and activity in cerebral resistance arteries: Effects of aging and exercise training. *FASEB J* 20: A813, 2006.
3. **LeBlanc AJ**, Behnke BJ, Wu G, Muller-Delp JM, DelpMD. Integrative Physiology of Exercise, Indianapolis, IN. Aging Decreases NOS Regulatory Mechanisms in Skeletal Muscle Resistance Arteries. *Med Sci Sports Exercise* 38(11) Suppl 1:S3, 2006.
4. Reyes RA, Nichol KE, Spier SA, **LeBlanc AJ**, Muller-Delp, JM. Integrative Physiology of Exercise, Indianapolis, IN. Effects of Age and Exercise Training on Nitric Oxide Bioavailability in Cerebral Resistance Arteries. *Med Sci Sports Exercise* 38(11) Suppl 1:S4, 2006.
5. AJ LeBlanc, R Reyes, JM Muller-Delp. 8th World Congress for Microcirculation, Milwaukee, WI. At the heart of the matter: Gender- and age-related alterations in NO-mediated endothelium-dependent vasodilation in coronary arterioles *Microcirculation* 2007; 14:526-527.
6. LS Kang, **AJ LeBlanc**, PJ Dougherty, R Shipley, and JM Muller-Delp; Experimental Biology, Washington D.C., Aging and gender alter thromboxane-induced vasoconstriction and thromboxane receptor expression in coronary microvasculature *FASEB J.* 2007 21:740.11
7. C McCroskey, RA Reyes, **AJ LeBlanc**, and J Muller-Delp; Experimental Biology, Washington D.C., Endothelial-dependent and –independent vasodilation in cerebral resistance arteries: Effects of age and estrogen Status *FASEB J.* 2007 21:904.9
8. RA Reyes, **AJ LeBlanc**, and J Muller-Delp; Experimental Biology, Washington D.C., Thromboxane induced-vasoconstriction in coronary resistance arteries: Effects of age and ovarian hormone status *FASEB J.* 2007 21:740.12
9. **LeBlanc, A.J.**, Y Hu, J Muller-Delp, B.T. Chen, D. Frazer, V. Castranova and TR Nurkiewicz. American Heart Association Combined Sessions, New Orleans, LA. Nanoparticle inhalation impairs endothelium-dependent vasoreactivity in coronary arterioles. *Circulation* 2008; 118:S_562, #5500.
10. **AJ LeBlanc**, Y Hu, J Muller-Delp, B.T. Chen, D. Frazer, V. Castranova and TR Nurkiewicz. 25th Conference of the European Society for Microcirculation, Budapest, Hungary, August 2008. Particulate matter inhalation impairs coronary microvascular reactivity. *J Vasc Res* 2008;45(suppl 2):156
11. **AJ LeBlanc**, R Reyes, and JM Muller-Delp; Experimental Biology, San Diego, CA. Advancing age and loss of ovarian hormones impair flow-induced dilation in the female coronary microvasculature *FASEB J.* 2008 22:1142.7
12. **LeBlanc, A.J.**, Touroo J, Hoying J, Williams S. 9th World Congress of Microcirculation, Paris, France, October 2010. Tissue-engineered cardiac patch stimulates angiogenesis and improves coronary function after myocardial infarct. *Microcirculation* 2010
13. Aird AL, Nguyen QT, **LeBlanc AJ**. ISHR XXI World Congress, July 2013. Regenerative potential of coronary blood flow reserve function by adipose-derived stromal vascular cells is dependent upon age of donor cells.
14. Aird AL, Nguyen QT, **LeBlanc AJ**. The Cardiovascular Forum for Promoting Centers of Excellence and Young Investigators, August 2013. Regenerative potential of coronary blood flow reserve function by adipose-derived stromal vascular cells is dependent upon age of donor cells.
15. Murray R, **LeBlanc AJ**, Lederer ED, Khundmiri SJ. American Society of Nephrology, November 2013. NHERF-1 expression in aging kidney tubular apical and basolateral membranes.

16. **LeBlanc AJ**, Aird AL, Nguyen QT, Nevitt CD. Adipose-derived cell treatment is associated with decreased ROS production and improved coronary microvascular function in advanced age. *The FASEB Journal*, vol. 28 no.1 supplement, 676.11, April 2014.
17. C. Kilar, R. Reyes, L. Kang, **A. LeBlanc**, C. McCroskey, R. Bryan and J. Muller-Delp. Endothelium-dependent vasodilation in cerebral resistance arteries: effects of age and estrogen status. *The FASEB Journal*, vol. 28 no.1 supplement, 680.8, April 2014
18. Nevitt CD, McKenzie GW, Christian KT, **LeBlanc AJ**. Thrombospondin-1 decreases NO-mediated vasodilation in coronary arterioles in advanced age. Gordon Conference “Biology of Aging”, July 2015

PUBLICATIONS

Articles Published in Peer Reviewed Journals (Original Research Articles):

1. **LeBlanc AJ**, Shipley RD, Muller-Delp JM. Aging Impairs Flk-1 Signaling and NO-Mediated Vasodilation in Coronary Arterioles. *Am J Physiol Heart Circ Physiol* 295: H2280–H2288, 2008.
2. **LeBlanc, AJ**, Reyes R, Kang LS, Dailey RA, Stallone JN, Muller-Delp JM. Estrogen replacement improves while aging and loss of ovarian hormones impair flow-induced vasodilation in coronary arterioles. *AJP-Regulatory- Integrative and Comparative Physiology* Dec;297(6):R1713-23, 2009
3. **LeBlanc AJ**, JL Cumpston, BT Chen, D Frazer, V Castranova, TR Nurkiewicz. Nanoparticle inhalation impairs endothelium-dependent vasodilation in subepicardial arterioles. *J Toxicology and Environmental Health – Part A*, 72(24):1576-84, 2009.
4. **LeBlanc AJ**, AM Moseley, BT Chen, D Frazer, V Castranova and TR Nurkiewicz. Nanoparticle inhalation impairs coronary microvascular reactivity via a local reactive oxygen species-dependent mechanism. *Cardiovascular Toxicology*, 10(1):27-36, 2010
5. Kang L, Chen B, Reyes R, **LeBlanc A**, Teng B, Mustafa S, Muller-Delp J. Aging and estrogen alter endothelial reactivity to reactive oxygen species in coronary arterioles. *Am J Physiol Heart Circ Physiol*, 300: H2105-15, 2011
6. Sasser JM, Akinsiku O, Moningka NC, Jerzewski K, **LeBlanc AJ**, Kang LS, Sindler AL, Muller-Delp JM, Baylis C. Sexual dimorphism in development of kidney damage in the aging Fischer-344 (F344) rat. *Gender Medicine*, 9(4): 219-231, 2012.
7. **LeBlanc AJ**, Hoying JB, Touroo J, Williams SK. Adipose stromal vascular fraction construct protects coronary microvascular function after acute myocardial infarction. *Am J Physiol Heart Circ Physiol* 302: H973-82, 2012.
8. ***LeBlanc AJ**, Nguyen QT, Touroo JS, Aird AL, Chang RC, Ng CK, Hoying JB, Williams SK. Adipose-derived cell construct stabilizes heart function and increases microvascular perfusion in an established infarct. *Stem Cells Translational Research*, 2(11): 896-905, 2013, *Corresponding author
9. **LeBlanc AJ**, Chen B, Dougherty PJ, Reyes RA, Shipley RD, Korzick DH, Muller-Delp JM. Divergent effects of aging and sex on vasoconstriction to endothelin in coronary arterioles. *Microcirculation*, Jul;20(5):365-76, 2013.
10. Hunter RK II, Nevitt CD, Gaskins JT, Keller BB, Bohler HCL Jr, **LeBlanc AJ** Adipose-Derived Stromal Vascular Fraction Cell Effects on a Rodent Model of Thin Endometrium. *PLoS ONE* 10(12): e0144823. doi:10.1371/journal.pone.0144823, 2015

11. Aird AL, Nevitt CD, Christian K, Williams SK, Hoying JB, **LeBlanc AJ**. Adipose – derived stromal vascular fraction cells isolated from old animals exhibit reduced capacity to support the formation of microvascular networks. *Experimental Gerontology*, 63: 18-26, 2015.
12. Morris ME, Beare JE, Reed RM, Dale JR, **LeBlanc AJ**, Kaufman CL, Zheng, H, Ng C, Williams SK, and Hoying JB. CD11b-positive cells within the adipose stromal vascular fraction improves small artery function by reducing myogenic tone when delivered systemically. *Stem Cells Translational Research*, 4 (4): 369-380, 2015.
13. Nevitt CD, McKenzie G, Christian K, Austin J, Hencke S, Hoying JB, **LeBlanc AJ**. Physiological Levels of Thrombospondin-1 Decrease NO-Dependent Vasodilation in Coronary Microvessels from Aged Rats. *Am J Physiol Heart Circ Physiol*. 310(11): H1842-50, 2016. PMID: 27199114.
14. Nakane T, Masumoto H, Tinney J, Yuan F, Kowalski W, Ye F, **LeBlanc A**, Sakata R, Yamashita J, Keller B. Impact of Cell Composition and Geometry on Human Induced Pluripotent Stem Cells-Derived Engineered Cardiac Tissue. *Nature Scientific Reports*. 7:45641, 2017. PMID: 28368043, PMCID: PMC5377302
15. Barati MT, Ketchem CJ, Merchant ML, Kusiak WB, Jose PA, Weinman EJ, **LeBlanc AJ**, Lederer ED, Khundmiri SJ. Loss of NHERF-1 expression prevents dopamine-mediated Na-K ATPase regulation in renal proximal tubule cells from rat models of hypertension: aged F344 and SHR. *Am J Physiol Cell Physiol*. 313(2):C197-C206, 2017. PMID: 28515088

Articles Published in Peer Reviewed Journals (Review Articles):

1. **LeBlanc AJ**, Krishnan L, Sullivan CJ, Williams SK, Hoying JB. Microvascular Repair: Post-Angiogenesis Vascular Dynamics. *Microcirculation*, 19(8): 676-695, 2012.
2. ***LeBlanc AJ** and Nevitt CD. Targeting the vessel underdogs: therapeutic approaches for microvessel dysfunction in the heart. *Critical Reviews in Biomedical Engineering*, 43(5-6):473-89; 2015. PMID: 27480587. *Corresponding author
3. ***LeBlanc AJ** and Hoying JB. Adaptation of the Coronary Microcirculation in Aging. *Microcirculation*, 23(2):157-67, 2016. PMID: 26661273. *Corresponding author
4. ***LeBlanc AJ**, Kelm NQ. Thrombospondin-1, free radicals, and the coronary microcirculation: the aging conundrum. *Antioxidants and Redox Signaling*. Aug 1 2017 Epub ahead of print, PMID: 28762749 *Corresponding author, PMID: 28762749
5. ***LeBlanc AJ**, Kelm NQ, George M. Aging and the Heart. *Current Opinion in Physiology*. Resubmitted in July 2017. *Corresponding author

Articles in Book, Bulletins or Proceedings:

1. **LeBlanc, AJ**, Y Hu, J Muller-Delp, BT Chen, D Frazer, V Castranova, TR Nurkiewicz. Particulate matter inhalation impairs coronary microvascular reactivity. *Proceedings of 25th European Conference on Microcirculation*, 13-17, 2008.
2. **LeBlanc AJ**. Myocardial Protection: The Science and Pathophysiology of Myocardial Ischemic Injury. *Journal of ExtraCorporeal Technology*, 48: P2-P8, 2016