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## CURRICULUM VITAE

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### EUCATION

Medical School Beijing Medical University, Beijing, China, MD. 1991.

Other Advance Degree Xi'an Jiaotong University, Xi'an, China, Ph.D, 2012

### POSTGRADUATE TRAINING

University of Oxford, Oxford, United Kingdom, Molecular Cardiology, 1997-1998

Virginia Commonwealth University School of Medicine, Molecular Cardiology 1998-2001

### POSTGRADUATE HONORS AND AWARDS

1992 The Young Investigator Award by Beijing International Society for Heart Research (ISHR)

1993 The Young Scientist Award by China Government

1994 Outstanding Academic Award by Xinxiang Medical College

1995 The Scientific and Technical Advance Award by China Academy of Sciences, Henan section.

1997 The Royal Society Research Fellowship Award, The Royal Society of UK,

2001 Grant-In-Aid (American Heart Association)

2007 Scientist Development Grant Award (American Heart Association)

2010 K.C. Wong Visiting Scholarship Award (Chinese Academy of Science)

2014 Distinction in Scholar Award by American Physiology Society.

- 2014 Mentor/PI to Research Fellow who received the 2015 American Heart Association (AHA) CVSA (Council on Cardiovascular Surgery and Anesthesia) Travel Grant Stipend
- 2014. Mentor/PI to Research Fellow Travel Award. 2014 AHA Scientific Sessions BCVS (Basic Cardiovascular Sciences)
- 2015. Mentor/PI to Research Fellow who received the 2015 AHA BCVS (Basic Cardiovascular Sciences)
- 2015. Mentor/PI to Research Fellow/Senior Research Scientist who received the 2015 AHA BCVS Abstract Travel Grant Stipend
- 2016. Mentor/PI to Research Fellow 2016 AHA CVSA Abstract Travel Award.
- 2016. Mentor/PI to Research Fellow 2016 AHA CVSA Abstract Travel Award.

#### ACADEMIC APPOINTMENTS

- 1992 -1994 Assistant Professor, Department of Pathophysiology, Xinxiang Medical College.
- 1994-1997 Associate Professor, Department of Pathophysiology, Xinxiang Medical College
- 1997-1998 Visiting Scholarship of Molecular Cardiology, the Department of Biochemistry, University of Oxford.
- 1998-2001 Research Associate, Department of Medicine, Medical College of Virginia Commonwealth University.
- 2001-2003 Instructor, Department of Medicine, Medical College of Virginia Commonwealth University.
- 2003-2004 Senior Research Scientist, Department of Medicine, Allegheny General Hospital, Drexel University.
- 2004-2009 Assistant Professor, Alpert Brown Medical School, Brown University.
- 2009-07/2019 Medical Staff, Department of Surgery, Roger William Medical Center.
- 2011-07/2019 Associate Professor, Department of Surgery, Boston University School of Medicine.
- 2020- Professor of Department Surgery and Department of Reconstructive and Plastic Surgery, Alpert Brown Medical School, Brown University

#### HOSPITAL APPOINTMENTS

08/2019-present      Research Scientist, Department of Plastic Surgery, Rhode Island Hospital.

2009-07/2019      Medical Staff, Department of Surgery, Roger William Medical Center.

#### OTHER APPOINTMENTS

2016      The Scientific Review Committee of The Surgery, Anesthesiology, and Trauma Study Section (SAT), NATIONAL INSTITUTES OF HEALTH, NIH (Adhoc).

2012-2020:      The Scientific Review Committee, American Heart Association.

2014      U.S.-Israel Binational Science Foundation

#### **Editorial board and reviewers**

2018-Present      Frontier in Pharmacology (editorial board)

#### Reviewers for journals

2005-2007      Biochimica et Biophysica Acta -Molecular Cell Research

2007-2008      FASEB Journal

2010      J Cell Biochem

2010      J Cell Physiol

2012      Molecular Medicine

2012      Stem Cell and Translation

2012 -      Plos One

2012      Drug Design, Development and Therapy

2012      Cardiovascular Diabetology

2012      International Journal of Molecular Science

2012 Drug Metabolism and Toxicology

2012 Patient Preference and Adherence

2012 Experimental & Molecular Medicine

2012 Circulation Research

2012 Stem cell research and therapy

2016 Life Science

2016 American Journal of Physiology-Cell Physiology

2016 The Chinese Journal of Physiology

2016 Scientific Report

2017 Arteriosclerosis, Thrombosis, and Vascular Biology

2017 Experimental Neurology

2016-2017 Stem cell International

2017 Acta Pharmacologica Sinica

2017 Diabetes, obesity and metabolism

2017 Ontargets

2017 Obesity

2017 Clinical Science

2018 Molecular and Cellular Endocrinology

2018 International Journal of Molecular Medicine

2018 International Journal of Nanomedicine

2018 Cellular Signaling

2018 BMC Nephrology

2019 Oxidative Medicine and Cellular Longevity

2019 American Journal of Physiology: Heart and Circulatory Physiology

#### HOSPITAL COMMITTEES

2014. The Member of Search Committee for Senior Scientist, Department of Surgery, Roger Williams Medical Center, Boston University School of Medicine.
- 2013 The Member of Search Committee for the Chairman of Dermatology, Roger Williams Medical Center, Boston University School of Medicine.
- 2012 The Member of Search Committee for Staff Scientist of Biotherapeutic Development lab, Roger Williams Medical Center, Boston University School of Medicine.
- 2012 The Member of Search Committee for Scientist of Biotherapeutic Development lab, Roger Williams Medical Center, Boston University School of Medicine.
- 2012 The Member of Search Committee for Scientist Staff of Biotherapeutic Development lab, Roger William Medical Center, Boston University School of Medicine.
- 2012 The Member of Search Committee for Staff Scientist of Internal Medicine, Roger Williams Medical Center, Boston University School of Medicine.
2011. The Member of Search Committee for Staff Scientist, Department of Surgery, Roger Williams Medical Center, Boston University School of Medicine.
2011. The Member of Search Committee for Senior Research Scientist, Department of Surgery, Roger Williams Medical Center, Boston University School of Medicine.
- 2010 The Member of Search Committee for Staff Scientist, Department of Surgery, Roger Williams Medical Center, Boston University Medical School
- 2009 The Member of Search Committee for Staff Scientist, Department of Surgery, Roger Williams Medical Center, Boston University School of Medicine.

#### OTHER COMMITTEES.

- 1997 Biological Science Society, Oxford, UK: Scientific Committee-General Secretary for Scientific Committee for the First Conference of Biological Science Society for Oversea Chinese Scientists.
- 2003-2004 Henrico County Gifted Student Advisory Council, Henrico County Public Schools, Henrico, VA.

## MEMBERSHIP IN SOCIETIES

- 2002- International Society for Heart Research (ISHR)-North America
- 2006- Membership of American Heart Association

## ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Liu Z, **Zhao TC**, and Shi AY. Effects of diagnostic ultrasound on human Embryos in uterus. Chin J of Ultrasound Med 1992; 8(1):18.
2. **Zhao TC**, Xu H, and Shi AY, Wang XY, Wang NF. The effect of depletion of intracellular glycogen on post-ischemia and reperfused myocardium. Chin J Pathophysiol 1992; 8(4): 350
3. **Zhao TC**, Shi AY, Wang XY, Wang NF. Protective effect of amiloride on low flow anoxia and reperfusion injury in rat hearts. Chin J Pathophysiol 1992; 8(6): 613.
4. **Zhao TC**, Shi AY. The relationship between Na overload and Na/H exchange: A study in the isolated isovolumetrically rat heart and cardiac cells. Sheng Li Hsueh Pao 1992; 44 (5): 510. PMID:1338134
5. **Zhao TC**, Shi AY. Na<sup>+</sup>/H<sup>+</sup> exchange in the isolated perfused rat hearts and its significance. Basic Medicine and Clinics 1992; 13(1): 41.
6. **Zhao TC**, Xu H, and Shi AY. Na<sup>+</sup>-K<sup>+</sup>-ATPase inhibition and post-ischemic reperfusion injury. Chin J Applied Physiol 1993; 9(1): 16.
7. **Zhao TC**. Xu H, Zhang XL, Shi AY. The influence of low sodium in perfusate on functional recovery of reperfused myocardium in rat. Chin J Circulation 1993; 8(12):745.
8. Zhao TC, Shi AY. The Na/H exchanger and its significance in ischemia and reperfusion injury. Sheng Li Ko Hsueh Chin Chan 1993; 24(3): 234.
9. Zhang X L, **Zhao TC**. The relationship between intracellular Na and reperfusion injury of myocardium. J. Xinxiang Med 1995; 12: 232.
10. **Zhao TC**, and Zhang XL. The development of isolated isovolumetrically rat heart model. J. Xinxiang Med 1996; 13: 17.

11. Zhao TC, Zhang XL, Shi AY, Xu H. Effects of amiloride and glycogen depletion on post-ischemic reperfusion injury of isovolumetrically perfused rat hearts. *Sheng Li Hsueh Pao* 1996; 48(2): 204. PMID:9389175
12. Zhang XL, **Zhao TC**. Effect of sodium-free perfusion on low flow ischemia and reperfusion injury in rat heart. *J. Xinxiang Med* 1997; 14: 343.
13. **Zhao TC**, Xi L, Jeja C, Levasseur JE, and Kukreja RC. Nitric oxide mediates adenosine A1 receptor induced delayed protection: Evidence from pharmacological inhibition and gene knockout mice. *Circulation* 2000; 102: 902-907. PMID:10952960
14. Tekin D, Xi L, **Zhao T**, Tejero-Taldo M, Atluri S, Kukreja RC. Mitogen-activated protein kinase mediates heat shock-induced delayed protection in mouse heart. *Am J Physiol Heart Circ Physiol* 2001; 281(2):H523-32. PMID:11454553
15. **Zhao TC**, Hines D, Krottapalli K, Emani V R, Xi L, Kukreja. RC. Adenosine induced late preconditioning in mouse heart: role of p38 MAP kinase and mitochondrial KATP channels. *Am J Physiol Heart Circ Physiol* 2001; 280: H1278-1285. PMID:11179074
16. **Zhao TC**, M M. Taher, KC. Valerie, Kukreja R C. p38 Triggers late preconditioning elicited by anisomycin in heart: involvement of NF-kB and iNOS. *Circ Res* 2001; 89:915-22. PMID:11701619
17. Tejero-Taldo M, **Zhao TC**, Kukreja RC. Alpha-adrenergic receptor stimulation produced the preconditioning through inducible nitric oxide synthase in mouse. *J Mol Cell Cardiol* 2002; 34: 185-95. PMID:11851358
18. **Zhao TC**, Kukreja RC. Nitric Oxide and nuclear factor  $\kappa$  B mediates myocardial protection induced by selective activation of adenosine A3 receptor: evidence from gene knock out mice. *J Mol Cell Cardiol* 2002; 34:263-77. PMID:11945020
19. **Zhao TC**, Kukreja RC. Protein kinase C-delta mediates adenosine A3 receptor-induced delayed cardioprotection in mouse. *Am J Physiol Heart Circ Physiol* 2003; 285(1):H434-41. PMID:12793983
20. **Zhao TC**, Parikh P, Bhashyam S, Bolukoglu H, Poornima I, Shen YT, Shannon RP. Direct effects of glucagon-like peptide-1 on myocardial contractility and glucose uptake in normal and post-ischemic isolated rat hearts. *J Pharmacol Exp Ther* 2006;317(3):1106-13. PMID:16489128
21. Yano N, Suzuki D, Endoh M, **Zhao TC**, Padbury JF, Tseng YT. A novel phosphoinositide 3-kinase-dependent pathway for angiotensin II/AT-1 receptor-mediated induction of collagen synthesis in MES-13 mesangial cells. *J Biol Chem* 2007; 282(26):18819-30. PMID:17493931

22. Yano N, Ianus V, **Zhao TC**, Tseng A, Padbury JF, Tseng YT. A novel signaling pathway for  $\beta$ -adrenergic receptor-mediated activation of phosphoinositide 3-kinase in H9c2 cardiomyocytes. *Am J Physiol Heart Circ Physiol* 2007; 293:H385-93. PMID:18723766
23. Zhao TC, Cheng GM, Zhang XL, Tseng Y, Padbury JF. Histone deacetylases inhibition triggers preconditioning effects against myocardial ischemic injury in mouse. *Cardiovasc Res* 2007;76:473-81. PMID:17884027
24. Haley SA, **Zhao T**, Zou LJ, Klysik JE, Padbury JF and Kochilas LK. Forced expression of the cell cycle inhibitor p57<sup>KIP2</sup> protects the mouse heart from ischemia-reperfusion injury. *BMC Physiol* 2008; 8:4. PMID:18312674
25. Yano N, Tseng A, **Zhao TC**, Robbins J, Padbury JF, Tseng YT. Temporally controlled overexpression of cardiac-specific PI3K $\alpha$  induces enhanced myocardial contractility--a new transgenic model. *Am J Physiol Heart Circ Physiol* 2008; 295(4):H1690-4. PMID:18723766.
26. Yano N, Suzuki D, Endoh M, Tseng A, Stabila JP, McGonnigal BG, **Zhao TC**, Padbury JF, Tseng YT.  $\beta$ -adrenergic receptor mediated protection against doxorubicin-induced apoptosis in cardiomyocytes: the impact of high ambient glucose. *Endocrinology* 2008; 149 (12):6449-61. PMID:18719028
27. **Zhao T C**, Tseng A, Yano N, Tseng Y-T, Davol P A, Lum L G, Padbury J F. Targeting of human CD 34(+) hematopoietic stem cells with myosin light chain preserves cardiac function in myocardial infarction. *J Appl Physiol* 2008; 104(6):1793-800. PMID:18292296
28. **Zhao TC**, Zhang LX, Cheng G, Liu JT. gp-91 mediates histone deacetylase inhibition-induced cardioprotection. *Biochim Biophys Acta* 2010;1803(7):872-80. PMID:20433879
29. Zhang LX, Zhao Y, Cheng G, Guo Tl, **Zhao TC**. Targeted deletion of nuclear factor kappa B p50 diminishes the cardioprotection of HDAC inhibition. *Am J Physiol Heart Circ Physiol* 2010;298(6):H2154-63. PMID:20382965
30. Tseng A, Stabila J, McGonnigal B, **Yano N**, Yang MJ, Tseng YT, Davol PA, Lum LG, Padbury JF, **Zhao TC**. Effect of disruption of Akt-1 of lin-c-kit<sup>+</sup> stem cells on myocardial performance and remodeling in infarcted heart. *Cardiovasc Res* 2010;87(4):704-12. PMID:20410290
31. Pang M, Ma L, Liu N, Ponnusamy M, **Zhao TC**, Yan H, Zhuang S. Histone deacetylase 1/2 mediates proliferation of renal interstitial fibroblasts and expression of cell cycle proteins. *J Cell Biochem.* 2011;112(8):2138-48. PMID:21465537
32. Chen HP, Denicola M, Qin X, Zhao Y, Zhang L, Long XL, Zhuang S, Liu PY, **Zhao TC**. HDAC inhibition promotes cardiogenesis and the survival of embryonic stem cells through proteasome-dependent pathway. *J Cell Biochem.* 2011;112(11):3246-55. PMID:21751234



33. **Zhao TC**, Zhang L, Liu JT, Guo TL. Disruption of Nox2 and TNFRp55/p75 eliminates anisomycin-induced preconditioning effect in the heart. *Am J Physiol Heart Circ Physiol*. 2012;303(10):H1263-72. PMID:20433879
34. Ponnusamy M, Sellamuthu R, **Zhao TC**, Zhuang SG. Autophagy protects against necrotic renal epithelial cells-induced death of renal interstitial fibroblasts. *American Journal of Physiology - Renal Physiology*. 2012;303(1):F83-91. PMID:22496408
35. Guan YJ, Chen Q, Yang X, Haines P, Pei M, Terek R, Wei XC, **Zhao T**, Wei L. Subcellular relocation of histone deacetylase regulates growth plate chondrocyte differentiation through Ca<sup>2+</sup>/calmodulin-dependent kinase IV. *American Journal of Physiology-Cell Physiology*. 2012;303(1):C33-40. PMID:22442139
36. Zhang L, Xin Q, Zhao Y, Fast L, Zhuang S, Liu P, Cheng G, **Zhao TC**. Inhibition of histone deacetylases preserves myocardial performance and prevents cardiac remodeling through stimulation of endogenous angiomyogenesis. *J Pharmacol Exp Ther* 2012; 341(1):285-93 (Cover illustration and Highlighted paper). PMID:2227182
37. Zhang L, Chen B, Zhao Y, Dubielecka PM, Wei L, Qin GJ, Chin YE, Wang Y, **Zhao TC**. Inhibition of histone deacetylase-induced myocardial repair is mediated by c-kit in infarcted hearts. *J Biol Chem*. 2012;287(47):39338-48. PMID:23024362
38. Huang W, Dai B, Wen Z, Millard RW, Yu XY, Luther K, Xu M, **Zhao TC**, Yang HT, Qi Z, Lasance K, Ashraf M, Wang Y. Molecular strategy to reduce in vivo collagen barrier promotes entry of NCX1 positive inducible pluripotent stem cells (iPSC(NCX1<sup>+</sup>)) into ischemic (or injured) myocardium. *PLoS One*. 2013;8(8):e70023. PMID: 23990893. PMID: 23990893. PMCID: PMC3749126.
39. Liu N, He S, M, Tang J, Tolbert E, Bayliss G, Ma L, Ponnusamy **Zhao TC**, Yan H, Zhuang S. Blocking the class I histone deacetylase ameliorates renal fibrosis and inhibits renal fibroblast activation via modulating TGF-beta and EGFR signaling. *PLoS One*. 2013;8(1):e54001. PMID: 23342059. PMCID: PMC3546966.
40. Tang J, Yan Y, **Zhao TC**, Bayliss G, Yan H, Zhuang S. Class I histone deacetylase activity is required for proliferation of renal epithelial cells. *Am J Physiol Renal Physiol*. 2013; 305(3):F244-54. PMID: 23698124. PMCID: PMC3742866.
41. Zhou J, Cheng M, Liao YH, Hu Y, Wu M, Wang Q, Qin B, Wang H, Zhu Y, Gao XM, Goukassian D, **Zhao TC**, Tang YL, Kishore R, Qin G. Rosuvastatin Enhances Angiogenesis via eNOS-Dependent Mobilization of Endothelial Progenitor Cells. *PLoS One*. 2013;8(5):e63126. PMID: 23704894. PMCID: PMC3660394.
42. Zhou J, Cheng M, Wu M, Boriboun C, Jujo K, Xu S, **Zhao TC**, Tang YL, Kishore R, Qin G. Contrasting roles of E2F2 and E2F3 in endothelial cell growth and ischemic

angiogenesis. *J Mol Cell Cardiol.* 2013;60:68-71. PMID: 23603666. PMCID: PMC3684263. PMID: 23603666. PMCID: PMC3684263.

43. **Zhao TC.** Glucagon-like peptide-1 (GLP-1) and protective effects in cardiovascular disease: a new therapeutic approach for myocardial protection. *Cardiovasc Diabetol.* 2013;12:90. PMID: 23777457. PMCID: PMC3700838.
44. **Zhao TC,** Du J, Zhuang S, Liu P, Zhang LX. HDAC Inhibition Elicits Myocardial Protective Effect through Modulation of MKK3/Akt-1. *PLoS One.* 2013;8(6):e65474. PMID: 23762381. PMCID: PMC3677871.
45. Li P, Wei X, Guan Y, Chen Q, **Zhao T,** Sun C, Wei L. MicroRNA-1 regulates chondrocyte phenotype by repressing histone deacetylase 4 during growth plate development. *FASEB J.* 2014. 28(9):3930-41 PMID:2485827
46. Ponnusamy M, Zhou X, Yan Y, Tang J, Tolbert E, **Zhao TC,** Gong R, Zhuang S. Blocking sirtuin 1 and 2 inhibits renal interstitial fibroblast activation and attenuates renal interstitial fibrosis in obstructive nephropathy. *J Pharmacol Exp Ther.* 2014;350(2):243-56. PMID: 24833701
47. Chorzalska A, Salloum I, Shafqat H, Khan S, Marjon P, Treaba D, Schorl C, Morgan J, Bryke CR, Falanga V, **Zhao TC,** Reagan J, Winer E, Olszewski AJ, Al-Homsi AS, Kouttab N, Dubielecka PM. Low expression of Abelson interactor-1 is linked to acquired drug resistance in Bcr-Abl-induced leukemia. *Leukemia.* 2014; 28(11):2165-77. PMID:24699303.
48. Tang J, Yan Y, **Zhao TC,** Gong R, Bayliss G, Yan H, Zhuang S. Class I HDAC activity is required for renal protection and regeneration after acute kidney injury. *Am J Physiol Renal Physiol.* 2014;307(3):F303-16. PMID:24808536
49. Wu M, Zhou J, Chen M, Boriboun C, Wang H, Thorne T, Jie C, Kishore R, **Zhao TC** and Qin G et al, E2F1 Suppresses Cardiac Neovascularization by Downregulating VEGF and PlGF Expression. *Cardiovasc Res.* 2014;104(3):412-22.PMID: 25341896.
50. DeNicola M, Du J, Wang Z, Yano N, Zhang L, Wang Y, Qin GJ, Zhuang S, 3. Zhao TC. Stimulation of glucagon-like-peptide-1 receptor through exendin-4 preserves myocardial performance and prevents cardiac remodeling in infarcted myocardium. *Am J Physiol Endocrinol Metab.* 2014; 307(8):E630-43. PMID:25117407.
51. Zhang LX, DeNicola M, Qin X, Du J, Ma J, Tina Zhao Y, Zhuang S, Liu PY, Wei L, Qin G, Tang Y, **Zhao TC.** Specific Inhibition of HDAC4 in Cardiac Progenitor Cells Enhances Myocardial Repairs. *Am J Physiol Cell Physiol.* 2014;307(4):C358-72. PMID:24944198
52. Jingming Zhou, Pengcui Li, Qian Chen, Xiao chun Wei, **Ting Zhao,** Zhengke Wang, and Lei Wei Mitogen-activated Protein Kinase p38 Induces HDAC4 Degradation in

- Hypertrophic Chondrocytes. *BBA - Molecular Cell Research*. 2015; 1853 (2): 370-376. PMID:25447540.
53. Zhou J, Li P, Chen Q, Wei X, **Zhao T**, Wang Z, Wei L. Mitogen-activated protein kinase p38 induces HDAC4 degradation in hypertrophic chondrocytes. *Biochim Biophys Acta*. 2015;1853(2):370-6. PMID:25447540. PMCID: PMC4289442.
54. Yan Y, Bai J, Zhou X, Tang J, Jiang C, Tolbert E, Bayliss G, Gong R, **Zhao TC**, Zhuang S. P2X7 receptor inhibition protects against ischemic acute kidney injury in mice. *Am J Physiol Cell Physiol*. 2015;308(6):C463-72. PMID: 25588875. PMCID:PMC4360025
55. Cheng M, Huang K, Zhou J, Yan D, Tang YL, **Zhao TC**, Miller RJ, Kishore R, Losordo DW, Qin G. A critical role of Src family kinase in SDF-1/CXCR4-mediated bone-marrow progenitor cell recruitment to the ischemic heart. *Journal of Molecular and Cellular Cardiology*. 2015; 81:49–53.PMID: 25655934.
56. Zhou J, Cheng M, Boriboun C, Ardehali MM, Jiang C, Liu Q, Han S, Goukassian DA, Tang YL, **Zhao TC**, Zhao M, Cai L, Richard S, Kishore R, Qin G. Inhibition of Sam68 triggers adipose tissue browning. *J Endocrinol*. 2015;225(3):181-9. PMID: 25934704. PMCID: PMC4482239
57. Ponnusamy M, Zhuang MA, Zhou X, Tolbert E, Bayliss G, **Zhao TC**, Zhuang S. Activation of Sirtuin-1 Promotes Renal Fibroblast Activation and Aggravates Renal Fibrogenesis. *J Pharmacol Exp Ther*. 2015;354(2):142-51. PMID:26022003. PMCID: PMC4518074
58. Du J, Zhang L, Zhuang S, Qin GJ, **Zhao T**. HDAC4 degradation mediates HDAC inhibition-induced protective effects against hypoxia/reoxygenation injury. *J Cell Physiol*. 2015 ;230(6):1321-31. PMCID: PMC4373665. PMCID:PMC4864970
59. Chen Y, Du J, Zhao YT, Zhang L, Lv G, Zhuang S, Qin G, **Zhao TC**. Histone deacetylase (HDAC) inhibition improves myocardial function and prevents cardiac remodeling in diabetic mice. *Cardiovasc Diabetol*. 2015;14:99. PMID: 26245924. PMCID: PMC4527099.
60. Zhao YT, Du J, Chen Y, Tang Y, Qin G, Lv G, Zhuang S, **Zhao TC**. Inhibition of Oct 3/4 mitigates the cardiac progenitor-derived myocardial repair in infarcted myocardium. *Stem Cell Res Ther*. 2015;6(1):259. PMID:26704423
61. Zhou X, Zang X, Ponnusamy M, Masucci MV, Tolbert E, Gong R, **Zhao TC**, Liu N, Bayliss G, Dworkin LD, Zhuang S. Enhancer of Zeste Homolog 2 Inhibition Attenuates Renal Fibrosis by Maintaining Smad7 and Phosphatase and Tensin Homolog Expression. *J Am Soc Nephrol*. 2016 ;27(7):2092-108. PMID:26701983

62. Du J, Zhang L, Wang Z, Yano N, Zhao YT, Wei L, Dubielecka-Szczerba P, Liu PY, Zhuang S, Qin G, **Zhao TC**. Exendin-4 induces myocardial protection through MKK3 and Akt-1 in infarcted hearts. *Am J Physiol Cell Physiol*. 2016;310(4):C270-83. PMID:26739490
63. Zhao YT, Wang H, Zhang S, Du J, Zhuang S, **Zhao TC**. Irisin ameliorates hypoxia/reoxygenation-induced injury through modulation of histone deacetylase 4. *PLOS ONE*. 2016;11(11):e0166182. PMID:27875543. PMCID:PMC5119735
64. Xiong C, Masucci MV, Zhou X, Liu N, Zang X, Tolbert E, **Zhao TC**, Zhuang S. Pharmacological targeting of BET proteins inhibits renal fibroblast activation and alleviates renal fibrosis. *Oncotarget*. 2016; 7(43):69291-69308. PMID:27732564. PMCID:PMC5342478
65. Xiong CX, Zang XJ, Zhou XX, Liu LR, Masucci M, Tang Jh, Li XZ, Liu N, Bayliss G, Zhao TC, Zhuang S. Pharmacological inhibition of Src kinase protects against acute kidney injury in a murine model of renal ischemia/reperfusion. *Oncotarget*. 2017;8(19):31238-31253. PMID:28415724. PMCID:PMC5458204
66. Ma L, Huang C, Wang XJ, Xin DE, Wang LS, Zou QC, Zhang YS, Tan MD, Wang YM, **Zhao TC**, Chatterjee D, Altura RA, Wang C, Xu YS, Yang JH, Fan YS, Han BH, Si J, Zhang X, Cheng J, Chang Z, Chin YE. Lysyl Oxidase 3 Is a Dual-Specificity Enzyme Involved in STAT3 Deacetylation and Deacetylimination Modulation. *Molecular cell*. 2017; 65(2):296-309. PMID:28065600
67. Chorzalska A, Flores Kim J, Roder K, Tepper A, Ahsan N, Rao RS, Olszewski AJ, Yu X, Terentyev D, Morgan J, Treaba DO, **Zhao T**, Liang O, Gruppuso P, Dubielecka P. Long-term exposure to imatinib mesylate downregulates Hippo pathway and activates YAP in a model of chronic myelogenous leukemia. *Stem Cells Dev*. 2017;26(9):656-677. PMID:28103766. PMCID:PMC5421616
68. Wang XJ, Qiao Y, Xiao MM, Wang L, Chen J, Lv W, Xu L, Li Y, Wang Y, Tan MD, Huang C, Li J, **Zhao TC**, Hou Z, Jing N, Chin YE. Opposing Roles of Acetylation and Phosphorylation in LIFR-Dependent Self-Renewal Growth Signaling in Mouse Embryonic Stem Cells. *Cell Rep*. 2017;18(4):933-946. PMID:28122243
69. Zhang L, Du JF, Yano N, Wang H, Zhao YT, Dubielecka-Szczerba P, Zhuang S, Chin Y, Qin G, **Zhao TC**. Sodium butyrate protects against high fat diet-induced cardiac dysfunction and metabolic disorders in type II diabetic mice. *J Cell Biochem*. 2017 . doi: 10.1002/jcb.25902. [Epub ahead of print], PMID: 28109123
70. Wang H, Zhao YT, Zhang S, Dubielecka PM, Du J, Yano N, Chin YE, Zhuang S, Qin G, **Zhao TC**. Irisin plays a pivotal role to protect the heart against ischemia and reperfusion injury. *Journal of cellular physiology*. 2017; 232(12):3775-3785. PMID:2818169 PMCID:PMC5550372

71. Liang D, Sun J, Wei F, Zhang J, Li P, Xu Y, Shang X, Deng J, **Zhao T**, Wei L. Establishment of rat ankle post-traumatic osteoarthritis model induced by malleolus fracture. *BMC Musculoskelet Disord*. 2017 Nov 17;18(1):464. PMID:29149841.
72. Huang C, Zhang Z, Chen L, Lee HW, Ayrapetov MK, **Zhao TC**, Hao Y, Gao J, Yang C, Mehta GU, Zhuang Z, Zhang X, Hu G, Chin YE. Acetylation within the N- and C-Terminal Domains of Src Regulates Distinct Roles of STAT3-Mediated Tumorigenesis. *Cancer Res*. 2018;78(11):2825-2838. PMID:29531159.
73. Xu S, Tao J, Yang L, Zhang E, Boriboun C, Zhou J, Sun T, Cheng M, Huang K, Shi J, Dong N, Liu Q, **Zhao TC**, Qiu H, Harris RA, Chandel NS, Losordo DW, Qin G. E2F1 Suppresses Oxidative Metabolism and Endothelial Differentiation of Bone Marrow Progenitor Cells. *Circulation research*. 2018; 122(5):701-711. PMID:29358228.
74. Chorzalska A, Ahsan N, Rao RSP, Roder K, Yu X, Morgan J, Tepper A, Hines S, Zhang P, Treaba DO, **Zhao TC**, Olszewski AJ, Reagan JL, Liang O, Gruppuso PA, Dubielecka PM. Overexpression of Tpl2 is linked to imatinib resistance and activation of MEK-ERK and NF- $\kappa$ B pathways in a model of chronic myeloid leukemia. *Molecular oncology*. 2018; 12(5):630-647. PMID:2948570 PMCID:PMC5928369.
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1. Wang Z and **Zhao TC**. Histone Deacetylase 4 (HDAC4): Regulations and Biological Functions. *Epigenomics.* 2014;6(1):139-50. PMID: 24579951. PMCID: PMC4380265.
2. Chen HP, Zhao YT, **Ting C Zhao**. Histone Deacetylases and Mechanisms of Regulation of Gene Expression. *Critical Reviews in Oncogenesis* 2015;20:35-47. PMID: 25746103. PMCID:PMC4809735

#### BOOKS AND BOOK CHAPTERS

1. Ting C Zhao. The pathophysiology of ischemia and reperfusion injury (ISBN7-5349), Book Chapter, 1996
2. Ting C Zhao. Ischemia and Reperfusion injury (ISBN 14892). Book Chapter, 1996
3. Ting C. Zhao, Rakesh C. Kukreja. Adenosine A<sub>3</sub> Receptor induced Delayed Preconditioning: Essential Role of Nuclear Factor  $\kappa$ B, Nitric Oxide Synthase and Mitochondrial K<sub>ATP</sub> channels; Myocardial Ischemia and Preconditioning Progress in *Experimental Cardiology*: ( ISBN978-1-4613-5036-1)Volume 6, pp 329-345, 2003
4. John Z.Q. Luo, Souriya Vang, Zhao Ting, Ivor Jackson and LuGuang Luo. A Small Molecular Thyrotropin-Releasing Hormone (TRH) in Pancreas for Promotes Insulin Producing Cell Proliferation. Book Chapter: IntechOpen 2014 (DOI: 10.5772/57550).

## MANUSCRIPTS IN PREPARATION

1. Du J, Tina Zhao, Naohiro Yano, Dubielecka PM, Gangjian Qin, Shougang Zhuang, Paul Y Liu, **Ting C Zhao**. The functional of PRAK in mitigating cardiac remodeling and increasing angiogenesis in myocardial infarction (In preparation, ready to submit in next 1.5 month)

## ABSTRACTS

1. **Zhao TC**, Xu H, and Shi AY. Amiloride's protective effect on reperfused myocardium in isolated rat heart. Chengde International Society for heart Research, Chengde, China, June 1991.
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43. **Ting C Zhao**, Hongping Chen, Megan DeNicola, Yu Zhao, Xin Qin, Ling Zhang, Paul Liu. Hdac inhibition promotes cardiogenesis and the survival of embryonic stem cells through proteasome-dependent pathway. 2011 Basic Cardiovascular Sciences 2011 Scientific Sessions, New Orleans, LA. July 19, 2011.
44. Xin Qin, **Ting Zhao**. Specific inhibition of HDAC4 in c-kit<sup>+</sup> cardiac stem cells promotes myocardial regeneration and improves cardiac function recovery following myocardial infarction. NHLBI Symposium on Cardiovascular Regenerative Medicine. Bethesda, Maryland, USA, Oct 4-6, 2011.
45. Ling Zhang, Xin Qin, Loren Fast, Yu Zhao, Guangmao Cheng, **Ting Zhao**. Hdac inhibition elicits in vivo endogenous myocardial regeneration through c-Kit<sup>+</sup> cardiac stem cells in infarcted hearts. 2011 AHA Scientific Session, Orlando, FL. Nov 15, 2011.
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- progenitor cells. The 22<sup>nd</sup> Annual meeting of the wound healing society, Atlanta, Georgia, April 19-22, 2012.
48. **Ting Zhao**, Inhibition of Histone deacetylation stimulates myocardial regeneration. AHA Awardees Research Symposium of Rhode Island, Providence, Rhode Island, March 20, 2013.
  49. **Ting C Zhao**, Jianfeng Du. Stimulation of glucagon-like-peptide-1 receptor through exendin-4 preserves myocardial performance and prevents cardiac remodeling in the infarcted myocardium. 2013 AHA Scientific Session, Dallas, Texas, Nov 17, 2013.
  50. **Zhao TC**. Disruption of histone deacetylase 4 sumoylation promotes hypoxia-induced injury in cardiomyocyte. 2013 *AHA Scientific Session*, Dallas, Texas, Nov 17, 2013.
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  56. Jianfeng Du, Naohiro Yano, Yu Zhao, Zhengke Wang, Ling Zhang, **Ting C Zhao**. Inhibition Of Histone Deacetylases Protects High Fat Diet-induced Cardiac Dysfunction. Inhibition Of Histone Deacetylases Protects High Fat Diet-induced Cardiac Dysfunction. *Circulation* 2015. 2015 AHA Scientific Sessions, Orlando, USA, November 8, 2015.
  57. Ling Zhang, Yu Zhao, Jianfeng Du, **Ting C Zhao**. Cardiac-specific Overexpression of Hdac4 Exacerbates Myocardial Dysfunction And Remodeling. *Circulation* 2015, 2015 AHA Scientific Sessions, Orlando, USA. November 8, 2015.

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59. Yu T Zhao, Jianfeng Du, Hao Wang, Ling Zhang, **Ting C Zhao**. Irisin Protects Against Hypoxia and Reoxygenation Injury Through HDAC4. *Circulation*. 2016;134:A17980. American Heart Association (AHA) Scientific Sessions. New Orleans, LA. November 13, 2016.
60. Jianfeng Du, Ling Zhang, Hao Wang, Yu T Zhao, Naohiro Yano, **Ting C Zhao**. Cardiac Specific Overexpression of Histone Deacetylase 4 Aggravates High Fat Diet-induced Cardiac Dysfunction and Metabolic Disorders. *Circulation*. 2016;134:A17970. AHA Scientific Sessions. New Orleans, LA. November 14, 2016.
61. Hao Wang, Shouyan Zhang, Yu T Zhao, Jianfeng Du, **Ting C Zhao**. Irisin Protects the Heart Against Myocardial Ischemia and Reperfusion Injury. *Circulation*. 2016;134:A17950. AHA Scientific Sessions. New Orleans, LA. November 14, 2016.
62. Yu Tina Zhao, Jianfeng Du, **Zhao TC**. Irisin develops protective effects in cardiomyoblasts exposed to hypoxia/reoxygenation. Boston University Clinical and Translational Science Institute (CTSI)'s 6<sup>th</sup> Annual Translational Science Symposium. Boston, March 2017.
63. Wang H, **Zhao TC**. Deletion of PRAK promotes myocardial ischemia and reperfusion injury in mice. *Circulation*. 2017; 136 A20677. American Heart Association (AHA) Scientific Sessions. Anaheim, California, November 11, 2017.
64. Zhao TY, Yano N, Wang H, Du JF, **Zhao TC**. Deletion of PRAK Exacerbates Myocardial Dysfunction and Remodeling in Myocardial Infarction. *Circulation*. 2017; 136 A14043. American Heart Association (AHA) Scientific Sessions. Anaheim, California, November 11, 2017.
65. Zhang L, Du JF, Zhao YT, Wang JG, Wang H, Denicola M, **Zhao TC**. Cardiac-specific overexpression of histone deacetylase 4 promotes cardiac dysfunction and enhances cardiac remodeling. *Circulation*. 2017; 136 A 20514. American Heart Association (AHA) Scientific Sessions. Anaheim, California, November 11, 2017.
66. **Zhao TC**. Irisin promoted stem cell-induced myocardial repair. 2018 Southern China International Cardiovascular Conference. Zhuangzhou, China, April 9, 2018
67. Wang JG, Zhao YT, **Zhao TC**, Irisin improves myocardial performance and attenuates insulin resistance in Type II diabetic mice. *Shock* 2018; 46 (supplement) 41 st Annual Conference on Shock, Scottsdale, AZ, June 9, 2018

68. Wang JG, Zhao YT, **Zhao TC**. Irisin Attenuates High Fat Diet-Induced Cardiac Dysfunction and Metabolic Disorder Through the Hdac4 Pathway. *Circulation*. 2018 AHA Scientific Sessions. Chicago, IL. November 10, 2018
69. Yano N. Zho YT and Zhao T. Irisin counters high glucose and fatty acid-induced cytotoxicity by preserving AMPK-insulin receptor signaling pathway ( ID 3399108, accepted). 43rd Annual Conference on Shock, Toronto, Canada. 2020.
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## INVITED PRESENTATIONS

### National

1. Ischemic preconditioning, Cardiovascular Institute, Texas A&M University, College Station, Texas, May 18, 2002.
2. p38 in delayed preconditioning, Cardiovascular Institute and Cellular Biology and Molecular Medicine, New Jersey Medical School, Newark, NJ, June 19, 2002.
3. MAP kinase and myocardial Preconditioning, Department of Bioengineering, Duke University, Durham, NC, USA, October, 2002.
4. MAP kinase and myocardial preconditioning, Cardiovascular Research Institute, Morehouse School of Medicine, Atlanta, GA, USA, May 20, 2003.
5. MAP kinase and myocardial preconditioning, Cardiovascular Research Institute, University of South Dakota School of Medicine, Sioux Falls, SD, USA, June, 2003
6. The Pivotal Role of Stem Cell in Myocardial Repair, Department of Excise Physiology, West Virginia University School of Medicine, Morgantown, WV, USA, January 22, 2008.

7. The Pivotal Role of Stem Cell in Myocardial Repair, Department of Clinical and Administrative Pharmacy, College of Pharmacy, University of Georgia, Medical College of Georgia, Augusta, GA, USA, September 9, 2008.
8. Role of stem cells in myocardial regeneration, School of Pharmacy, Idaho State University, Pocatello, Idaho, USA, January 23, 2009.
9. The pivotal role of stem cells in myocardial repair, Cardiovascular Institute, University of Vermont, Burlington, USA, January 26, 2009.
10. Stem cells and myocardial repairs, Department of Medicine, College of Medicine, Texas A&M Health Science Center, Texas A&M University, Temple, Texas, USA, March 5, 2009.
11. Stem cells and myocardial repairs, Department of Integrative Medical Science, Northeastern Ohio Universities Colleges of Medicine and Pharmacy, Rootstown, Ohio, March 10, 2009.
12. Stem cells and myocardial repairs, Department of Surgery, University of Massachusetts Medical School, Worcester, MA, August 5, 2009.
13. HDAC inhibition and myocardial protection: College of Osteopathic Medicine, New York Institute of Technology, Lang Island, NY, May, 2013
14. P38 signaling pathway and cardiac protection, Molecular Cardiology Research Institutes (MCRI), Tufts Medical Center, Boston, MA, May 19, 2015.
15. HDAC inhibition and myocardial protection. Molecular Cardiology Research Institutes (MCRI), Tufts Medical Center, April 28, 2016, Boston, MA.
16. Histone deacetylation inhibition and cardiac protection: The 14th Annual Discovery on Target Event, September, 2016, Boston, MA.
17. The role of histone deacetylation inhibition in diabetes. Loyola University Chicago Stritch School of Medicine, Maywood, IL, January 2017
18. P38 signaling pathway and cardiac repair. Loyola University Chicago Stritch School of Medicine, Maywood, IL, May 2017

#### Local

1. HDAC in diabetic myocardium and protection. Department of Surgery, Boston University Medical Center, Boston, MA, January 9, 2019.



2. The role of Akt in myocardial repair and remodeling. 2010 BBB PI Symposium. Boston, MA, Oct 2010.

## Regional

1. A role p38 in myocardial protection in mouse heart. Woman and Infants Hospital, Alpert Brown Medical School, Brown University, Providence, RI, January 29, 2004.
2. The role of the Pi3K/ Akt / p70S6k pathway in cardiac remodeling after myocardial infarction. COBRE Conference of Women & Infant's Hospital, Alpert Brown Medical School, Providence, RI, February 26, 2006.
3. The Essential Role of Akt1+ Hematopoietic Stem Cells in Preserving Myocardial Function Following Myocardial Infarction. New England Perinatal Symposium, Newport, RI, October 27, 2006.
4. A New Lease for Cardioprotection, Research Symposium of Women and Infants Hospital, Alpert Brown Medical School, Brown University, January 5, 2007, Providence, RI.
5. Targeting of Human CD 34(+) Hematopoietic Stem Cells with Myosin Light Chain Preserves Cardiac Function in Chronic Infarcted Heart of Mouse. COBRE Perinatal Conference, Women and Infants Hospital, Alpert Brown Medical School, Jan 2008, Providence, RI.
6. Pharmacological preconditioning and role of HDAC, Cardiovascular Symposium, Rhode Island hospital and Women and Infants hospital, Alpert Brown Medical School, Brown University, Providence, RI. March 12, 2008,
7. Perspectives of stem cells in infarcted hearts, Department of Surgery, Rhode Island Hospital, Alpert Brown Medical School, Brown University, Providence, RI, September, 2008.
8. Signaling pathway in myocardial protection. Roger Williams Hospital, Providence, RI, February 2009.
9. HDAC inhibition stimulates NF-kappa B in myocardial protection, Division of Kidney Disease and Hypertension, Department of Medicine, Brown University, Providence, RI. March 17, 2010.
10. The myocardial repair and remodeling the infarcted heart. Surgical research Meeting, Department of Surgery, Roger Williams Medical Center, Providence, RI, March 2013,
11. p38 acetylation and myocardial protection. VA Medical Center, Brown University, , Providence, RI, March 2013

12. GLP-1 and myocardial protection. VA Medical Center, Brown University, Providence, RI, Dec 2013.
13. The signaling pathway in myocardial ischemia/reperfusion and protection. Roger Williams Hospital Research Day Symposium, Roger Williams Medical Center, Providence, RI, June 13, 2014.
14. The HDAC inhibition in diabetic myocardium. The Department of Plastic Surgery, Rhode Island Hospital, Providence, RI, May 2016.

#### International

1. The Na/H exchange and myocardial ischemia and reperfusion injury. International Society for Heart Research-Chinese section, Zhengzhou, China. May, 1996.
2. Cell therapy and diabetics in cardiovascular disease. Guangdong Yinuo Biological and Technological Inc, Guangdong, China, Dec 2017.
3. The development of cardiovascular institutes and opportunities of scientists. Luoyang Central Hospital, Zhengzhou University, Luoyang, China, Dec 2017.
4. Epigenetic regulation and diabetic cardiomyopathy. Luoyang Central Hospital, Zhengzhou University, Luoyang, China. Dec 2017.
5. Irisin promoted stem cell-induced myocardial repair. 2018 Southern China International Cardiovascular Conference, Guangzhou, China, April 2018.

#### GRANTS

1. 2009-2021 National Institutes of Health (1R01HL089405). Title of Grant: Histone Deacetylase Inhibition: A Novel Approach to Cardioprotection (Total budget \$1746,196) (Principle Investigator)
2. 2012- 2019 National Institutes of Health (1R01HL115265-01). Title of Grant: p38 acetylation: Novel signaling mechanisms and myocardial protection. (Total Budget \$ 1550,956/) (Principle Investigator).
3. 2007-2012 American Heart Association, National Center (0735458N Scientist Developmental Grant of), Title of Grant: Histone deacetylase inhibition: A unique approach for cardioprotection. Budget: Total amount: \$ 280,000 (direct cost: \$260,000; indirect cost: \$20,000) (Principle Investigator)

4. 2008-2009 National Institutes of Health (1P20 RR018728-01): The Project III PI: Title of grant: The role of PI3 kinase in myocardial remodeling and regeneration. Budget (direct cost: \$160,000/per year) (Project III Principle Investigator)
5. 2007-2010 American Heart Association-Northeast (0735585T Scientist Developmental Grant): Title of Grant: Histone deacetylase inhibition: A unique approach for cardioprotection. Budget: Total Amount: \$ 210,000/per year (direct cost:\$195,000; indirect cost: \$15,000) (declined) ( Principle Investigator)
6. 2006-2009 Rhode Island Foundation: Title of Grant: P38 isoform(s) regulation of cardiac preconditioning. Budget \$10,000 (total cost), (Principle Investigator)
7. 2004-2008 National Institutes of Health (1P20 RR018728-01) Pilot Project PI: Title of grant: The role of stem cells in myocardial regeneration. Budget \$110,000/per year (direct cost), (Principle Investigator)
8. 2001-2003 American Heart Association-Mid-Atlantic Grant in Aid, Title of grant: The role of p38 and NF-kappa B in mediating the late phase of preconditioning in heart (0160420 U) Budget \$ 130,000/per year, (Principle Investigator).
9. 1997-1998 The Royal Society Fellowship Foundation: Title of grant: The Role of Na/H Exchange in the low flow ischemia and reperfusion injury in rat heart. Budget £10,000/per year. (Principle Investigator).
10. 1994-1996 Henan Academic Foundation: Title of Grant: The significance of Na/H exchange in myocardial ischemia and reperfusion injury. Budget; Chinese ¥ 50,000/per year, (Principle Investigator).
11. 1994-1996 Bureau of Pingdingshan-Department of China Coal Industry: Title of Grant: The pH paradox and myocardial reperfusion injury. Budget Chinese ¥ 20,000/per year, (Co-Principle Investigator)

#### UNIVERSITY TEACHING, ADVISING and MENTORING ROLES

##### Mentors

1. Zhao Bai lin, BS, Research Associate (2002-2003): Investigating the role of adenosine receptor A2a on myocardial ischemia and reperfusion injury using isolated mouse heart model (Virginia Commonwealth University).
2. Demet Tekin, MD (1999-2000). Supervising to use the isovolumetrically isolated mouse perfused heart model and determination of cardiac function (Virginia Commonwealth University).

3. Zhang Xueling MD, (2002-2003): Research Associate: Working on the evaluation of p38, NF- $\kappa$ B and nitric oxides in the regulation of ischemic myocardium, and establishing the genetic approach to analyze transcriptional factors mediating cardiac injury and protection (Virginia Commonwealth University).
4. Maojing Yang, BS, Research Assistant (2004-2006): working on assisting cardiac functional measurement and perfusion of isolated heart (Women and Infants Hospital/Brown University)
5. Andy Tseng, BS, Research assistant (2007-2009): working on the histology and isolation of bone marrow –derived c-kit positive e progenitor cells (Women and Infants Hospital/Brown University).
6. Chen Bin PhD. (2007-2008): Post-doctoral associate: working on cardiac stem cell isolation, culture and stem cell engraftment in the infarcted hearts (Women and Infants Hospital/Brown University)
7. Hongping Chen Ph.D, (2010-2011): Post-doctoral research associate: Working on establishing embryonic stem cell model and identifying the role of histone deacetylase in mediating cardiac lineage commitment and related signaling pathway (Roger Williams Medical Center/Boston University School of Medicine).
8. Megan DeNicola, BS, Research Associate (2010-2012): Working on identification of stem cell-derived cardiac lineage commitment using embryonic stem cell model; and investigating the function of glucagon-like peptide receptor in mediating cardiac protection (Roger Williams Medical Center/Boston University School of Medicine).
9. Qin Xin, Ph.D (2010-2011): Post-doctoral associate: working on embryonic stem cells and using immunohistochemical analysis to assess the fate of stem cells following inhibition of histone deacetylase (Roger Williams Medical Center/Boston University School of Medicine).
10. Tina Y Zhao, BA, Research associate (2015-2017): working on histology and immunoblot to assess the cardiac remodeling, hypertrophy and cell death (Roger Williams Medical Center/Boston University School of Medicine).
11. Jian Feng Du, MD/Ph.D (2013-2017): Post-doctoral associate: working on myocardial infarction model, assessment of cardiac function using echocardiography and Millar catheter in mouse (Roger Williams Medical Center/Boston University School of Medicine).

12. Naohiro Yano, MD/Ph.D, Research Associate (2017-2019): Assistant Professor: working on detection of apoptosis in cardiomyocytes in hypoxia and re-oxygenation (Roger Williams Medical Center/Boston University School of Medicine).
13. Jianguo Wang, MD/Ph.D, Research Associate (2017-present): working on histology, tissue injury in hypoxia and re-oxygenation (Roger Williams Medical Center/Boston University School of Medicine).

#### International Scholars

1. You-fang Chen, MD/Ph.D, International Scholar (2014-2015): Working on myocardial infarction model and assessing the signaling pathway of diabetic cardiomyopathy in mouse (Roger Williams Medical Center/Boston University School of Medicine).
2. Hao Wang, MD, International Scholar (2015-2017): Working on metabolic regulation, angiogenesis and cardiac protection (Roger Williams Medical Center/Boston University School of Medicine).

#### Independent Studies (University Students and High School Student).

1. Julio Ma, Brown University (09/2012-04/2013): Working on histology and immunostainings to evaluate cardiomyocytes and vascular angiogenesis.
2. Tina Y Zhao, Brown University (04/2013 to 06/2013): Working on cardiomyocyte cultures and immunoblots.
3. Dennis Wei, Northeastern University (06/2018 to 09/2018): Working on mitochondrial analysis
4. Thomas J Zhao, La Salle Academy (11/2018-2/2019): Working on immunostaining.

#### International Academic Advisor and Consultant.

1. The Chief Scientific Advisor. Cardiovascular Sciences and Institutes, Luoyang Central Hospital, Zhengzhou University, Luoyang, China.
2. The Scientific Consultant: Guangdong Yinuo Biological and Technological Inc, Guangdong, China.

#### Thesis Committees

Nedyalka Valkov: Role of miRNA-1 and miRNA-365 in cardiac remodeling. Brown University, Doctoral Thesis. April, 2017.

#### Teaching Courses (Medical Students of Xinxiang Medical College)

1. Molecular mechanism of myocardial failure (Fall 1993 to Fall 1996, size of class: 80 students)
2. Signaling pathway of cardiac infarction (Fall 1993 to 1996, size of class: 80 students)
3. Myocardial and ischemia and reperfusion injury (1994, size of class: 80 students)
4. Pathological implication of Shock (1995, size of class: 80 students)
5. Pathology and physiology of cardiovascular system (Fall 1993- Fall 1997, size of class: 80 students)