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EDUCATION

Ph.D.	University of Michigan, Ann Arbor MI	2007	Kinesiology
M.A.	University of Texas, Austin TX	2002	Kinesiology
B.S.	Seoul National University, South Korea	1995	Physical Education

TEACHING EXPERIENCE

2025-Present	Assistant Professor, Department of Biological and Health Sciences Texas A&M University-Kingsville
2025	Instructor, Department of Health, Human Performance, and Recreation Baylor University
2015-2024	Assistant Professor, Department of Nutrition and Integrative Physiology Florida State University

Professional Experience

2024 – 2025	Assistant Research Scientist, Department of Health, Human Performance, and Recreation, Baylor University.
2012 – 2015	Research Instructor, Department of Medicine, Vanderbilt University.
2007 – 2012	Research Fellow, Department of Medicine, Vanderbilt University.

SELECTED PUBLICATIONS

Refereed Journal Articles

1. Laskin GR, Rentería LI, Muller-Delp JM, Kim JS, Chase PB, **Hwang H**, Gordon B. Short-term aerobic exercise prevents development of glucocorticoid myopathic features in aged skeletal muscle in a sex-dependent manner, *J Physiol*. 2025 Jan;603(1):127-149. doi: 10.1113/JP286334. Epub 2024 Jun 11. PMID: 38861348.
2. Centner A, Cullen A, Ukhanov V, Hill S, Deitado R, **Hwang H**, La Favor J, Laitano O, Parvatiyar M, Salazar G. The Role of Sex in the Effects of Smoking and Nicotine in Cardiovascular Function, Atherosclerosis, and Inflammation. *Nicotine Tob Res*. 2024 Nov 21;ntae274. doi: 10.1093/ntr/ntae274. Epub ahead of print. PMID: 39569583.
3. **Hwang H**, Kahmini AR, Prascak J, Carbonell AC, Valera IC, Champion S, Corrigan M, Mumbi F, Parvatiyar MS. Sarcospan deficiency increases oxidative stress and arrhythmias in hearts after acute ischemia-reperfusion injury. *Int J Mol Sci*. 2023 Jul 24;24(14):11868. doi: 10.3390/ijms241411868.
4. Landim-Vieira M, Ma W, Song T, Rastegarpouyani H, Gong H, Bogaards S, Conijn S, Ottenheijm C, **Hwang H**, Papadaki M, Knollmann B, Sadayappan S, Irving T, Galkin V, Chase PB, Pinto JR. Cardiac troponin T N-domain variant destabilizes the actin interface resulting in disturbed myofilament function. *Proc Natl Acad Sci U S A*. 2023 Jun 6;120(23):e2221244120. doi: 10.1073/pnas.2221244120. Epub 2023 May 30.

5. Valera I, Wacker A, **Hwang H**, Holmes C, Laitano O, Landstrom A, & Parvatiyar M (2022). Essential roles of the dystrophin-glycoprotein complex in different cardiac pathologies. *Adv Med Sci*. doi:10.1016/j.advms.2020.12.004.
6. Kim D, Klemp A, Salazar G, **Hwang H**, Yeh M, Panton L, & Kim J (2020). High-dose vitamin D administration and resistance exercise training attenuate the progression of obesity and improve skeletal muscle function in obese p62-deficient mice. *Nutr Res*. doi:10.1016/j.nutres.2020.10.002.
7. Salazar G, Cullen A, Huang J, Zhao Y, Serino A, Hilenski L, Patrushev N, Forouzandeh F, & **Hwang H** (2020). SQSTM1/p62 and PPARGC1A/PGC-1alpha at the Interface of Autophagy and Vascular Senescence. *Autophagy*. doi:10.1080/15548627.2019.1659612.
8. **Hwang H**, Baldo M, Rodriguez J, Faggioni M, & Knollmann B (2019). Efficacy of Flecainide in Catecholaminergic Polymorphic Ventricular Tachycardia is Mutation-Independent but Reduced by Calcium Overload. *Front. Physiol*. doi:10.3389/fphys.2019.00992.
9. Dieseldorff Jones K, Koh Y, Welle R, Turna R, Ahmad F, Huke S, Knollmann B, Pinto J, & **Hwang H** (2019). Pathogenic troponin T mutants with opposing effects on myofilament Ca²⁺ sensitivity attenuate cardiomyopathy phenotypes in mice. *Arch Biochem Biophys*, 661, 125-131. doi:10.1016/j.abb.2018.11.006.
10. Boutaud O, Sosa I, Amin T, Oram D, Adler D, **Hwang H**, Crews B, Milne G, Harris B, Hoeksema M, Knollmann B, Lammers P, Marnett L, Massion P, & Oates J (2016). Inhibition of the Biosynthesis of Prostaglandin E2 By Low-Dose Aspirin: Implications for Adenocarcinoma Metastasis. *Cancer Prev Res (Phila)*, 9(11), 855-865. doi:10.1158/1940-6207.capr-16-0094.
11. Boczek N, Gomez-Hurtado N, Ye D, Calvert M, Tester D, Kryshtal D, **Hwang H**, Johnson C, Chazin W, Loporcaro C, Shah M, Papez A, Lau Y, Kanter R, Knollmann B, & Ackerman M (2016). Spectrum and Prevalence of CALM1-, CALM2-, and CALM3-Encoded Calmodulin Variants in Long QT Syndrome and Functional Characterization of a Novel Long QT Syndrome-Associated Calmodulin Missense Variant, E141G. *Circ Cardiovasc Genet*, 9(2), 136-146. doi:10.1161/circgenetics.115.001323.
12. Park H, Hwang HJ, **Hwang H**, Kim H, Choi B, Pak HN, Lee M, Chung J, & Joung B (2015). Alpha B-crystallin prevents ventricular arrhythmia by attenuating inflammation and oxidative stress in rat with autoimmune myocarditis. *Int J Cardiol*, 182, 399-402. doi:10.1016/j.ijcard.2014.12.152.
13. **Hwang H**, Kryshtal D, Feaster TK, Sanchez-Freire V, Zhang J, Kamp T, Hong C, Wu JC, & Knollmann B (2015). Comparable calcium handling of human iPSC-derived cardiomyocytes generated by multiple laboratories. *J Mol Cell Cardiol*, 85, 79-88. doi:10.1016/j.yjmcc.2015.05.003.
14. **Hwang H**, Kryshtal D, Feaster TK, Sanchez-Freire V, Zhang J, Kamp TJ, Hong C., Wu JC, & Knollmann B (2015). Human induced pluripotent stem cell (hiPSC) derived cardiomyocytes to understand and test cardiac calcium handling: A glass half full. *J Mol Cell Cardiol*, 89(Pt B), 379-80. doi:10.1016/j.yjmcc.2015.10.021.
15. **Hwang H**, Nitu FR, Yang Y, Walweel K, Pereira L, Johnson CN, Faggioni M, Chazin W, Laver D, George AL Jr, Cornea R, Bers D, & Knollmann B (2014). Divergent regulation of ryanodine receptor 2 calcium release channels by arrhythmogenic human calmodulin missense mutants. *Circ Res*, 114(7), 1114-24. doi:10.1161/circresaha.114.303391.
16. Faggioni M, Savio-Galimberti E, Venkataraman R, **Hwang H**, Kannankeril P, Darba, D, & Knollmann B (2014). Suppression of spontaneous Ca elevations prevents atrial fibrillation in calsequestrin 2-null hearts. *Circ Arrhythm Electrophysiol*, 7(2), 313-20. doi:10.1161/circep.113.000994.
17. Faggioni M, **Hwang H**, van der Werf C, Nederend I, Kannankeril P, Wilde AA, & Knollmann B (2013). Accelerated sinus rhythm prevents catecholaminergic polymorphic ventricular tachycardia in mice and in patients. *Circ Res*, 112(4), 689-97. doi:10.1161/circresaha.111.300076.

18. Huke S, Venkataraman R, Faggioni M, Bennuri S, **Hwang H**, Baudenbacher F, & Knollmann B (2013). Focal energy deprivation underlies arrhythmia susceptibility in mice with calcium-sensitized myofilaments. *Circ Res*, 112(10), 1334-44. doi:10.1161/circresaha.113.301055.
19. Venkataraman R, Baldo M, **Hwang H**, Veltri T, Pinto J., Baudenbacher F, & Knollmann B (2013). Myofilament calcium de-sensitization and contractile uncoupling prevent pause-triggered ventricular tachycardia in mouse hearts with chronic myocardial infarction. *J Mol Cell Cardiol*, 60, 8-15. doi:10.1016/j.yjmcc.2013.03.022.
20. Lee YS, Liu O, **Hwang H**, Knollmann B, & Sobie E (2013). Parameter sensitivity analysis of stochastic models provides insights into cardiac calcium sparks. *Biophys J*, 104(5), 1142-50. doi:10.1016/j.bpj.2012.12.055.
21. Mezu U, Singh P, Shusterman V, **Hwang H**, Knollmann B, & Nemec J (2012). Accelerated junctional rhythm and nonalternans repolarization lability precede ventricular tachycardia in *Casq2*^{-/-} mice. *J Cardiovasc Electrophysiol*, 23(12), 1355-63. doi:10.1111/j.1540-8167.
22. Feng W, **Hwang H**, Kryshchal D, Yang T, Padilla I, Tiwary A, Puschner B, Pessah I & Knollmann B (2012). Coordinated regulation of murine cardiomyocyte contractility by nanomolar (-)-epigallocatechin-3-gallate, the major green tea catechin. *Mol Pharmacol*, 82(5), 993-1000. doi:10.1124/mol.112.079707.
23. Kalyanasundaram A, Viatchenko-Karpinski S, Belevych A, Lacombe V, **Hwang H**, Knollmann B, Gyorke S, & Periasamy M (2012). Functional consequences of stably expressing a mutant calsequestrin (CASQ2D307H) in the CASQ2 null background. *Am J Physiol Heart Circ Physiol*, 302(1), H253-61. doi:10.1152/ajpheart.00578.2011.
24. Schober T, Huke S, Venkataraman R, Gryshchenko O, Kryshchal D, **Hwang H**, Baudenbacher F, & Knollmann B (2012). Myofilament Ca sensitization increases cytosolic Ca binding affinity, alters intracellular Ca homeostasis, and causes pause-dependent Ca-triggered arrhythmia. *Circ Res*, 111(2), 170-9. doi:10.1161/circresaha.112.270041.
25. Lee YS, Maruyama M, Chang P, Park HW, Rhee K, Hsieh Y, Hsueh CH, Shen C, Lin SF, **Hwang H**, Yin H, Knollmann B, & Chen P (2012). Ryanodine receptor inhibition potentiates the activity of Na channel blockers against spontaneous calcium elevations and delayed afterdepolarizations in Langendorff-perfused rabbit ventricles. *Heart Rhythm*, 9(7), 1125-32. doi:10.1016/j.hrthm.2012.02.031.
26. Nelson M, Harris M, Boluyt M, **Hwang H**, & Starnes J (2011). Effect of N-2-mercaptopropionyl glycine on exercise-induced cardiac adaptations. *Am J Physiol Regul Integr Comp Physiol*, 300(4), R993-r1000. doi:10.1152/ajpregu.00405.2010.
27. **Hwang H**, Hasdemir C, Laver D, Mehra D, Turhan K, Faggioni M, Yin H, & Knollmann B (2011). Inhibition of cardiac Ca²⁺ release channels (RyR2) determines efficacy of class I antiarrhythmic drugs in catecholaminergic polymorphic ventricular tachycardia. *Circ Arrhythm Electrophysiol*, 4(2), 128-35. doi:10.1161/circep.110.959916.
28. **Hwang H**, Boluyt M, Converso K, Russell M, & Bleske B (2009). Effects of hawthorn on the progression of heart failure in a rat model of aortic constriction. *Pharmacotherapy*, 29(6), 639-48. doi:10.1592/phco.29.6.639.
29. Watanabe H, Chopra N, Laver D, **Hwang H**, Davies SS, Roach D, Duff H, Roden DM, Wilde AA, & Knollmann B. (2009). Flecainide prevents catecholaminergic polymorphic ventricular tachycardia in mice and humans. *Nat Med*, 15(4), 380-3. doi:10.1038/nm.1942.
30. **Hwang H**, Bleske B, Ghannam M, Converso K, Russell M, Hunter J, & Boluyt M (2008). Effects of hawthorn on cardiac remodeling and left ventricular dysfunction after 1 month of pressure overload-induced cardiac hypertrophy in rats. *Cardiovasc Drugs Ther*, 22(1), 19-28. doi:10.1007/s10557-008-6082-2.
31. **Hwang H**, Cirrincione G, Thomas D, McCormick R, & Boluyt M (2007). Aldosterone antagonism fails to attenuate age-associated left ventricular fibrosis. *J Gerontol A Biol Sci Med Sci*, 62(4), 382-8.

32. Bleske B, Zineh I, **Hwang H**, Welder G, Ghannam M, & Boluyt M (2007). Evaluation of hawthorn extract on immunomodulatory biomarkers in a pressure overload model of heart failure. *Med Sci Monit*, 13(12), Br255-8.
33. Bleske B, **Hwang H**, Zineh I, Ghannam M, & Boluyt M (2007). Evaluation of immunomodulatory biomarkers in a pressure overload model of heart failure. *Pharmacotherapy*, 27(4), 504-9. doi:10.1592/phco.27.4.504.
34. Cirrincione G, Boluyt M, **Hwang H**, & Bleske B (2006). 3-HMG-Coenzyme A reductase inhibition and extracellular matrix gene expression in the pressure-overloaded rat heart. *J Cardiovasc Pharmacol*, 47(4), 521-30. doi:10.1097/01.fjc.0000211745.70831.75.
35. Boluyt M, Converso K, **Hwang H**, Mikkor A, & Russell M (2004). Echocardiographic assessment of age-associated changes in systolic and diastolic function of the female F344 rat heart. *J Appl Physiol* (1985), 96(2), 822-8. doi:10.1152/japplphysiol.01026.2003.