

CURRICULUM VITAE
John Peter Konhilas, Ph.D., M.S., A.B.
September 2017

Professional Address:

Department of Physiology
Sarver Molecular Cardiovascular Research Program,
MRB rm. 320

University of Arizona
Tucson, AZ 85724
Konhilas@arizona.edu

Chronology of Education:

1996-2001 Ph.D., Physiology and Biophysics, University of Illinois at Chicago
Dissertation title: *The Molecular Mechanisms of Length-Dependent Activation in Striated Muscle*
Advisor: Pieter P. de Tombe, Ph.D.

1994-1996 M.S., Biological Sciences, University of Illinois at Chicago
Thesis title: *The Dynamics of Spherical Elastic Systems and its Significance to the Left Ventricular End-Systolic Pressure-Volume Relation*
Advisor: William W. Holt, M.D., Ph.D.

Independent Study: *A Study of Left Ventricular Function: A Discussion of Muscle Mechanics and the Dynamics of Contraction*

1988-1992 A.B., Art History, Duke University, Durham, North Carolina

1988-1992 Certificate awarded in the Neurosciences, Duke University, Durham, North Carolina

Chronology of Employment:

1994-1996 Teaching assistant, Department of Biological Sciences, University of Illinois at Chicago

1996-2001 Teaching Assistant, Department of Physiology and Biophysics, University of Illinois at Chicago

1996-2001 Graduate Research Assistant, Department of Physiology and Biophysics, University of Illinois at Chicago

1997-2001 Training program, "Cellular Signaling in the Cardiovascular System"

2001-2004 Post-doctoral Research Fellow, University of Colorado, Boulder

2005-2008 Research Associate, University of Colorado, Boulder

2008-2014 Assistant Professor, University of Arizona, Tucson

2014-pres Associate Professor, University of Arizona, Tucson

Honors and Awards:

2000 Kiichi Sagawa Young Investigator Award runner up. Cardiovascular Systems Dynamics Society: Baltimore, MD: Sept. 2000.

2002 Outstanding Poster Award. Cardiovascular Systems Dynamics Society: Osaka, Japan: July, 2002.

2002-2005 National Research Service Award, Fellowship

- 2003 New Investigator Award. Molecular Mechanisms of Growth, Death and Regeneration in the Myocardium: Basic Biology and Insights into Ischemic Heart Disease and Heart Failure, August, 2003, Salt Lake City, Utah.
- 2007 New Investigator Award. Cardiovascular Repair and Regeneration: Structural and Molecular Approaches in the Cellular Era. AHA, July-August, 2007, Keystone, CO.
- 2015 Special Lecture. Minority Health Disparities. University of Arizona
- 2016 Special Lecture. Minority Health Disparities. University of Arizona
- 2017 Special Lecture. Minority Health Disparities. University of Arizona
- 2016 Athletes Look To Gain An Edge Gulping Deep Blue See Water. KJZZ. Podcast. Oct 6, 2016. **Mark Brodie, The Show.**
- 2016 APSSelect by the American Physiological Society Pod Cast
- 2017 Biomedical Engineering Builder's Day Award for Dedication and Service. University of Arizona
- 2017 American Heart Special Western States Affiliate Research Insights.

Service and Outreach:

Local and State Outreach Programs

- 2008-pres Graduate Interdisciplinary Program in the Physiological Sciences
- 2008-pres Graduate Interdisciplinary Program in Biomedical Engineering
- 2008-pres Department of Cellular and Molecular Medicine
- 2008-pres Department of Molecular Cell Biology
- 2009-pres Undergraduate Biology Research Program
- 2009 Minority Health Disparities Research Program
- 2010-pres Faculty Volunteer, Physiology PhUn Week – American Physiological Society
- 2012 Keep Engaging Youth in Science (KEYS)
- 2012-pres Graduate Program in the Nutritional Sciences
- 2012-pres Southwest Environmental Health Sciences Center
- 2013 Biotechnology Career Expo, Pima County Workforce Investment Board
- 2012-pres Honors Academy Research Matchmaking Event

National and International Outreach Programs

- 1997-pres Member, Biophysical Society
- 2000-pres Member, Cardiovascular Systems Dynamics Society
- 2003-pres Member, American Heart Association
- 2008-pres Member, International Society for Heart Research
- 2008-pres Member, Arizona Physiological Society
- 2008-pres Member, American Physiological Society
- 2008-pres Member, Molecular Cardiovascular Research Program, University of Arizona
- 2008-pres Member, Sarver Heart Center, University of Arizona

Departmental Committees:

- 2008-pres Interviewer, Graduate Interdisciplinary Program in the Physiological Sciences
- 2011 Chair, Department of Physiology Faculty Retreat
- 2013-pres Department of Physiology Advisory Committee
- 2013-pres Faculty recruitment committee, Department of Physiology
- 2014-pres Faculty recruitment committee, Department of Medicine, Section of Cardiology

2014-pres	Faculty recruitment committee, Department of Cellular and Molecular Medicine
2014-pres	Department of Physiology Department Head Advisory Committee
2015	Department of Physiology Dean's Consul meeting (March 2015)
2015-pres	Department of Physiology Annual Performance Review Committee

College/University Committees:

2009-pres	Faculty Advisor, Graduate Interdisciplinary Program in the Physiological Sciences Student Forum
2010-pres	Program Committee, Graduate Interdisciplinary Program in Biomedical Engineering
2012-pres	Graduate Admissions Committee, Graduate Interdisciplinary Program in the Physiological Sciences
2013-pres	Member, Institutional Animal Care and Use Committee
2013-pres	Executive Committee, Graduate Interdisciplinary Program in the Physiological Sciences
2013-pres	Chair, Activities Committee, Graduate Interdisciplinary Program in the Physiological Sciences
2014-2017	Executive Committee, Graduate Interdisciplinary Program in Biomedical Engineering
2014-2017	Chair, Program Committee, Graduate Interdisciplinary Program in Biomedical Engineering
2014-2017	Executive Committee, Graduate Interdisciplinary Program in Nutritional Sciences
2014-2015	Conflict of Interest Committee, College of Medicine, University of Arizona
2014	Executive Committee CVTG T32 (Barton)
2014-2017	Executive Committee ITVR T32 (Burt)
2014-pres	Vice-President of Research, Special Committee on Visual Sonics, high-resolution Ultrasound Imaging
2015	Sarver Heart Center Grant Review Committee
2015	Program Coordinator Search Committee, Graduate Interdisciplinary Program in the Physiological Sciences
2015-16	Academic Program Review Committee, Graduate Interdisciplinary Program in Biomedical Engineering
2016-pres	Chair, Sarver Heart Center Grant Review Committee
2016-17	BME Planning Committee, Graduate Interdisciplinary Program in Biomedical Engineering
2017-pres	Chair, Graduate Interdisciplinary Program in the Physiological Sciences
2017-pres	Executive Committee, Arizona Biological and Biomedical Sciences Program (ABBS)
2017-pres	Executive Committee, Graduate Interdisciplinary Programs
2017-pres	Co-Director, ITVR T32 (Gregorio)
2017-pres	Graduate Education Committee, Department of Biomedical Engineering

National/International Committees/Service:

2010	Arizona Physiological Society, Session chair, Annual Meeting
2013-pres	American Heart Association, Molecular Signaling Peer Review Committee
2015-pres	Canadian Institutes of Health Research, Peer Review Study Section

- 2016-pres American Heart Association, Innovative Research Grant Peer Review Committee
- 2015-pres Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada (NSERC), Peer Review Study Section
- 2015-pres Canadian Institutes of Health Research, Peer Review Study Section

Journal Editorial Boards:

Journal of Applied Physiology
Journal of Molecular and Cellular Cardiology

Ad Hoc Peer Reviewer

American Heart Association

Journal Review Boards:

Frontiers in Cardiac Muscle Physiology
Frontiers in Veterinary Science
Journal of Applied Physiology
Journal of Molecular and Cellular Cardiology
American Journal of Physiology Heart and Circulatory Physiology
American Journal of Physiology Regulatory, Integrative and Comparative Physiology
Physiological Genomics
Journal of Biomedicine and Biotechnology
PLoS One Biology
Endocrine
Journal of Obstetrics and Gynaecology Research
Pflugers Archiv
Life Sciences
Journal of Immunological Methods
FASEB
Physiology and Behavior
Endocrine, Metabolic & Immune Disorders - Drug Targets

Publications/Creative Activity:

Primary Research Publications (*from graduate studies)

1. Holt WW, **J Konhilas**, CJ Wolfkiel. Regional Pulmonary Blood Flow Measurements in Humans with Electron Beam Computed Tomography. Proceedings of SPIE – The International Society for Optical Engineering Medical Imaging. *Physiology and Function from Multidimensional Images*. Vol. 2433: 15-25, 1995.
2. *Irving, T.C., **Konhilas, J.P.**, Perry, D., Fischetti, R., de Tombe, P.P. Myofilament Lattice Spacing as a Function of Sarcomere Length in Isolated Rat Myocardium. 2000. *American Journal of Physiology-Heart and Circulatory Physiology*. 279; H2568-H2573.
3. *Wolska, B.M., Vijayan, K., Arteaga, G.M., **Konhilas, J.P.**, Phillips, R.M., Kim, R., Naya, T., Leiden, J.M., Martin, A.F., de Tombe, P.P., and Solaro, R.J. Expression of Slow Skeletal Troponin I in Adult Heart Muscle Reduces Force Decline During Acidic Conditions. 2001. *Journal of Physiology (London)*. 536; 863-870.
4. ***Konhilas, J.P.**, Irving, T.C., and de Tombe P.P. Myofilament calcium sensitivity in skinned rat cardiac trabeculae: role of inter-filament spacing. 2002. *Circulation Research*. 90; 59-65.

- **Journal Cover (Circ Res).**

5. *Dobesh, D., **Konhilas, J.P.**, and de Tombe P.P. Cooperative activation in cardiac muscle is not influenced by muscle length. 2002. *American Journal of Physiology-Heart and Circulatory Physiology*. 282; H1055-H1062.
6. *Pieples, K., Arteaga, G., Solaro, R. J., Grupp, I., Lorenz, J. N., Boivin, G. P., Jagatheesan, G., Labitzke, E., de Tombe, P. P., **Konhilas, J. P.**, Irving, T. C., and Wieczorek, D. F. Tropomyosin 3 expression leads to hypercontractility and attenuates myofilament length-dependent Ca^{2+} activation. 2002. *American Journal of Physiology-Heart and Circulatory Physiology*. 283; H1344-53.
7. ***Konhilas, J.P.**, Irving, T.C., and de Tombe P.P. Length-dependent activation in three striated muscle types of the rat. 2002. *Journal of Physiology (London)*. 544; 225-236.
8. ***Konhilas, J.P.**, Irving, T.C., and de Tombe P.P. Frank-Starling law of the heart and the cellular mechanisms of length-dependent activation. 2002. *Pflugers Archiv-European Journal of Physiology*. 445; 305-310.
9. ***Konhilas, J.P.**, Irving, T.C., Arteaga, G.M., Wolska, B.M., Martin, A.F., Solaro, R.J. and de Tombe, P.P. Troponin I in the heart: influence on length-dependent activation and inter-filament spacing. 2003. *Journal of Physiology (London)*. 547; 951-961.
10. **Konhilas, J.P.**, Maass, A.H., Luckey, S.W., Stauffer, B.L., Ikeda, K., Olson, E.N., and Leinwand, L.A. Sex modifies exercise and cardiac adaptation in the mouse. 2004. *American Journal of Physiology-Heart and Circulatory Physiology*. 287; H2768-H2776.
11. **Konhilas, J.P.**, Widegren, U., Allen, D.L., Paul, A.C., Cleary, A., and Leinwand, L.A. Loaded wheel running and muscle adaptation in the mouse. 2005. *American Journal of Physiology-Heart and Circulatory Physiology*. 289; H455-65.
12. Stauffer, B.L., **Konhilas, J.P.**, Head, E., and Leinwand, L.A. Soy diet worsens a genetic heart disease in mice. 2006. *Journal of Clinical Investigation*. 116; 209-16.
 - **Editorial comment**. 2006. *J Clin Invest*. 116; 209-16.
13. **Konhilas, J.P.**, Watson, P.A., Maass, A.H., Boucek, D.M., Horn, T., Stauffer, B.L., Luckey, S.W., Rosenberg, P., and Leinwand, L.A. Exercise can prevent and reverse the severity of hypertrophic cardiomyopathy. 2006. *Circulation Research*. 98; 540-8.
 - **Editorial comment**. 2006. *Circulation Research*. 98; 443-5.
14. Watson, P.A., Reusch, J.E-B., McCune, S., Leinwand, L.A. Luckey, S.W., **Konhilas, J.P.**, Brown, D.A., Chicco, A.J., Long, C.S., and Moore, R.L. Restoration of CREB Function is Linked to Completion and Stabilization of Adaptive Cardiac Hypertrophy in Response to Exercise. 2007. *American Journal of Physiology-Heart and Circulatory Physiology*. 293; H246-H259.
15. Jensen, D.R., Knaub, L.A., **Konhilas, J.P.**, Leinwand, L.A., MacLean, P.S., and Eckel, R.H. Increased Thermoregulation in Cold Exposed Transgenic Mice Overexpressing Lipoprotein Lipase in Skeletal Muscle: An Avian Phenotype? 2008. *Journal of Lipid Research*. 49; 870-9.
 - **Journal Cover (Journal of Lipid Research)**
16. Rosedale, R., Westman, E.C., and **Konhilas, J.P.** Clinical experience of a diet designed to reduce aging. 2009. *Journal of Applied Research*. 9; 159-65.
 - **The intellectual and analytical content of this clinical study was developed at the University of Arizona**
17. **Konhilas, J.P.**, Boucek, D.M., Johnson, G.L., and Leinwand, L.A. The role of MEKK1 in hypertrophic cardiomyopathy. 2010. *International Heart Journal*. 51; 277-84.
 - **Includes experiments and/or ideas generated at the University of Arizona**
18. Luczak E.D., Barthel, K., Stauffer, B.L., **Konhilas, J.P.**, Cheung, T.H., and Leinwand, L.A. Remodeling the cardiac transcriptional landscape with diet. 2011. *Physiological Genomics*. 43; 772-780.

19. Mark-Kappeler C.J., Nivedita Sen N., Lukefahr A., McKee, L.A.K., I. Glenn Sipes, G., **Konhilas, J.P.**, and Hoyer, P.B. Inhibition of ovarian KIT phosphorylation by the ovotoxicant 4-vinylcyclohexene diepoxide. 2011. *Biology of Reproduction*. 85; 755-762.
- **McKee, L.A.K.: graduate trainee from Konhilas lab at the University of Arizona**
20. Haines, C.D., Harvey, P.A., Luczak E.D., Barthel, K.K., **Konhilas, J.P.**, Watson, P.A., Stauffer, B.L., and Leinwand, L.A. Estrogenic compounds are not always cardioprotective and can be lethal in males with genetic heart disease. 2012. *Endocrinology*. 153; 4470-9.
21. Chen, H., Untiveros, G.M., McKee, L.A., Perez, J., Antin, P.B., and **Konhilas, J.P.** Micro-RNA-195 and -451 Regulate the LKB1/AMPK Signaling Axis by Targeting MO25. 2012. *PLoS One*. 7:e41574.
22. Perez, J.N., Chen, H., Regan, J.A., Emert, A., Constantopoulos, E., Lynn, M., and **Konhilas, J.P.** Effects of chemically induced ovarian failure on voluntary wheel-running exercise and cardiac adaptation in mice. 2013. *Comparative Medicine*. 63; 233-43.
23. McKee, L.A., Chen, H., Regan, J.A., Behunin, S.M., Walker, J.W., Walker, J.S., and **Konhilas, J.P.** Sexually dimorphic myofilament function and cardiac troponin I phosphospecies distribution in hypertrophic cardiomyopathy mice. 2013. *Archives of Biochemistry and Biophysics*. 535; 39-48.
24. Chen, H., Perez, J.N., Constantopoulos, E., McKee, L.A., Hoyer, P.B., Brooks, H.L., and **Konhilas, J.P.** A method to study the impact of chemically-induced ovarian failure on exercise capacity and cardiac adaptation in mice. 2013. *Journal of Visualized Experiments*. Apr 7;(86).
25. Chen, H., Hwang, McKee, L.A., H. Perez, J.N., Regan, J.A., Constantopoulos, E., LaFleur, B., **Konhilas, J.P.** Temporal and morphological impact of pressure overload in transgenic FHC mice. 2013. *Frontiers in Physiology*. 4:205.
26. Khalpey Z, Qu N, Hemphill C, Louis AV, Ferng AS, Son TG, Stavoe K, Penick K, Tran PL, **Konhilas J**, Lagrand DS, Garcia JG. Rapid porcine lung decellularization using a novel organ regenerative control acquisition bioreactor. *ASAIO J*. 2015 Jan-Feb;61(1):71-7.
27. Khalpey Z, Janardhanan R, **Konhilas J**, Hemphill C. First in man: adipose-derived stromal vascular fraction cells may promote restorative cardiac function. 2014. *Am J Med*. May;127(5):e11-2.
28. **Konhilas, J.P.**, Chen, H., Luczak, E., McKee, L.A.K., Regan, J., Watson, P.A., Stauffer, B.L., McKinsey, T.A., Horn, T., LaFleur, B., Leinwand, L.A. Diet and sex modify exercise and cardiac adaptation in the mouse. 2015. *American Journal of Physiology*. 308:H135-45.
- **Selected for APSselect by the American Physiological Society**
 - **Pod Cast**
29. Behunin SM, Lopez-Pier MA, Birch CL, McKee LA, Danilo C, Khalpey Z, **Konhilas JP**. LKB1/Mo25/STRAD Uniquely Impacts Sarcomeric Contractile Function and Posttranslational Modification. 2015. *Biophysical Journal*. 108:1484-94.
30. Li F, Buck D, De Winter J, Kolb J, Meng H, Birch C, Slater R, Escobar YN, Smith JE 3rd, Yang L, **Konhilas J**, Lawlor MW, Ottenheijm C, Granzier HL. Nebulin deficiency in adult muscle causes sarcomere defects and muscle-type-dependent changes in trophicity: novel insights in nemaline myopathy. *Hum Mol Genet*. 2015. 24:5219-33.
31. Lipovka, Y., Chen, H., Vagner, J., Price, T.J., Tsao, T., and **Konhilas, J.P.** Estrogen receptors interact with the alpha catalytic subunit of AMP-activated protein kinase to regulate its activity. *Biosci Rep*. 2015. 35
32. Pollow, DP Jr, Romero-Aleshire MJ, Sanchez JN, **Konhilas JP**, Brooks HL. Ang II-induced hypertension in the VCD mouse model of menopause is prevented by estrogen

- replacement during perimenopause. *Am J Physiol Regul Integr Comp Physiol*. 2015. Dec 15;309(12):R1546-52.
33. Birch C, Behunin S, Lopez-Pier M, Danilo C, Lipovka Y, Saripalli C, Granzier H, **Konhilas JP**. Sex-dimorphisms of crossbridge cycling kinetics in transgenic hypertrophic cardiomyopathy mice. *Am J Physiol Heart Circ Physiol*. In press.
34. Keen DA, Constantopoulos E, **Konhilas JP**. 2016. The impact of post-exercise hydration with deep-ocean mineral water on rehydration and exercise performance. *J Int Soc Sports Nutr*. Apr 16;13:17.
- **NPR interview**
35. Behunin SM, Lopez-Pier MA, Mayfield RM, Danilo CA, Lipovka Y, Birch C, Lehman S, Tardiff JC, Gregorio CC, **Konhilas JP**. 2016. Liver Kinase B1 complex acts as a novel modifier of myofilament function and localizes to the Z-disk in cardiac myocytes. *Arch Biochem Biophys*. Jul 1;601:32-41.
36. Hay M, Vanderah TW, Samareh-Jahani F, Constantopoulos E, Uprety AR, Barnes CA, **Konhilas JP**. Cognitive impairment in heart failure: A protective role for angiotensin-(1-7). *Behav Neurosci*. 2017. Feb;131(1):99-114.
37. **Danilo CA**, Constantopoulos E, McKee, L.A., Chen H, Regan J.A., Lipovka Y, Lahtinen S, Stenman LK, Thuy-Vi V. Nguyen TV, Doyle KP, Slepian MJ, Zain I. Khalpey ZI, Konhilas JP. *Bifidobacterium animalis* subsp. *lactis* 420 mitigates the pathological impact of myocardial infarction in the mouse. 2017. *Benef Microbes*. Apr 26;8(2):257-269.
38. A dual therapy of off-pump temporary left ventricular extracorporeal device and amniotic stem cell for cardiogenic shock. Kazui T, Tran PL, Pilikian TR, Marsh KM, Runyan R, **Konhilas J**, Smith R, Khalpey ZI. *J Cardiothorac Surg*. 2017 Sep 7;12(1):80.
39. Improved metabolism and redox state with a novel preservation solution: implications for donor lungs after cardiac death (DCD). Schipper DA, Louis AV, Dicken DS, Johnson K, Smolenski RT, Black SM, Runyan R, **Konhilas J**, Garcia JGN, Khalpey Z. *Pulm Circ*. 2017 Apr-Jun;7(2).

Reviews and editorials (indicates peer reviewed)**

40. **Konhilas, J.P.** and Leinwand, L.A. Partnering up for cardiac hypertrophy. 2006. *Circulation Research*. 98; 985-7.
41. ****Konhilas, J.P.** and Leinwand, L.A. The Effects of Biological Sex/Gender and Diet on the Development of Heart Failure. 2007. *Circulation*. 116; 2747-59.
42. **Konhilas, J.P.** What makes a dead cell attractive? 2008. *J Appl Physiol*. 104; 573-4.
43. ****Konhilas, J.P.** What we know and don't know about sex and cardiac disease. 2010. *J Biomed Biotech*. 2010; 562051.
44. **Konhilas, J.P.**, Behunin, S.M., and Lynch, R.M. Keeping the Beat: Focus on Enrichment of neonatal rat cardiomyocytes in primary culture facilitates long-term maintenance of contractility in vitro. 2012. *American Journal of Physiology-Cell Physiology*. 303; C1218-9.
45. **Konhilas, J.P.** Gender and Heart Disease. *International Innovation*. July 2013. 94-5.
46. Lipovka, Y. and **Konhilas, J.P.** AMP-Activated Protein Kinase Signaling in Cancer and Cardiac Hypertrophy. *Cardiol Pharmacol*. 2015. 4; 154.
47. Lipovka Y, **Konhilas JP**. 2016. The complex nature of estrogen signaling in breast cancer: enemy or ally? *Biosci Rep*.
48. Molecular Mechanisms Underlying Cardiac Adaptation to Exercise. 2017. Vega RB, **Konhilas JP**, Kelly DP, Leinwand LA. *Cell Metab*. May 2;25(5):1012-1026.

Book chapters (indicates peer reviewed)**

49. Maass, A., **Konhilas, J.P.**, Stauffer, B.L., and Leinwand, L.A. From sarcomeric mutations to heart disease: understanding Familial Hypertrophic Cardiomyopathy. 2003. *Cold*

Spring Harbor Symposium on Quantitative Biology: The Cardiovascular System. Volume 67. 409-415.

50. **Konhilas, J.P.** and Leinwand, L.A. Myosin Myopathies. 2003. *Molecular Motors*. Ed. Manfred Schliwa. Wiley-VCH Verlag GmbH & Co. KgaA, Weinheim. P. 473-495.
51. **Hwang, H. and **Konhilas, J.P.** Phytoestrogens and heart disease. 2013. Phytoestrogens and the Role in Cardiovascular Health: To Consume or Not to Consume?. In: Watson RR and Preedy VR (eds.) *Bioactive Food as Dietary Interventions for Cardiovascular Disease*, pp. 283-302. San Diego: Academic Press.
52. **Chen, H. and **Konhilas, J.P.** Pro-biotic species on cardiovascular disease. 2013. Probiotic Species on Cardiovascular Disease: The Use of Probiotics to Reduce Cardiovascular Disease Risk Factors. In: Watson RR and Preedy VR (eds.) *Bioactive Food as Dietary Interventions for Cardiovascular Disease*, pp. 303-317. San Diego: Academic Press.
53. **Lopez-Pier, M, Lipovka, Y and **Konhilas, J.P.** Inherited Cardiomyopathies. 2016. In: *Cardiomyopathies*. Intech Publishing.

Abstracts and short papers (out of 44): (indicates peer reviewed)**

1. Regan, J., and **Konhilas, J.P.** Cardiac Myosin Expression and Its Relationship to Sex and Hypertrophy. Undergraduate Physiology Research Symposium. 2009.
2. **McKee, L., Regan, J., Walker, J., **Konhilas, J.P.** Sex dimorphic myofilament function and AMPK expression in R403Q hearts. *Biophysical Journal*. 2010. Abstract.
3. **McKee, L., Regan, J., Walker, J. Leinwand, L.A., **Konhilas, J.P.** Sex dimorphic myofilament function and AMPK expression in R403Q hearts. *Circulation*. 122. 2010. Abstract.
4. **McKee, L., Regan, J., Walker, J. Leinwand, L.A., **Konhilas, J.P.** Sex dimorphic myofilament function and AMPK expression in R403Q hearts. American Heart Association Council on Basic Cardiovascular Sciences. July. 2010. Abstract.
5. Emert, A. and **Konhilas, J.P.** Shifts in Skeletal Muscle Fiber Types During the Progression of Hypertrophic Cardiomyopathy. 21st Annual Undergraduate Biology Research Conference, January 23, 2010.
6. Emert, A. and **Konhilas, J.P.** The Effects of Hypertrophic Cardiomyopathy and Age on Skeletal Myosin Isoform Expression. Arizona Physiological Society Meeting, November 5, 2010.
7. McKee, L., Regan, J., Walker, J. Leinwand, L.A., **Konhilas, J.P.** Sex dimorphic myofilament function and AMPK expression in R403Q hearts. Arizona Physiological Society Meeting, November 5, 2010.
8. Constantopoulos, E. and **Konhilas, J.P.** Mechanics of cardiac muscle in hypertrophic cardiomyopathy mice vs. wild-type mice. Annual Meeting for the Undergraduate Program in Biology. 2011.
9. Regan, J., and **Konhilas, J.P.** Expression of Passive and Active Proteins in Hypertrophic Cardiomyopathy. 22nd Annual Undergraduate Biology Research Conference. 2011.
10. **Chen, H., McKee, L.A.K., Untiveros, G.M, Perez, J.N., Li, J., Antin, P.B., and **Konhilas, J.P.** The impact of micro-RNA-195 on the LKB1/AMPK signaling axis and hypertrophic cardiomyopathy. American Heart Association Council on Basic Cardiovascular Sciences. July. 2011. Abstract.
 - **Council abstract award to Hao Chen.**
11. Behunin, S., Hidalgo, C., McKee, L.A.K., and **Konhilas, J.P.** Cardiac troponin I phosphorylation at ser149 by protein kinase A: a potential modulator in myocardial contractility. Biophysical Society. 2012.

12. McKee, L., Regan, J., Walker, J. Leinwand, L.A., **Konhilas, J.P.** Target-specific phosphorylation of troponin I and sex dimorphic myofilament function in R403Q mice. Biophysical Society. 2012.
13. **Regan, J.**, Sequeira, V., Stienen, GJM, Michels, M., ten Cate, F.J., **Konhilas, J.P.**, and van der Velden, J. Biophysical Society. 2012.
14. Perez, J.N., Chen, H., Lynn, M., Lipovka, Y., Constantopoulos, E. and **Konhilas, J.P.** Impact of menopause on cardiac adaptation after voluntary cage wheel exercise. American Heart Association Council on Nutrition and Metabolism. March 2012.
15. Behunin, S., Hidalgo, C., McKee, L.A.K., and **Konhilas, J.P.** Cardiac troponin I phosphorylation at ser149 by protein kinase A: a potential modulator in myocardial contractility. Arizona Physiological Society Annual Meeting. Nov. 2012.
16. Birch, C.L. and **Konhilas, J.P.** The Effect of Familial Hypertrophic Cardiomyopathy on Force Redevelopment Kinetics. Arizona Physiological Society Annual Meeting. Nov. 2012.
17. Constantopoulos, E., Chen, H., Regan, J., and **Konhilas, J.P.** Probiotics as a Treatment for Myocardial Infarction. Arizona Physiological Society Annual Meeting. Nov. 2012.
18. Pollow, D.P., Perez, J.N., Booth, A., **Konhilas, J.P.**, Brooks, H.L. Validating The VCD Treated Mouse as a Model of Postmenopausal Angiotensin II-Induced Hypertension. Arizona Physiological Society Annual Meeting. Nov. 2012.
19. ****Behunin, S., Hidalgo, C., McKee, L.A.K., and Konhilas, J.P.** Phosphorylation Patterning Determined by AMP-Activated Kinase, the LKB1/MO25/STRAD Complex, and Protein Phosphatase 1 Alters Contractile Function in Rat Cardiac Trabeculae. American Heart Association Council on Basic Cardiovascular Sciences. July. 2013. Abstract.
20. ****Birch, C.L. and Konhilas, J.P.** R403Q Mutation Increases the Rate of Force Redevelopment in 2 Month Mice. American Heart Association Council on Basic Cardiovascular Sciences. July. 2013. Abstract.
21. ****Lipovka, Y. and Konhilas, J.P.** Estradiol activates AMPK potentially through direct interaction with estrogen receptors. American Heart Association Council on Basic Cardiovascular Sciences. July. 2013. Abstract.
22. ****Hay, M., Constantopoulos, E., Uprety, A.R., Samareh-Jahani, F., Barnes, C.A., Konhilas, J.P.** Cognitive dysfunction in heart failure and a protective role for angiotensin (1-7). Society for Neuroscience. Nov. 2013. Abstract.

Scholarly Presentations:

1. Johns Hopkins University. Dept. of Cardiology. Baltimore, MD. July, 2000.
2. University of Colorado at Boulder. MCD Biology. Boulder, CO. Oct, 2000.
3. University of Illinois at Chicago. Department of Physiology and Biophysics. Sept., 2002.
4. University of Colorado Health Sciences Center. Department of Cardiology Research Conference. Denver, CO. March 2004.
5. University of Illinois at Chicago. Department of Physiology and Biophysics. Chicago, IL. April, 2004.
6. Conference on Hypoplastic Left Heart Syndrome. University of Colorado Health Sciences Center. Department of Pediatric Cardiology. Aspen, CO. August, 2004.
7. Washington State University. Department of Physiology. Pullman, WA. March 2006.
8. Canadian Society for Exercise Physiology. November 14 - 17, 2007. London Convention Centre, London, Ontario.
9. University of Arizona. Department of Physiology. Tucson, AZ. December 2007.
10. Frontiers in Medical Research Seminar. University of Arizona. Tucson, AZ. October 2008.

11. Sarver Heart Center. University of Arizona. Tucson, AZ. Feb 2010.
12. Florida Dietetic Association. 75th Annual Symposium. Orlando, FL. July 2010.
13. University of Northern Arizona. Flagstaff, AZ. Dec 2010
14. University of Arizona Basic Medical Sciences. Phoenix, AZ. Jan 2011.
15. University of Arizona Program in Biomedical Engineering. Tucson, AZ. Oct 2011.
16. Loyola University Chicago. Cell and Molecular Physiology. Cardiovascular Research Institute. Maywood, IL. Nov 2011.
17. University of Arizona. Junior Faculty Forum. Tucson, AZ. Feb 2012.
18. University of Arizona. Department of Nutritional Sciences. Tucson, AZ. Nov 2012.
19. University of Arizona. Department of Physiology. Tucson, AZ. Dec 2012.
20. Alternative Muscle Club. University of California, San Diego. San Diego, CA. June 2013.
21. University of Arizona. Department of Nutritional Sciences. Tucson, AZ. Nov 2013.
22. Sarver Heart Center. University of Arizona. Tucson, AZ. April 2015.
23. Minority Health Disparities. University of Arizona. Tucson, AZ. July 2015.
24. Sarver Heart Center Board Meeting. University of Arizona. Tucson, AZ. October 2016.

List of Trainees

Current Pre-Doctoral/Masters

- 2016-pres Marissa Lopez-Pier, Graduate Interdisciplinary Program in Biomedical Engineering (Ph.D.)
 2014-pres Preston Royal Harris, (M.S.)
 2016-pres Matthew Koppinger, Nutritional Sciences Graduate Program (M.S.)

Past Pre-Doctoral/Masters

- 2009-2011 Laurel A. McKee, Graduate Interdisciplinary Program in Physiological Sciences (M.S.)
 2010-2015 Camille Birch, Graduate Interdisciplinary Program in Biomedical Engineering (Ph.D.)
 2010-2015 Samantha Behunin, Graduate Interdisciplinary Program in Physiological Sciences (Ph.D.)
 2010-2015 Yulia Lipovka, Molecular Cell Biology (Ph.D.)
 2013-2015 Gustavo Untiveros, Molecular Cell Biology (M.S.)

Past Post-Doctoral

- 2009-2012 Hyosook Hwang, Ph.D
 2010-2013 Hao Chen, MD, Ph.D.
 2014-2016 Christiane A. Danillo, Ph.D.
 2015-2016 Yulia Lipovka, Ph.D.

Federal:

Grants and Contracts:

Current

1. *Source:* American Heart Association
Type: Grant-In-Aid
Role: Principal Investigator
Total Amount: \$140,000.00
Years: 07/01/2016-06/30/2018
Title: Angiotensin II-mediated hypertension in mice with ovarian failure

2. *Source:* NIH NHLBI
Type: UO1 HL131014
Role: Co-Investigator
Total Amount: \$2,611,939
Years: 3/1/17-2/28/21
Title: Evaluation of the Safety and Efficacy of Angiotensin 1-7 to Enhance Cognitive Function in Participants Undergoing Coronary Artery Bypass Graft (CABG Surgery)
PIs: Andrew Arai, Meredith Hay, Lee Ryan, Nancy Sweitzer

Completed

1. *Source:* NIH NHLBI (No cost Extension)
Type: R01 HL098256A
Role: Principle Investigator
Total Amount: \$1,766,574
Years: 01/01/2010-12/31/2014
Title: Impact of AMP-activated kinase on sex differences in hypertrophic cardiomyopathy
Summary: The general aim of this project addresses sex differences in the progression of cardiac disease using an inherited disease, hypertrophic cardiomyopathy, as the model and focusing on a mechanistic role for Adenosine-monophosphate activated kinase (AMPK), a potent regulatory of energy homeostasis.
2. *Source:* NIH NHLBI
Type: K02 HL105799
Role: Principle Investigator
Total Amount: \$515,565.00
Years: 04/01/2011-03/31/2016
Title: Impact of AMP-activated kinase on sex differences in hypertrophic cardiomyopathy
Summary: The general aim of this project addresses sex differences in the progression of cardiac disease using an inherited disease, hypertrophic cardiomyopathy, as the model and focusing on a mechanistic role for Adenosine-monophosphate activated kinase (AMPK), a potent regulatory of energy homeostasis.
3. *Source:* NIH NHLBI
Type: R01 HL098256-Supplement
Role: Principle Investigator
Total Amount: \$79,377.00
Years: 08/01/2013-12/31/2014
Title: Impact of AMP-activated kinase on sex differences in hypertrophic cardiomyopathy
Summary: This is an administrative supplement award titled, "Research Supplements to Promote Diversity in Health-Related Research". This award is designed to provide support for research experiences for individuals from underrepresented racial and ethnic groups.

4. *Source:* American Heart Association
Type: Post-doctoral Fellowship
Role: Sponsor
Total Amount: \$86,728.00
Years: 01/01/2011-12/31/2013
Title: Micro-RNA Regulation of the AMP-Activated Protein Kinase (AMPK) Pathway
Summary: This was awarded to post-doctoral fellow, Hao Chen, MD, PhD.

5. *Source:* NIH NIAMS
Type: K01 AR052840
Role: Principle Investigator
Total Amount: \$600,480
Years: 04/01/2006-03/31/2011
Title: Metabolism, Skeletal Muscle, Cardiac Disease, Exercise
Summary: The general aim of this project is to examine the impact of cardiac disease on skeletal muscle and to determine the role that exercise plays in recovering skeletal muscle function during cardiac disease states.

6. *Source:* NIH NHLBI
Type: F32 HL70509
Role: Principle Investigator
Total Amount: \$133,668.00
Years: 4/1/2002-3/31/2004
Title: Impact of MEKK1 on pathological and physiological cardiac hypertrophy
Summary: The general aim of this project was to investigate the role of MEKK1 in pathological (hypertrophic cardiomyopathy) and physiological (exercise) hypertrophy.

Private Foundations:

Current

7. *Source:* Sarver Heart Center
Type: Edward and Virginia Madden Award
Role: Principle Investigator
Total Amount: \$25,000
Years: 10/01/2012-09/30/2013
Title: The impact of probiotic administration on an acute coronary event

8. *Source:* Alzhemier consortium
Role: Co-Investigator
Total Amount: \$10,000
Years: 10/01/2015-09/30/2016
Title: The impact of Ang-(1-7) on cognitive function in heart failure

Completed

9. *Source:* Sarver Heart Center
Type: The Steven M. Gootter Investigator Award for the Prevention of Sudden Cardiac Death
Role: Principle Investigator

Total Amount: \$25,000

Years: 10/01/2010-09/30/2011

Title: The impact of hypertension on the progression of hypertrophic cardiomyopathy

10. *Source:* Sarver Heart Center

Type: The John T. and Janet K. Billington Research Award for Heart Disease in Women and/or Technology

Role: Co-Investigator

Total Amount: \$15,000

Years: 10/01/2009-09/30/2010

Title: Inflammation and its role in increasing cardiovascular and kidney disease in women.

11. *Source:* Sarver Heart Center

Type: The Steven M. Gootter Investigator Award for the Prevention of Sudden Cardiac Death

Total Amount: \$25,000

Years: 10/01/2009-09/30/2010

Title: Hypertrophic Cardiomyopathy, Sudden Death and Exercise: the role of AMP-activated Kinase

12. *Source:* Sarver Heart Center

Type: Edward and Virginia Madden Award

Role: Principle Investigator

Total Amount: \$25,000

Years: 10/01/2012-09/30/2013

Title: The impact of probiotic administration on an acute coronary event