

Mitra Esfandiarei, BSc, MSc, PhD

Associate Professor, Department of Biomedical Sciences
Coordinator, Master of Biomedical Sciences Program
College of Graduate Studies
College of Veterinary Medicine
Midwestern University
19555 North 59th Avenue, Glendale, AZ 85308, USA
Tell: 623-572-3666, mesfan@midwestern.edu; mesfandiarei@gmail.com

Research Associate Professor, Department of Basic Medical Sciences
College of Medicine Phoenix, University of Arizona, Phoenix, USA

Adjunct Professor, Department of Anesthesiology, Pharmacology, & Therapeutics
Faculty of Medicine, University of British Columbia, Vancouver, Canada

Areas of Expertise

Cardiovascular diseases, Vascular biology, Aortic aneurysms, Endothelial & Smooth Muscle Pathophysiology, Signal Transduction, Apoptosis, Endoplasmic Reticulum Stress Response

Work History

- Research Associate Professor, Department of Basic Medical Sciences, College of Medicine Phoenix, University of Arizona, January 2020-Present
- Associate Professor, Department of Biomedical Sciences, College of Graduate Studies, College of Veterinary Medicine, Midwestern University, USA, July 2017-Present
- Assistant Professor, Department of Biomedical Sciences, College of Health Sciences, College of Veterinary Medicine, Midwestern University, USA, July 2013-June 2017.
- Adjunct Professor, Department of Anesthesiology, Pharmacology, and Therapeutics, University of British Columbia, Canada, December 2013-Present
- Teaching Faculty, Undergraduate Medical Program, Faculty of Medicine, University of British Columbia, Canada, September 2007-2013
- Research Associate, BC Children's Research Institute, University of British Columbia, Canada, Jan 2010-June 2013
- Postdoctoral Fellow, Department of Pharmacology & Therapeutics, University of British Columbia, Canada, Jan 2006-Dec 2009
- Graduate Research Assistant, The Heart & Lung Institute, University of British Columbia, Canada, Sep 2000-Dec 2005

Academic Training

- Postdoctoral Fellowship, Anesthesiology, Pharmacology & Therapeutics, University of British Columbia, Vancouver, May 2006-Dec 2009
- Ph.D., Pathology & Laboratory Medicine, University of British Columbia, Vancouver, Canada, Sep 2001-April 2006

- M.Sc., Pathology & Laboratory Medicine, University of British Columbia, Vancouver, Canada, Sep 2000-Aug 2001
- M.Sc., Medical Microbiology, Razi Vaccine & Serum Research Institute, Tehran (Karaj), Iran, Jan 1995-May 1998
- B.Sc., Biology (Hons. in Microbiology), University of Tehran, Tehran, Iran, Sep 1984-May 1988

Awards/Distinctions

- Vice President of Research Award, Midwestern University, 2015
- Mentor of the Year Award, Biomedical Sciences Program, Midwestern University, 2014
- Research Award, UBC Faculty of Medicine, 2011
- Research Award, Aegean Conferences, 7th international meeting on pathways, networks, and systems medicine, 2009
- Research Award, European Biomedical Society, 2009
- Research Award, Child & Family Research Institute, 2009
- Post-Doctoral Research Fellowship, Heart & Stroke Foundation of Canada, 2008.
- Post-Doctoral Research Fellowship, AstraZeneca Canada, 2008.
- Third Prize, Division for Cardiovascular Pharmacology Junior Scientists' Competition, American Society for Pharmacology and Experimental Therapeutics, 2008.
- First Prize, UBC Department of Anesthesiology, Pharmacology, and Therapeutics Annual Research Day, 2008.
- Lewis MacDonald Research Fellowship, Heart & Stroke Foundation of BC & Yukon, 2007.
- Post-Doctoral Fellowship, Michael Smith Foundation for Health Research, 2007.
- ASIP Merit Award, American Society for Investigative Pathology, 2006.
- Third Prize, Merck-Frost Biology Research Day, 2006.
- Post-Doctoral Fellowship, Canadian Diabetes Association, 2006.
- Trainee Research Award, American Society for Pharmacology and Experimental Therapeutics (ASPET), 2006.
- St. Paul's Hospital Foundation Prize for Graduating PhD Students, 2005
- Trainee Research Award, American Society for Investigative Pathology (ASIP), 2005.
- Trainee Research Award, Canadian Institutes of Health Research/Heart & Stroke Foundation of Canada, National Research Forum for Young Investigators in Circulatory and Respiratory Health, 2005.
- Doctoral Research Award, Heart and Stroke Foundation of Canada, 2003.
- Doctoral Research Award, Canadian Institutes of Health Research, 2003.
- Doctoral Research Award, Heart and Stroke Foundation of BC and Yukon, 2001.
- Doctoral Research Award, Michael Smith Foundation for Health Research, 2001.
- Hardwick Graduate Studentship, Department of Pathology & Laboratory Medicine, 2000

Teaching, Mentoring, Judging, and Coaching Experience

- Program Coordinator, Master of Biomedical Sciences Program, Midwestern University, Glendale, USA, July 2016-Present

- Academic Advisor, Biomedical Sciences Graduate Program, Midwestern University, Glendale, USA, July 2013-Present
- Course director/Instructor, Biomedical Sciences Graduate Program, Midwestern University, Glendale, USA, July 2013-Present.
- Invited Judge, Pharmacology Research Day, University of British Columbia, 2018
- Invited Judge, Pharmacology Research Day, University of British Columbia, 2016
- Invited Judge, Pharmacology Research Day, University of British Columbia, 2014
- Invited Judge, Arizona Junior Sciences and Humanities Symposium, Arizona State University, 2014
- Instructor, MD Undergraduate Program, Faculty of Medicine, University of British Columbia, Vancouver, Canada, Sep 2007-May 2013.
- Mentor, Tri-Mentoring Program, University of British Columbia, Sep 2008-2012
- Mentor, Canadian Institutes of Health Research (CIHR), Synapse, CIHR Youth Science Connection Program, Sep 2009-2012
- Invited Judge, Greater Vancouver Science Fair, 2012
- Facilitator, Responsible Conduct of Research Workshop, University of British Columbia, Faculty of Medicine, Dec 2008
- Instructor, 1st Grant Writing Workshop, Endocrine Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, May 11th-19th, 2006.

Research Funding

- National Institute of Health (NIH R15). *Targeting endothelial function in a genetic mouse model of aortic aneurysm: implications for prevention and therapy* (2019-2022), \$441,000, Role: Principal Investigator.
- Canadian Institutes of Health Research, *The role of endothelial function in the pathogenesis and management of Marfan syndrome-associated aortic disease* (2018-2023), \$950,000, Role: Co-Principal Investigator.
- Rare Disease Foundation, *Investigation of endoplasmic reticulum stress response in Marfan-associated aortic aneurysm development* (2018), \$5,000, Role: Principal Investigator.
- Heart & Stroke Foundation of Canada, *Role of endothelial dysfunction in aortic root pathology in a mouse model of Marfan syndrome* (2018-2021), \$300,000, Role: Co-Principal Investigator.
- The Marfan Foundation, *Endothelial function in Marfan syndrome: a drug target and clinical biomarker* (2018-2020), \$100,000, Role: Co-Principal Investigator.
- The Marfan Foundation, *Children and adolescents with Marfan syndrome: 10,000 healthy steps and beyond* (2017-2019), \$100,000, Role: Co-Principal Investigator
- MWU's Vice President for Research & Strategic Initiatives' Multidisciplinary Research Grant, *Manipulation of caveolin-1 in a mouse model of Marfan syndrome associated aneurysm: effects on biomechanics, physiology, & cell signaling in the aortic wall* (2016-2017), \$20,000, Role: Principal Investigator.
- The Marfan Foundation, *Role of caveolin-1 in progression of aortic aneurysm in Marfan syndrome* (2015-2017), \$75,000, Role: Principal Investigator.

- Canadian Institutes of Health Research, *Understanding the cellular mechanisms underlying vascular dysfunction and aortic aneurysm in Marfan syndrome* (2011-2015), \$800,000, Role: Co-Principal Investigator.
- Rare Disease Foundation, *Inhibitors of matrix metalloproteinase: a novel therapeutic approach for Marfan syndrome* (2015), \$3,500, Role: Principal Investigator.

List of Peer-Reviewed Publications

Under Review:

- 1) Pull K, Folk R, Kang J, Jackson S, Gusek B, **Esfandiarei M**, Jadavji NM. *Scientific Reports*, November 2022 (**Under Review**)

Published:

- 1) Selamet Tierney ES, Chen A, Chung S, Stauffer KJ, Brabender J, Collins RT, Folk R, Li W, Murthy AK, Murphy DJ, Sandor GGS, **Esfandiarei M**. *Journal of American Heart Association*, 2022 Dec 1; e027598. doi: 10.1161/JAHA.122.027598. Online ahead of print.
- 2) Curry TM, **Esfandiarei M**, Thomas TC, Rastogi RG. Case report: Lingering post-concussive symptoms in a pediatric patient with presumed Ehlers-Danlos syndrome. *Frontiers in Pediatrics*, 2022 Nov 4;10:937223. doi: 10.3389/fped.2022.937223.
- 3) Gusek B, Folk R, Curry TM, **Esfandiarei M**. Measurement of endothelium-dependent vasorelaxation in the mouse thoracic aorta using tensometric small volume chamber myography. *J Vis Exp*. 2022 Aug 12;(186). doi: 10.3791/63918.
- 4) Baylow HE, **Esfandiarei M**, Ratiu I. Voice symptoms and quality of life in individuals with Marfan syndrome: A cross-sectional study. *Voice J*. 2022 May 4: S08992-1997(22)00107-2. doi: 10.1016/j.jvoice.2022.04.003.
- 5) Tehrani AY, White Z, Tung LW, Zhao RRY, Milad N, Seidman MA, Sauge E, Theret M, Rossi, FMW, **Esfandiarei M**, van Breemen C, Bernatchez P. Pleiotropic activation of endothelial function by angiotensin II receptor blockers is crucial to their protective anti-vascular remodeling effects. *Sci Rep*. 2022 Jun 13;12(1):9771. doi: 10.1038/s41598-022-13772-3.
- 6) Tehrani AY, White Z, Milad N, **Esfandiarei M**, Seidman MA, Bernatchez P. Blood pressure-independent inhibition of Marfan aortic root widening by the angiotensin II receptor blocker valsartan. *Physiol Rep*. 2021 May;9(10):e14877. doi: 10.14814/phy2.14877.
- 7) Cui JZ, Harris KC, Raedschelders K, Hollander Z, Potts JE, De Souza A, Kiess M, McManus BM, Bernatchez P, Raffin LA, Paine H, van Breemen C, Sandor GS, **Esfandiarei M**. Aortic Dimensions, Biophysical Properties and Plasma Biomarkers in Children and Adults with Marfan Syndrome. *CJC Open*, 2020 Dec 28;3(5):585-594. doi: 10.1016/j.cjco.2020.12.018.
- 8) Tehrani AY, Cui AZ, Jones Bucky T, Hotova E, Castro M, Bernatchez P, van Breemen C, **Esfandiarei M**. Characterization of doxycycline-mediated inhibition of Marfan syndrome-associated aortic dilation by multiphoton microscopy. *Sci Rep*. 2020 Apr 28;10(1):7154. doi: 10.1038/s41598-020-64071-8.

- 9) Nielson C, Ratiu I, **Esfandiarei M**, Chen A, Tierney ES. A review of psychosocial factors of Marfan syndrome: adolescence, adults, family, and providers. *J. Pediatr Genet.* 2019 Sep;8(3):109-122.
- 10) White Z, Milad Nadia, Tehrani AY, Lamothe J, Hogg JC, **Esfandiarei M**, Seidman M, Booth S, Hackett TL, Morissette MC, Bernatchez P. Sildenafil prevents Marfan-associated emphysema and early pulmonary artery dilation in mice. *Am J Pathol.* 2019 Aug;189(8):1536-1546.
- 11) **Esfandiarei M**, Hoxha B, Talley NA, Anderson MR, Alkhouli MF, Squire MA, Eckman DM, Babu JR, Loapschuk GD, Broderick TL. Beneficial effects of resveratrol and exercise training on cardiac and aortic function and structure in the 3xTg mouse model of Alzheimer's disease. *Drug Des Devel Ther.* 2019 Apr 17; 13:1197-1211.
- 12) Cui JZ, Lee L, Sheng X, Chu F, Gibson CP, Aydinian T, Walker DC, Sandor GGS, Bernatchez P, Tibbits GF, van Breemen C, **Esfandiarei M**. In vivo characterization of doxycycline-mediated protection of aortic function and structure in a mouse model of Marfan syndrome-associated aortic aneurysm. *Sci Rep.* 2019 Feb 14;9(1):2071.
- 13) Chohan H, **Esfandiarei M**, Arman D, Van Raamsdonk CD, van Breemen C, Friedman JM, Jett, KA. Neurofibromin haploinsufficiency results in altered spermatogenesis in a mouse model of neurofibromatosis type 1. *PLoS One*, 2018 Dec 20;13(12): e0208835. 10.1371/journal.pone.0208835. eCollection 2018.
- 14) Ratiu I, Virden TB, Baylow H, Flint M, **Esfandiarei M**. Executive and Quality of Life in Individuals with Marfan Syndrome. *Qual. Life Res.*, 2018 Aug;27(8):2057-2065.
- 15) Sellers S, Milad N, Chan R, Mielnik M, Jermilova U, Huang PL, de Crom R, Hirota J, Hogg JC, Sondor GG, van Breemen C, **Esfandiarei M**, Seidman M, Bernatchez P. Inhibition of Marfan Syndrome Aortic Root Dilation by Losartan: Role of ATR1-Independent Activation of Endothelial Function. *Am J Pathol*, Vol. 183, No. 3, March 2018
- 16) Gibson C, Alex R, Cooper K, Cui JZ, Gaufin D, Farney M, Broderick T, van Breemen C, Vallejo-Elias J, **Esfandiarei M**. Structural and functional effects of mild exercise on the progression of aortic aneurysm in a mouse model of Marfan syndrome. *J. Appl Physiol*, 2017, Jul 1;123(1):147-160.
- 17) Lee L, Cua M; **Esfandiarei M**, Sheng X, Cui JZ, Sarunic MV, Faisal Beg M, van Breemen C, Sandor GS, Tibbits GF. Aortic and Cardiac Structure and Function Using High-Resolution Echocardiography and Optical Coherence Tomography in a Mouse Model of Marfan Syndrome. *PLoS One.* 2016 Nov 8;11(11): e0164778.
- 18) Ziomek G, van Breemen C, **Esfandiarei M**. Measurement of calcium fluctuations within the sarcoplasmic reticulum of cultured smooth muscle cells using a FRET-based confocal imaging. *JoVE.* 2016
- 19) Ziomek G, van Breemen C, **Esfandiarei M**. Drop in endo/sarcoplasmic calcium precedes the unfolded protein response in Brefeldin A-treated vascular smooth muscle cells. *Eur J Pharmacol.* 2015 Jul 11; 764:328-339.
- 20) Cui J, Tehrani AY, Abraham T, van Breemen C, **Esfandiarei M**. Quantification of aortic and cutaneous elastin and collagen morphology in Marfan syndrome by multiphoton microscopy. *J Struct Biol.* 2014. Sep;187(3):242-53.
- 21) Ziomek G, Cheraghi Zanjani P, Arman D, van Breemen C, **Esfandiarei M**. Calcium Regulation in Vascular Smooth Muscle Cell during the Initial Phase of Endo/sarcoplasmic Reticulum Stress. *Eur J Pharmacol.* 2014 Jul 15; 735:86-96.

- 22) **Esfandiarei M**, Fameli N, Choi YH, Tehrani AY, Hoskins JG, van Breemen C. Endothelin-Induced Sarcoplasmic Reticulum Calcium Depletion Waves in Vascular Smooth Muscle Cells. *PLoS One*. 2013;8(2): e55333.
- 23) Maghsoudi AH, Khodaghli F, Hadi-Alijanvand H, **Esfandiarei M**, Sabbaghian M, Zakeri Z, Shaerzadeh F, Abtahi Sh, Maghsoudi N. Homology modeling, docking, molecular dynamics simulation, and structural analyses of coxsackievirus B3 2A protease: An enzyme involved in the pathogenesis of inflammatory myocarditis. *Int J Biol Macromol*. 2011;49(4):487-92.
- 24) **Esfandiarei M**, Julia Lam, Abdoli Yazdi S, Harley Syyong, and Cornelis van Breemen. Diosgenin modulates vascular smooth muscle cell function by regulating cell viability, proliferation, migration, and calcium homeostasis. *J Pharmacol Exp Ther*. 2011 Mar;336(3):925-39.
- 25) **Esfandirei M**, Abdoli Yazdi S, Gray V, Dedhar S, and Cornelis van Breemen. Integrin-linked kinase functions as a downstream mediator of platelet-derived growth factor to enhance smooth muscle cell migration via a p38 MAPK-dependent pathway. *BMC Cell Biol*, 2010;11(1):16.
- 26) Maghsoudi N, Tafreshi N KH, Khodagholi F, Zakeri Z, **Esfandiarei M**, Zeinoddini M, and Amir Hossein Maghsoudi. Targeting Enteroviral 2A Protease by a 16-mer Synthetic Peptide: Inhibition of 2A^{Pro}-Induced Apoptosis in a Stable Tet-on HeLa Cell Line. *Virology*. 2009; 399(1): 39-45.
- 27) **Esfandiarei M** and Bruce McManus. Molecular biology and pathogenesis of viral myocarditis. *Annu Rev Pathol*. 2008; 3:127-55.
- 28) **Esfandiarei M**, Boroomand S, Suarez A, Si X, Rahmani M, and Bruce McManus. Coxsackievirus B3 activates nuclear factor kappa-B transcription factor via a phosphatidylinositol-3 kinase/protein kinase B-dependent pathway to improve host cell viability. *Cell Microbiol*. 9(10):2358-71, 2007.
- 29) **Esfandiarei M**, Suarez A, Amaral A, Si X, Rahmani M, Dedhar S, and Bruce McManus. Novel role for integrin-linked kinase in modulation of coxsackievirus B3 replication and virus-induced cardiomyocyte injury. *Circ Res*. 99(4):354-61, 2006.
- 30) Wong J, Zhang J, **Esfandiarei M**, Yanagawa B, Suarez A, McManus BM, and Honglin Luo. Liposome-mediated transient transfection reduces cholesterol-dependent coxsackievirus B3 infectivity. *J Virol Methods*. 133(2):211-8, 2006.
- 31) Si X, Luo H, Zhang J, Yuen J, Cheung C, **Esfandiarei M**, Suarez A, Morgan A, and Bruce McManus. Pyrrolidine Dithiocarbamate Reduces Coxsackievirus B3 Replication through Inhibition of Ubiquitin-Proteasome Pathway. *J Virol*. 79(13):8014-23, 2005.
- 32) Si X, Luo H, Morgan A, Zhang J, Wong J, Yuan J, **Esfandiarei M**, Gao G, Cheung C, and Bruce M. McManus. Stress-Activated Protein Kinases Are Involved in Coxsackievirus B3 Viral Progeny Release. *J Virol*. 79(22):13875-81, 2005.
- 33) Rahmani M, Read JT, Carty J, McDonald PC, Wong BW, **Esfandiarei M**, Si X, Luo Z, Luo H, Rennie PS, and Bruce McManus. Regulation of versican promoter by the beta-catenin/TCF complex in vascular smooth muscle cells. *J Biol Chem*. 280(13):13019-28, 2005.
- 34) **Esfandiarei M**, Luo H, Yanagawa B, Suarez A, Dabiri D, Zhang J, and Bruce McManus. Protein kinase B/Akt regulates coxsackievirus B3 replication through a mechanism, which is not caspase dependent. *J Virol*. 78(8):4289-98, 2004.

- 35) Carthy CM, Yanagawa B, Luo H, Granville DJ, Yang DC, Cheung P, **Esfandiarei M**, Rudin CM, Thompson CB, Hunt DWC, and Bruce McManus. 2003. Bcl-2 and Bcl-xL overexpression inhibits cytochrome c release, activation of multiple caspases, and virus release following coxsackievirus B3 infection. *Virology*. 313:147-157, 2003.
- 36) Luo H, Yanagawa B, Zhang J, Luo Z, Zhang M, **Esfandiarei M**, Carthy C, Wilson JE, Yang DC, and Bruce McManus. Coxsackievirus B3 replication is reduced by inhibition of the extracellular signal-regulated kinase (ERK) signalling pathway. *J Virol*. 76(7): 3365-3373, 2002.
- 37) McManus BM, Luo H, Yanagawa B, **Esfandiarei M**, Carthy C, Yang D, Wilson JE, Cheung P, and A. Wang. Structural and biochemical basis of cardiac myocyte survival and death: A dynamic tension. Published for the 2nd International Congress on Heart Disease, Washington, DC, 2001.
- 38) Cheung P, Yanagawa B, Zhang M, Wang A, Luo H, **Esfandiarei M**, Suarez A, Wilson JE, Carthy C, McManus BM, and Decheng Yang. Molecular mechanisms of cardiovirulence and host cell responses in coxsackievirus B3-induced myocarditis. In *Recent Research Developments in Virology*. Transworld Research Network, India, 2001.

Published Peer-Reviewed Book Chapters:

- 1) **Esfandiarei M**, Yanagawa B, and Bruce McManus. Single gene disorders in dilated cardiomyopathy: *In Cardiovascular Genetics and Genomics for the Cardiologist*. Liew CC and Dzau V (eds), Blackwell Publishing, Oxford, 2007.
- 2) Yanagawa B, **Esfandiarei M**, Carthy C, Cheung P, Luo H, Granville DJ, Yang DC, Choy J, Lui A, Dabiri D, Wilson JE, Wang A, Zhang M, Sinn S, Wei K, Laher I, and Bruce McManus. Life and Death Signaling In: *Myocarditis: Bench to the Bedside*, Cooper LT (ed), Humana Press, Totowa, 2002.

Peer-Reviewed Scientific Abstracts:

- 1) Effect of the General Inhibitor of Nitric Oxide Synthase (L-NAME) On Cardiac and Aortic Function and Structure in A Mouse Model of Marfan Syndrome-Associated Aortic Aneurysm. Christian Priday, Robert Folk, Christopher Fullmer, Brikena Gusek, Tala Curry, Nathan Johnson, Johana Vallejo-Elias, **Mitra Esfandiarei**. American Society of Pharmacology & Experimental Therapeutics Annual Meeting (FASEB/ASPET), April 2022, Philadelphia, PA.
- 2) Evaluation of the effects of Marfan pathogenesis and losartan treatment on coronary and cerebral arteries in the well-established Marfan Syndrome mouse model. Kuechenmeister B, Gusek B, Jones TB, **Esfandiarei M**. American Society of Pharmacology & Experimental Therapeutics Annual Meeting (FASEB/ASPET), April 2021, Virtual.
- 3) Cerebrovascular and Neurological Alterations in a Mouse Model of Marfan Syndrome. Curry T, Gusek B, Bromberg C, Gonzales R, **Esfandiarei M**, Currier Thomas T. 6th Annual ABRC-Flinn Research Conference, February 2021, Virtual.
- 4) Investigation of the early effects of angiotensin-II type-I receptor blocker losartan on coronary and cerebral artery peak flow in a mouse model of Marfan Syndrome. Kuechenmeister B, Gusek B, **Esfandiarei M**. Arizona Physiological Society Annual Meeting, November 2020, Virtual.

- 5) Children and adolescents with Marfan syndrome: 10,000 healthy steps & beyond. Salamat-Tierney ES, Chen A, Murphy D, Sandor GG, **Esfandiarei M**. 2020 GenTAC Aortic Summit, October 2020, Virtual.
- 6) Evaluation of the effects of combination of mild aerobic exercise and angiotensin-II type-I receptor blocker in a genetic mouse model of Marfan syndrome-associated aortic aneurysm. Alexander T, Hoxha B, Talley NA, Dickman R, Cooper K, Broderick TL, Vallejo-Elias J, **Esfandiarei M**. 21st International Vascular Biology Meeting, September 2020, Seoul, Korea (Virtual).
- 7) Talley N, Curry T, Gusek B, Gibson C, Alexander T, Jones TB, Vallejo-Elias J, **Esfandiarei M**. Implications for pharmacological and genetic inhibition of inducible nitric oxide synthase (iNOS) in a genetic mouse model of aortic aneurysm. 21st International Vascular Biology Meeting, September 2020, Seoul, Korea (Virtual).
- 8) Understanding the Role of Inducible Nitric Oxide (iNOS) on the progression of Marfan Syndrome Associated Aortic Aneurysms. Talley N, Curry T, Hoxha B, Gibson C, Alexander T, Vallejo-Elias J, **Esfandiarei M**. Arizona Osteopathic Medical Association (AOMA) Annual Meeting, April 2020, Phoenix, AZ.
- 9) Children and adolescents with Marfan syndrome: 10,000 healthy steps & beyond. Salamat-Tierney ES, Chen A, Murphy D, Sandor GG, **Esfandiarei M**. 10th International Symposium on Marfan Syndrome and Related Disorders. May 2018, Amsterdam, NL.
- 10) The importance of endothelial function to losartan's anti-remodeling effects: Of mice and Men. Tehrani A, Sellers S, White Z, **Esfandiarei M**, Harris K, Van Breemen C, Sandor GG, Bernatchez P. 10th International Symposium on Marfan Syndrome and Related Disorders. May 2018, Amsterdam, NL.
- 11) Insights into the role of inducible nitric oxide synthase in Marfan syndrome associated aortic aneurysm. Talley NA, Alexander T, Hoxha B, Cameron E, Vallejo-Elias J, **Esfandiarei M**. Experimental Biology Annual Meeting, April 2018, San Diego, CA.
- 12) Investigating the effects of methyl-beta-cyclodextrin on aortic function & structure in a mouse model of Marfan syndrome using high frequency ultrasound imaging. Cameron E, Hoxha B, Potter RM, Vallejo-Elias J, **Esfandiarei M**. Experimental Biology Annual Meeting, April 2018, San Diego, CA.
- 13) Investigation of early effects of combination of mild aerobic exercise and angiotensin-II type-I receptor blocker losartan on aortic function in a mouse model of Marfan syndrome. Alexander T, Hoxha B, Talley NA, Cameron E, Cooper K, Broderick TL, Vallejo-Elias J, **Esfandiarei M**. Experimental Biology Annual Meeting, April 2018, San Diego, CA.
- 14) High resolution ultrasound imaging reveals cardiac and vascular dysfunction in the 3xTG mouse model of Alzheimer's disease. Hoxha B, Talley NA, Anderson MR, Alkhouli MF, Squire MA, **Esfandiarei M**, Broderick TL. Experimental Biology Annual Meeting, April 2018, San Diego, CA.
- 15) Mice expressing human apolipoprotein E4e exhibit altered thoracic ascending aortic elastic properties, Talley NA, Jones TB, Alexander T, Vallejo-Elias J, **Esfandiarei M**. Experimental Biology Annual Meeting, April 2018, San Diego, CA.
- 16) Harris KC, Cui JZ, Raffin LA, Hollander Z, Potts JE, De Souza A, Paine H, McManus BM, van Breemen C, **Esfandiarei M**, Sandor GG. Evaluation of the association between aortic dimensions, biophysical properties and plasma biomarkers in children and adult patients with Marfan Syndrome. American Heart Association Scientific Sessions. November 2017, Anaheim, CA

- 17) Hoxha B, Anderson MR, Talley NA, Alkhouli MF, Squire MA, Lopaschuk GD, **Esfandiarei M**, Broderick TL. Characterization of cardiac and aortic function and structure by high resolution ultrasound imaging in the 3xTg mouse model of Alzheimer's Disease. Arizona Physiological Society Annual Meeting, October 2017, Flagstaff, AZ
- 18) Hoxha B, Cameron E, Talley NA, Potter R, Vallejo-Elias J, **Esfandiarei M**. Evaluation of the effects of methyl- β -cyclodextrin on aortic function & structure in a mouse model of Marfan syndrome using high frequency ultrasound imaging. Arizona Physiological Society Annual Meeting, October 2017, Flagstaff, AZ
- 19) Alexander T, Hoxha B, Talley NA, Cameron E, Cooper K, Broderick TL, Vallejo-Elias J, **Esfandiarei M**. Combination of mild aerobic exercise and angiotensin-II type-I receptor blocker treatment on cardiac and aortic function in a mouse model of Marfan Syndrome. Arizona Physiological Society Annual Meeting, October 2017, Flagstaff, AZ
- 20) Talley NA, Hoxha B, Alexander T, Gibson CP, Vallejo-Elias J, **Esfandiarei M**. Role of Inducible Nitric Oxide Synthase (iNOS) in Marfan Syndrome Associated Aortic Aneurysm. Arizona Physiological Society Annual Meeting, October 2017, Flagstaff, AZ
- 21) Ratiu I, **Esfandiarei M**, Virden T, Baylow HE, Flint M, Bhargava R. Executive function and quality of life in Marfan Syndrome. Arizona Speech-Language Hearing Association Convention, 2017, Tucson, USA.
- 22) Baylow HE, Ratiu I, **Esfandiarei M**, Flint M, Virden T, Bhargava R. Dysphagia symptoms and Quality of Life (QOL) in patients with Marfan Syndrome. The Annual Meeting of the Dysphagia Research Society, 2017, Portland, USA.
- 23) Jason Z. Cui, Ling Lee, Xiaoye Sheng, George Sandor, Casey van Breemen, Glen F. Tibbits, and **Mitra Esfandiarei**. Longitudinal study of long-term effects of doxycycline on cardiac structure and functions using high-frequency, high-resolution ultrasound imaging in a mouse model of Marfan syndrome. World Heart Failure Congress. 2016, Florence, Italy.
- 24) Christine P. Gibson, Michael Farney, Douglas Gaufin, Roshanak Rahimian, Tom Broderick, Johana Vallejo-Elias, and **Mitra Esfandiarei**. Determining the Threshold for Protective Effects of Aerobic Exercise on Aortic Structure in a Mouse Model of Marfan Syndrome Associated Aortic Aneurysm. APS Intersociety Meeting: The Integrative Biology of Exercise VII, 2016, Phoenix, USA.
- 25) **Mitra Esfandiarei**, Christine P. Gibson, Cory Nielsen, Ramona Alex, Michael Farney, Tom Broderick, and Johana Vallejo. Mild aerobic exercise blocks elastin fiber fragmentation and aortic dilatation in a mouse model of Marfan syndrome associated aortic aneurysm. Arizona Physiological Society 9th Annual Meeting, 2016, Tucson, USA.
- 26) Jason Z. Cui, Ling Lee, Xiaoye Sheng, Glen F. Tibbits, Cornelis van Breemen, and **Mitra Esfandiarei**. Evaluation of the protective effects of long-term doxycycline treatment on progression of Marfan-associated aortic aneurysm by high-resolution ultrasound imaging. American Heart Association Scientific Sessions. 2015, Orlando, USA.
- 27) Christine P. Gibson, Ramona Alex, Thomas L. Broderick, Johana Vallejo, and **Mitra Esfandiarei**. Effects of Voluntary Exercise on Progression of Aortic Aneurysm in a Mouse Model of Marfan Syndrome. American Physiological Society Annual Meeting, 2015, Boston, USA.
- 28) Jason Harmon, Lana Leung, **Mitra Esfandiarei**, and Johana Vallejo. Caveolin-1 as a Potential Regulator of Transforming Growth Factor- β and Angiotensin Type 1 Receptor

- Signaling in Primary Human Aortic Smooth Muscle Cells. American Society for Pharmacology & Experimental Therapeutics Annual Meeting. 2015, Boston, USA.
- 29) Gabriela Ziomek, Cornelis van Breemen, and **Mitra Esfandiarei**. SR calcium Decrease and UPR initiation in Brefeldin A-induced Endo/sarcoplasmic Reticulum Stress in Vascular Smooth Muscle Cells. American Society for Pharmacology & Experimental Therapeutics Annual Meeting. 2015, Boston, USA.
 - 30) Kimberly Jett, Harleen Chohan, Jason Z. Cui, Arash Y. Tehrani, Jan M. Freidman, Cornelis van Breemen, and **Mitra Esfandiarei**. Impairment of Vascular Function in a Mouse Model of Neurofibromatosis Type 1. American Physiological Society Annual Meeting, 2015, Boston, USA.
 - 31) Kimberly Jett, Harleen Chohan, Jason Z. Cui, Jan M. Freidman, Cornelis van Breemen, and **Mitra Esfandiarei**. Dysfunctions of the Abdominal Aorta and Renal Arteries in a Mouse Model of Neurofibromatosis Type 1. American Society for Pharmacology & Experimental Therapeutics Annual Meeting. 2015, Boston, USA.
 - 32) Cui ZJ, van breemen C, **Esfandiarei M**. Quantification of aortic and cutaneous elastin and collagen morphology in Marfan syndrome by multi-photon microscopy, 18th International Microscopy Conference, 2014, Prague, Czech republic.
 - 33) Zhang R, Han X, **Esfandiarei M**, Anderson L, Rahimian R. Shifts in rat aortic and mesentric endothelial responses to streptozotocin-induced diabetes with respect to sex: the role of EDRFs and superoxide. World Congress of Cardiology, 2014, Melbourne, Australia.
 - 34) Lee L, **Esfandiarei M**, Sheng X, van Breemen C, Sandor GS, Tibbits GF. *In vivo* measurements of biophysical properties of heart and aorta in a mouse model of Marfan syndrome. XXI International Society for Heart Research World Congress. 2013, San Diego, USA
 - 35) Jett K, Cui J, Chohan H, Arman D, Tehrani AY, Friedman J, van Breemen C, **Esfandiarei M**. Impairment of aortic structure and function in a mouse model of neurofibromatosis type 1. IUPS, 2013. Birmingham, UK.
 - 36) Fameli N, **Esfandiarei M**, van Breemen C. Calcium dynamics in nano-junctions between the sarcoplasmic reticulum, plasma, and other organells in vascular smooth muscle. IUPS, 2013, Birmingham, UK.
 - 37) Van Breemen C, **Esfandiarei M**, Chung AW. Matrixmetalloproteinases & aortic aneurysm in Mafan syndrom. The 2nd Genetically Triggered Thoracic Aortic (GenTAC) Disease Summit, 2012, Chicago, USA.
 - 38) **M. Esfandiarei**, N. Fameli, Y. H. Choi, A. Y. Tehrani, J. G. Hoskins, C. van Breemen, Sarcoplasmic Reticulum Ca²⁺ depletion waves in vascular smooth muscle cells. The Biophysical Society Meeting, 2012, San Diego, CA, USA.
 - 39) **Esfandiarei M**, Abdoli Yazdi S, and Casey van Breemen. Mapping the pathway from growth factors to actin cytoskeleton. 7th international meeting on pathways, networks, and systme medicine. 2009, Corfu, Greece.
 - 40) Garmaroudi FG, Marchant D, Bashashati M, **Esfandiarei M**, Ng RT, Murphy K, Luo H, and Bruce McManus. Functional properties of signaling networkd in enteroviral myocarditis. The 10th International Conference on System Biology (ICSB), 2009, Stanford, USA.
 - 41) **Esfandiarei M**, Abdoli Yazdi S, and Casey van Breemen. Integrin-linked kinase regulates aortic smooth muscle cell migration in response to platelet-derived growth factor through a

- p38 MAPK-dependent pathway. UBC Department of Pharmacology and Therapeutics annula research day. 2009, Vancouver, Canada.
- 42) **Esfandiarei M**, Abdoli Yazdi S, and Casey van Breemen. Platelet-driven growth factor regulates smooth muscle cell migration through a integrin-linked kinase dependent mechanism. American Society for Pharmacology & Experimental Therapeutics, 2008, San Diego, USA.
 - 43) **Esfandiarei M**, Boroomand S, Suarez A, and Bruce McManus. Coxsackievirus B3 activates nuclear factor Kappa-B transcription factor via a phosphatidylinositol-3 kinase/protein kinase B-dependent pathway to improve host cell viability. Life Science 2007. *Young Life Scientist Forum*. 2007, Glasgow, UK.
 - 44) **Esfandiarei M**, Dedhar S, and Bruce McManus. Integrin-linked kinase modulates coxsackievirus B3-induced myocardial injury via protein kinase B/Akt activation: A Potential Therapeutic approach for enteroviral myocarditis. American Society for Pharmacology & Experimental Therapeutics, 2006, San Francisco, USA.
 - 45) **Esfandiarei M**, Suarez A, Amaral A, Rahmani M, Dedhar S, and Bruce McManus. Inhibition of Integrin-Linked Kinase (ILK) Attenuates Coxsackievirus B3 Replication without Restriction of Virus-Induced Cytopathic Effects. American Society for Pharmacology & Experimental Therapeutics, 2005, San Diego, USA.
 - 46) Rahmani M, Ang L, Read JT, Carthy J, Wong BW, **Esfandiarei M**, Grieve K, Rennie PS, and Bruce McManus. CtBP and CRARF domains of TCF transcription factors control the expression of the beta-catenin/TCF target gene, versican, in vascular smooth muscle cells. American Society of Biochemistry and Molecular Biology, 2005, San Diego, USA.
 - 47) McManus BM, Yang D, **Esfandiarei M**, and Honglin Luo. Life and Death in Entroviral Infection: A Critical Symphony of Signals. 27th Annual ISHR American Section Meeting, 2005, New Orleans, USA.
 - 48) Rahmani M, Carthy J, Read JT, Luo Z, **Esfandiarei M**, Rennie PS, and Bruce M. McManus. Versican Promoter is a Target for the beta-catenin/Tcf-4 Signaling Pathway in Vascular Smooth Muscle Cells. The American College of Cardiology Annual Scientific Session. 2004, New Orleans, USA.
 - 49) X. Si, Zhang J, **Esfandiarei M**, Yuan J, Cheung C, Luo H, and Bruce McManus. Pyrrolidine dithiocarbamate and zinc synergistically inhibit coxsackievirus B3 Replication in cultured HeLa cells. National Research Forum for Young Investigators in Circulatory and Respiratory Health. 2004, Winnipeg, USA.
 - 50) **Esfandiarei M**, Honglin Luo, Darya Dabiri, Jingchun Zhang, Agripina Suarez, Bobby Yanagawa, and Bruce M. McManus. Protein kinase B: A regulator of coxsackievirus B3 Replication. American Society for Investigative Pathology, 2003, San Diego, USA.
 - 51) **Esfandiarei M**, Luo H, Dabiri D, Zhang, Suarez A, Yanagawa B, and Bruce McManus. Protein kinase B/Akt regulates coxsackievirus replication through a caspase-independent mechanism. *Frontier in Cardiovascular Science*. 2003, Vancouver, Canada.
 - 52) **Esfandiarei M**, Luo H, Zhang J, Dabiri, D, Yanagawa B, Wilson JE, and Bruce McManus. Coxsackievirus B3 phosphorylates and activates protein kinase B via a PI3-kinase-dependent mechanism. American Society for Investigative Pathology, 2002, New Orleans, USA.
 - 53) Zhang M, Yanagawa B, Cheung P, Yuan Ji, **Esfandiarei M**, Chau D, Luo H, Zhang J, Dabiri D, Wilson JE, McManus BM, and Decheng Yang. Functional Roles of IP10 and

- IGTP Expression in Coxsackievirus B3 (CVB3) Replication. American Society for Investigative Pathology, 2002, New Orleans, USA.
- 54) Yanagawa B, **Esfandiarei**, Luo Z, Dabiri D, Carthy CM, Cheung P, Yang DC, Wilson JE, and Bruce McManus. Selective activation of mitogen activated protein kinases following coxsackievirus B3 infection. United States Academy of Pathology meeting. 2001, Atlanta, USA.
- 55) Luo H, Yanagawa B, Luo Z, Zhang M, **Esfandiarei M**, Carthy C, Yang D, Wilson J, and Bruce McManus. Coxsackievirus B3 replication is reduced by inhibition of the extracellular signal-regulated kinase (ERK) signaling pathway: A novel protective avenue against viral myocarditis? Heart Failure Society of America annual meeting. 2001, Washington, USA.
- 56) Yanagawa B, Spiller BO, Choy J, Goodfellow I, Luo H, Cheung P, Zhang M, **Esfandiarei M**, Suarez A, Wang A, Carthy C, Yang DC, and Bruce McManus. Soluble Coxsackievirus B3 Receptor: A treatment for Viral Myocarditis? Frontiers in Cardiovascular Research, 2001, Seattle, USA.
- 57) Yanagawa B, Choy J, Luo H, Cheung P, Suarez A, **Esfandiarei M**, Zhang M, Wang A, Spiller BO, and Bruce McManus. (2001) HDAF: A Treatment for CVB3-induced Myocarditis. University of British Columbia Pathology Research Day. 2001, Vancouver, Canada.

Invited Scientific Presentations

- 1) *Marfan syndrome-associated aortic aneurysm: new approaches in prevention & therapy.* University of the Pacific. 2022, Stockton, USA
- 2) *Exercise & Marfan-Associated Aortic Aneurysm: Implications for Prevention or Therapy.* Society of Vascular Medicine Annual Vascular Scientific Session. 2021, Virtual, USA.
- 3) *Effects of exercise on aortic root growth.* 35th Annual National Marfan Foundation Conference. 2019, Houston, USA
- 4) *Combination of Mild Aerobic Exercise and Losartan on The Progression of Aortic Aneurysm in a Mouse Model of Marfan Syndrome.* 10th International Symposium on Marfan Syndrome and Related Disorders, 2018, Amsterdam, Netherlands.
- 5) *Exploring Therapeutic Approaches for Marfan Syndrome Associated Aortic Aneurysm.* Stanford University Cardiovascular Institute, 2017, Palo Alto, USA.
- 6) *Exploring Therapeutic Approaches for Marfan Syndrome Associated Aortic Aneurysm.* Thomas J. Long School of Pharmacy & Health Sciences. University of The Pacific, 2017, Stockton, USA.
- 7) *Mild Aerobic Exercise & Marfan Associated Aortic Aneurysm.* Heart & Lung Institute, 2016, Vancouver, Canada.
- 8) *Mild Aerobic Exercise Blocks Elastin Fiber Fragmentation & Aortic Dilatation in a Mouse Model of Marfan Associated Aortic Aneurysm.* Arizona Physiological Society Annual Meeting. 2016, Tucson, USA
- 9) *Vascular Complications in Marfan Syndrome.* Department of Basic Medical Sciences, University of Arizona, 2016, Phoenix, USA.
- 10) *Exercise & Marfan Associated Aneurysms: Where is the Threshold?* Genetic Aortic Diseases Association (GADA) Annual Conference, 2016, Toronto, Canada

- 11) *Marfan syndrome: Exploring therapeutic approaches for a connective tissue disorder.* Kenneth Suarez Research Day, Midwestern University, 2016, Chicago, USA
- 12) *Aortic Aneurysm & Physical Activity: Is too much of a good thing is bad for you?* 1st Phoenix Symposium on Marfan Syndrome & Related Disorder, 2016, Phoenix, USA
- 13) *Effects of Exercise on the Progression of Aortic Aneurysms in Marfan Syndrome Patients.* Canadian Marfan Association Annual Conference. 2015, Ottawa, Canada.
- 14) *Translational Cardiovascular Research in Marfan syndrome.* Canadian Marfan Association Annual Conference. 2013, Vancouver, Canada.
- 15) *Basic Science Research in Marfan Syndrome.* A Workshop for Marfan Patients & Families. Canadian Marfan Association Annual Meeting. 2013, Vancouver, Canada
- 16) *Integrin-Linked Kinase: An Emerging Player in Vascular Smooth Muscle Cell Migration.* Department of Pharmacology & Toxicology, Arkansas University for Medical Sciences. 2010. Little Rock, USA.
- 17) *Integrin-Linked Kinase: An Emerging Crucial Player in Cardiovascular Complications.* University of Minnesota Medical School, 2009, Duluth, USA.
- 18) *Integrin-Linked Kinase Regulation of Smooth Muscle Cell Migration and Progression of Atherosclerosis.* UBC-Department of Pharmacology Annual Research Day (1st Prize). 2008, Vancouver, Canada.
- 19) *Novel role for integrin-linked kinase in modulation of coxsackievirus B3 replication and virus-induced myocardial injury.* Merck-Frost Biology Research Day (Finalist, 3rd Prize), 2006, Montreal, Canada.
- 20) *Coxsackievirus B3 phosphorylates and activates protein kinase B/Akt via a PI3-kinase-dependent mechanism.* Highlights: Graduate Student Posters in Pathology. ASIP annual meeting. 2002, New Orleans, USA.

Peer-Review Contributions

Editorial Board:

- Editorial Board Member, *Frontiers in Physiology*, 2022
- Editorial Board Member, *Nature Scientific Report*, 2019-Present

Reviewer for Scientific Journals:

- 2022: *Frontiers in Physiology*
- 2021: *Nature Communications Biology*; *Arteriosclerosis, Thrombosis, and Vascular Biology*
- 2020: *Frontiers in Physiology*
- 2019: *American Journal of Physiology*; *Cell & Molecular Life Sciences*; *Journal of American Heart Association*; *Scientific Reports*
- 2018: *Scientific Reports*; *Frontiers in Pharmacology*; *Journal of Visualized Experiments*
- 2017: *Clinical & Experimental Hypertension*; *Nature Scientific Reports*; *Frontiers in Physiology*
- 2015: *PLOS One*; *European Journal of Histochemistry*; *Analytical Cellular Pathology*; *International Journal of Endocrinology*
- 2014: *Journal of Pediatric Genetics*

- 2012: Circulation Research; Arteriosclerosis, Thrombosis; and Vascular Biology
- 2011: Systems Biology in Reproductive Medicine
- 2010: American Journal of Physiology; Journal of Neuroscience
- 2009: Journal of Cardiovascular Pharmacology; Biochimie Journal
- 2008: Arteriosclerosis, Thrombosis, and Vascular Biology Journal; BioMed Central (BMC); Cardiovascular Disorders Journal

Grant Funding Agencies:

- Arizona Biomedical Research Consortium, Project Grant, 2021
- Italian Telethon Foundation, Project Grant, 2020
- Heart & Stroke Foundation of Canada (HSFC), Project Grant, 2007.
- Canadian Institutes of Health Research (CIHR), Project Grant, 2007.
- Canadian Institutes of Health Research, Project Grant, 2006.

Most Recent Students Supervisory & Mentorship Activities

Research Supervisor:

- 1) M.Sc. Student Marcos Ramirez, Department of Biomedical Sciences, Midwestern University, 2021-Present
- 2) Ph.D. Student Brikena Gusek, Department of Translational Medicine, University of Arizona, 2020-Present
- 3) Ph.D. Student Tala Curry, Department of Translational Medicine, University of Arizona, 2019-Present
- 4) M.Sc. Student Christian Priday, Department of Biomedical Sciences, Midwestern University, 2020-present
- 5) M.Sc. Student Eunice Barrameda, Department of Biomedical Sciences, Midwestern University, 2020-present
- 6) M.Sc. Student Raechel Dickman, Department of Biomedical Sciences, Midwestern University, 2017-2019
- 7) M.Sc. Student Tala Curry, Department of Biomedical Sciences, Midwestern University, 2017-2019
- 8) M.Sc. Student Tia Alexander, Department of Biomedical Sciences, Midwestern University, 2016-2018
- 9) M.Sc. Student Nicholas Talley, Department of Biomedical Sciences, Midwestern University, 2016-2018
- 10) M.Sc. Student Gabriela Ziomek, Department of Pharmacology & Therapeutics, University of British Columbia, 2015-2018
- 11) M.Sc. Student Christine Gibson, Department of Biomedical Sciences, Midwestern University, 2013-2015.
- 12) Ph.D. Student Jason Cui, Co-Supervisor, Department of Pharmacology & Therapeutics, University of British Columbia, 2012-2017
- 13) Ph.D. student Kimberly Jett, Co-Supervisor, Department of Medical Genetics, University of British Columbia, 2011-2015.

Member of Supervisory Committee:

- 1) Daniela Alcazar, 2021-Present
- 2) Liam Curtin, 2021-Present
- 3) Katelyn Necco, 2020-Present
- 4) Taylor Pychewicz, 2020-Present
- 5) MaryAnn Carcamo, 2018-2020
- 6) Jordan O'Sullivan, 2016-2017
- 7) Shelby Subry, 2016-2017
- 8) Susana Gutierrez, 2014-2016
- 9) Jason Harmon, 2013-2015
- 10) Donia Hussain, 2013-2015
- 11) Christopher De Vera, 2013-2015
- 12) Jason Z. Cui, 2011-2015
- 13) Gabriela Ziomek, 2012-2015
- 14) Kimberly Jett, 2009-2013

University Committees & Other Activities

- 1) Member, Promotion and Graduation Committee, College of Graduate Studies, Midwestern University
- 2) Member, Biomedical Sciences Program Education Committee, July 2018-Present
- 3) Member, Biomedical Sciences Program Self-Study Committee, July 2018-Present.
- 4) Member, Tenure & Promotion Committee, Midwestern University, 2018.
- 5) Chair, University Diversity Education Committee, Midwestern University, 2018-2021.
- 6) Invited judge, Arizona Junior Sciences and Humanities Symposium, Arizona State University, 2017.
- 7) Member, Wellness Committee, Midwestern University, July 2015-2019.
- 8) Member, Student Promotion & Graduation Committee, College of Health Sciences, Midwestern University, July 2015-2019.
- 9) Member, Admissions Committee, College of Podiatry Medicine, Midwestern University, 2014-Present.
- 10) Chair, Admissions Committee, College of Health Sciences, Midwestern University, 2014-2016
- 11) Member, Academic Review Committee, College of Health Sciences, Biomedical Sciences Program, Midwestern University, 2013-2017.
- 12) Invited judge, Department of Anesthesiology, Pharmacology, and Therapeutics Research Day, University of British Columbia, 2014.
- 13) Invited judge, Arizona Junior Sciences and Humanities Symposium, Arizona State University, 2014.
- 14) Member, Committee for Taskforce on Planning for Research & Integrating the Medical Curriculum (member), Faculty of Medicine, University of British Columbia, 2007-2010.
- 15) Member, Research Council, Faculty of Medicine, University of British Columbia, 2006-2011.

- 16) Member, Postdoctoral Advisory Committee, Faculty of Medicine, University of British Columbia, 2007-2009.

Certificates and Licenses

- Instructional Skills Workshop, Centre for Teaching & Academic Growth, University of British Columbia
- Facilitative Leadership, University of British Columbia
- Foundation of Project Management, University of British Columbia

Memberships in Scientific Societies

- North American Vascular Biology Organization
- American Physiological Society
- American Society for Pharmacology & Experimental Therapeutics
- American Heart Association
- Genetic Aortic Disease Association (GADA) Canada
- Athens Institute for Education & Research

Patents and Intellectual Property Rights

- 1) US Patent No.US60/761,337 (02/08/2006); ILK Inhibitors for treatment of viral myocarditis (Pending).