

Curriculum Vitae

Name: **JIAN-XIONG CHEN, M.D.**

Office Address: Department of Pharmacology and Toxicology

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EDUCATION:

1980-1985 M.D., Hunan Medical University. P.R China

1987-1990 Master degree (M.S), Department of Pharmacology, Henan Medical University. P.R China

1996-1999 Joint PhD training of Southern Illinois University School of Medicine and Hunan Medical University

1998-2001 Postdoctoral fellow, Department of Pathology and Cardiology, Vanderbilt University Medical Center

Academic Appointments:

1985-1987 Assistant Professor of Pharmacology, Department of Pharmacology, Hengyang Medical College, China

1994-1996 Associate Professor of Pharmacology, Chairman of Department of Pharmacology, Hengyang Medical College, China

1998-2001 Postdoctoral Fellow, Departments of Pathology and Cardiology, Vanderbilt University School of Medicine, Nashville, Tennessee

2001-2002	Research Associate, Departments of Radiology and Oncology, Vanderbilt University School of Medicine, Nashville, Tennessee
2002-2006	Research Assistant Professor, Department of Pathology, Vanderbilt University School of Medicine, Nashville, Tennessee
2006-2010	Research Assistant Professor, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee
2010-2011	Research Associate Professor, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee
2011-present	Associate Professor, Department of Pharmacology and Toxicology, University of Mississippi Medical Center, Jackson, Mississippi
2011-present	Member, Graduate Faculty, The University of Mississippi Medical Center, School of Graduate Studies in the Health Sciences

Honors

1992	Recipient of Excellent Award in Teaching, Education Commissioner of Hunan province, P.R. China
1994	Recipient of Excellent Award in Teaching, Education Commissioner of P.R. China
1999	Achievement Award in Cardiovascular Research, Bureau of Medicine and Hygiene of Hunan Province, P.R. China
1999	Achievement Award in Science and Technology, Ministry of Science and Technology of Hunan Province, P.R. China
2011	Excellence in Research Award, University of Mississippi Medical Center (Bronze Level)
2012	Excellence in Research Award, University of Mississippi Medical Center (Silver Level)
2013	Excellence in Research Award, University of Mississippi Medical Center (Gold Level)

Professional Organizations:

Member of American Heart Association

Member of American Physiological Society

Editorial Boards:

Chinese Journal of Arteriosclerosis

Diabetes Research (Associate editor)

Journal of Diabetes Research and Treatment

Professional Activities

Reviewer for Acta Pharmacologica Sin; American Journal of Pathology; European Journal of Pharmacology; Journal of Thrombosis and Hemostasis; Canadian Journal of Physiology and Pharmacology, Journal of Pediatric Endocrinology and Metabolism, Arterioscler Thromb Vasc Biol, Experimental Eye Research, Current Diabetes Reviews.

Diabetes & Metabolism, Acta Biochimica et Biophysica Sinica, PLoS One, Biochemical and Biophysical Research Communications

2011-2013 Regular Reviewer for Vascular Wall Biology Committee of American Heart Association (Vas Wall Bio AAGI BSc2).

2011 Ad hoc reviewer for Medical Research Council (United Kingdom);

2012 Ad hoc reviewer for NIH-Cell, Molecular, and Computational Biology (11/08-11/09/2012)

2013 Ad hoc reviewer for NIH Special Emphasis Panel/Scientific Review (01/17-01/18/2013)

2013 Ad hoc reviewer for NIH Special Emphasis Panel/Scientific Review (05/28-05/29/2013)

2013 Ad hoc reviewer for NIH Special Emphasis Panel/Scientific Review (10/31-11/01/2013)

2014 Ad hoc reviewer for NIH Special Emphasis Panel/Scientific Review (02/04-02/05/2014)

2015 Ad hoc reviewer for NIH Special Emphasis Panel/Scientific Review (05/18-05/19/2015)

2015 Ad hoc reviewer for NIH Special Emphasis Panel/PPG Review (06/03/2015)

Visiting Professorships and Invited Talks

2006: June-July; visiting Professor of University of South China, Hengyang, Hunan, PR. China. Lecture title "Angiogenesis and cardiovascular diseases".

2008: June-July; visiting Professor of University of South China, Hengyang, Hunan, PR. China. Lecture title "Angiopoietins/Tie-2 in diabetic complications".

2008: July 23; invited talk, Beijing University Medical Center, Beijing, PR China, Title: "NADPH oxidase and diabetic angiogenesis".

2010: May 4, invited talk, University of Missouri, Department of Pharmacology and Physiology, Columbia, MO. Title "Angiopoietins/Tie-2 system and diabetic abnormal angiogenesis".

- 2010: July 12, invited talk, University of Mississippi Health Center, Department of Pharmacology, Jackson, MS. Title "Angiopoietins/Tie-2 system in diabetic vascular complications".
- 2011 March 16, invited talk, University of Mississippi Health Center, Department of Physiology& Biophysics, Jackson, MS. Title "Angiopoietins/Tie-2 in diabetic infarcted heart".
- 2011 November 4, invited talk, University of Southern Mississippi, Department of Biological Science, Hattiesburg, MS. Title "Angiopoietins/Tie-2 system in diabetic complications".
- 2012 December 11, invited talk, University of Mississippi Medical Center, Department of Biochemical Science, Jackson, MS. Title "Mechanisms of impairment of myocardial angiogenesis in type II diabetes".
- 2014 September 11, invited talk, University of Beijing Medical Center, Department of Physiology and Physiopathology. Title "Mechanisms of impairment of myocardial angiogenesis in type II diabetes".
- 2015 May 8, invited talk, Human University of Chinese Medicine, P.R. China. Title: New perspective of Angiopoietins/Tie-2 system in Sepsis".
- 2015 Sept 11, invited talk, University of Southern Illinois, School of Medicine, Department of Microbiology and Biochemistry, Title: Emerging role of Sirtuin 3 in EC metabolism and angiogenesis".
- 2016 Jan 25, University of Mississippi Medical Center, Department of Pharmacology and Toxicology, Jackson, MS. Title "Emerging role of Sirtuin 3 in EC metabolism and angiogenesis".
- 2016 May 9, invited talk, Human University of Chinese Medicine, P.R. China. Title "Emerging role of Sirtuin 3 in EC metabolism and diastolic dysfunction".
- 2016 May 13, invited talk, Fushan Hospital, Guang Dong, P.R. China. Title: New perspective of Angiopoietins/Tie-2 system in Sepsis".

Teaching Activities:

2011 fall semester: PhD graduate student course: the mechanisms of drug action-angiogenesis (4 hours)

2012 fall semester: PhD graduate student course: the mechanisms of drug action-cardiovascular disease and angiogenesis (4 hours)

2013 fall semester: PhD graduate student course: the mechanisms of drug action-
cardiovascular disease and angiogenesis (4 hours)

2013 fall semester: Medical pharmacology group studies (4 hours).

2013 Dental and medical pharmacology: Asthma therapeutic (1 hour)

Anti-histamine drugs (1 hour)

2014 Dental and medical pharmacology: Asthma therapeutic (1 hour)

Anti-histamine drugs (1 hour)

2014 Fall semester: Medical pharmacology group studies (8 hours).

2015 Dental and medical pharmacology: Asthma therapeutic (1 hour)

Anti-histamine drugs (1 hour)

2015 Fall semester: Medical pharmacology: Anti-histamine drugs (1 hour)

AAP section 1 hour

Asthma therapeutic (1 hour)

AAP section 1 hour

Small group 8 hours

2016 Dental and medical pharmacology: Asthma therapeutic (1 hour)

Anti-histamine drugs (1 hour)

AAP section 1 hour

AAP section 1 hour

Small group 8 hours

2017 PhD graduate student course: Approaches to study Control of Angiogenesis

2006-2009: Dr. Qin-Hui Tuo. M.D. PhD completed her Ph.D. thesis in our lab. Current
position: Associate Professor, Department of Pharmacology, Hengyang,
Hunan, PR. China.

2008-2010: Dr. Aaron Milliage M.D. completed his fellowship research training in our
lab.

2011-12-19	PhD graduate student course: the mechanisms of drug action-angiogenesis
2011- 2012	Ph.D. Advisory Committee for Carlos Zgheib.
2012-	Ph.D. Advisory Committee for Fouad Zouein
2012-	Ph.D. Supervisor for Xiaochen He
2011-2013	Dr. Lanfang Li, M.D. PhD completed her postdoctoral training in our lab.
2012- 2014	Dr. Xuwei Hou, M.D. PhD, Postdoctoral fellow.
2015-2016	Dr. Shuo Wang, MD. PHD, Postdoctoral fellow.
2015-2016	Dr. Xue-Jiao Xie, MD. PHD, Postdoctoral fellow.
2015-2016	Dr. Yong-Kang Tao, MD., Postdoctoral fellow.
2016-2017	Dr. Liying Zhuo, MD., Postdoctoral fellow.
2016-present	Dr. Jie Li, MD, PhD. Postdoctoral fellow.
2017-present	Dr. Lanfang Li, MD, PhD., Postdoctoral fellow.

2014 spring semester student lab rotation: Venkata Ramana Vaka

Department, institutional and national Service:

Faculty recruitment committee

Graduate Program Committee

Department self-study review committee

Associate Director of dental Pharmacology

RESEARCH PROGRAM

Active:

2R01HL102042-05

03/01/2017-02/28/2021

NIH/NHLBI

Total Budget: \$1,550,000

Title: Coronary microvascular rarefaction in diabetes

Principal Investigator: Jian-Xiong Chen

The overall goal of this application is to explore whether diabetes shifts metabolic flexibility of EC and alters coronary microvascular phenotype/function by a mechanism involving disruption of endothelial Sirt3-PFKFB3 signaling pathway; whether these abnormalities lead to coronary microvascular rarefaction, thus promoting cardiomyocyte hypoxia and diastolic dysfunction in diabetes.

Pending

NIH/NHLBI: 1R01HL131625-02, Title: Altered coronary pericyte function in obesity/diabetes (Scored 26 percentile)

NIH/NHLBI: R01 HL139527-01, Title: HL-Endothelial/pericyte interactions in pulmonary hypertension (under review).

NIH/NHLBI: Title: Targeting endothelial cell/cardiomyocyte interactions in heart failure with preserved ejection fraction (submitted to NIH).

Completed Research Support

1R01HL102042-01

07/15/2010-03/31/2016

NIH/NHLBI

Title: Regulation of vascular maturation/regression in diabetes

Total Budget: \$1,550,000

Principal Investigator: Jian-Xiong Chen (50% effort)

The overall goal of this application is to explore whether diabetes disrupts Ang-1/Tie-2 and apelin pathway by a mechanism involving Ang-2 and PHD2 activation; and contributes to abnormal vascular maturation and capillary regression in diabetic hearts.

0565196B (PI Dr. Jian-Xiong Chen)

07/01/05-06/30/07

American Heart Association

Total Budget: \$110, 000

Title: Angiopoietins/Tie-2 and Diabetic Impaired Myocardial Angiogenesis

PI: Dr. Jian-Xiong Chen (25% effort)

The goals of this project are to determine whether hyperglycemia dysregulates angiopoietins/Tie-2 system and impairs myocardial angiogenesis in response to hypoxia.

1R21DK074995-01

04/01/06-03/31/2010

NIH/NIDDK

Title: Functional Role of Angiopoietin-2 in Diabetic Heart

Total Budget: \$415,495

PI: Jian-Xiong Chen (65% effort)

This proposal investigated the mechanisms underlying impaired angiogenesis in the diabetic state

R01 HL075511-01 (PI Dr. Judy Aschner)

04/01/05-03/31/09

NIH/NHLBI

Total Budget: \$1,455,911

Title: Hsp90/Client Protein Interactions in the Newborn Lung

Role in Project: Co-investigator (25% effort).

The major goals of this project are to determine the role of Hsp90/client protein interactions in regulation of vascular responses in the normal newborn pulmonary circulation, and alterations in Hsp90/client protein interactions during chronic hypoxia.

R01 HL 49530 (PI, Meyrick)

06/01/00 - 05/31/05

NIH/NHLBI

Total Budget: \$1,550,000

Title: Effects of Hypoxia on the Coronary Microcirculation

Role in Project: Co-investigator (85% effort).

This work sought to a) define mechanisms of nitric oxide (NO) regulation of vascular tone in response to low partial pressures of oxygen, b) to understand mechanisms of reciprocal regulation of NO and prostanoids, and c) to elucidate the mechanisms whereby oxygen tension alters NO and prostanoid control of flow-mediated vasomotion.

PUBLICATIONS AND PRESENTATIONS

Peer-Reviewed Manuscripts

1. Liao DF, Yu L, Chen JX. A new method to study correlation between endothelium damage and free radicals-morphology change of endothelium under scanning electron microscopy. Journal of Hengyang Medical College. 1992; 20(4):341-343.
2. Chen JX, Yu L, Liao DF, Cao JG and Zhu BY. The effect of oxygen free radicals on airway of guinea pig and its mechanism. Journal of Hengyang Medical College. 1993; 21(4):360-362.
3. Chen JX, Yu L, Liao DF et al. Protective effect of gypenosides on free radical injury in isolated guinea pig heart. Journal of Hengyang Medical College. 1993; 21(3):243-245.

4. Wan Y, Weng SA, Chen JX, Wu HX, Cao YS. Effects of estradiol on asthma of guinea pigs and its relationship to beta-adrenergic receptors. Chinese Pharmacological Bulletin, 1993, 9(4):295-297.
5. Chen JX, Wu HX and Wan You. The role of endotoxin in the bronchial hyper-reactivity formation. National Medical Journal of China, 1994, 74(1):38-40.
6. Chen JX, Cao YS. Protection ammonium glycyrrhizate against endotoxin-induced bronchial hyperreactivity. Chinese Journal of Pharmacology and Toxicology, 1994, 8(3):235-236.
7. Chen JX, Cao YS. Effect ammonium glycyrrhizate against endotoxin-induced bronchial hyperreactivity-in relation to beta-cAMP system. Chinese Traditional and Herbal Drugs, 1994, 1(1):17-18.
8. Xiao GL, Liao DF, Chen JX, Yu L. Protective effect of gypenosides on OFR-induced damage of relaxing capacity of rabbit thoracic aortae in vitro. Chinese Pharmacological Bulletin, 1994, 10(2):136-138.
9. Chen JX, Tang XQ, Zhu BY, Liao DF. The mechanism of exogenous oxygen free radicals induced vasospasm of isolated basilar artery. Chinese Journal Arteriosclerosis, 1994, 2(2):88-91.
10. Liao DF, Chen JX, Huang HL, Tang XQ, Cao JG and Yu L. Correlation between the protection of probucol on injury of endothelial cells by free radicals and the activity of nitric oxide. Chinese Journal Arteriosclerosis, 1994, 2(2):67-71.
11. Chen JX, Liao DF, Yu L, Xiao GL, Zhu BY, Tang XQ. Protective effect of captopril on electrolyzed perfusion solution induced vasospasm of isolated basilar artery. Chinese Journal of Pharmacology and Toxicology, 1995, 9(1):44-46.
12. Li LX, Yu L, Chen JX, Liao DF, Cao JG, Chen LX, Huang HL and Zhu BY. Oxidized low density lipoprotein promotion of adhesion of monocytes to endothelial cells in vitro. Chinese Journal Arteriosclerosis, 1996, 4(4):272-275.
13. Chen JX, Liao DF, Tang XQ, Yu L, Zeng H, Cao JG. Protection of Gypenosides against oxygen free radical induced vasospasm of isolated rabbit basilar artery. Chinese Traditional and Herbal Drugs, 1997, 28(4):219-221.
14. Huang HL, Chen JX, Zeng H et al. Oxygen free radicals stimulates epithelial-leukocyte adhesion. Journal of Hengyang Medical College. 1996; 24(4):255-257.
15. Chen JX, Zeng H, Zhu BY. Effect of endotoxin on Endothelin-1, Thromboxane A2 and prostaglandin E2 secretion and role of oxygen free radicals. Journal of Hengyang Medical College, 1998, 26(8):121-123.

16. Liao DF, Lu N, Lei LS, Yu L, Chen JX. Effects of gypenosides on mouse splenic lymphocyte transformation and DNA polymerase II activity in vitro. *Acta Pharmacological Sin.* 16(4):322-4.1995
17. Chen JX, Chen WZ, Hung HL, Chen LX, Xie ZZ, Zhu PY. Protective effects of Ginkgo biloba extract against lysophosphatidylcholine induced endothelium cell damage. *Acta Pharmacological Sin.* 19(4):359-363,1998.
18. Li LX, Chen JX, Liao DF, Yu L. Probucol inhibits oxidized-low density lipoprotein induced adhesion of monocytes to endothelial cells by reducing P-selectin synthesis in vitro. *Endothelium.* 6:1-8, 1998.
19. Su CY, Chong KY, Chen JX, Ryter SW, Lai CC. A physiological relevant hyperthermia selectively activates constitutive Hsp70 in H9c2 cardiac myoblasts and confers oxidative protection. *J Mol Cell Cardiol.* 31:845-855, 1999. PMID: 10329212.
20. Chen JX, Zeng H, Chen X, Su CY, Lai CC. Induction of heme oxygenase-1 by Ginkgo biloba extract but not its tepernoids constituents partially mediated its protective effect against lysophosphatidylcholine-induced damage. *Pharmacological Research.* 43(1):63-69, 2001, PMID: 11207067.
21. Chen JX, Berry LC, Christman BW, Tanner M, Myers PR, Meyrick BO. NO regulates LPS-stimulated cyclooxygenase gene expression and activity in pulmonary artery endothelium. *Am J Physiology.* 280:L450-457, 2001, PMID: 11159028.
22. Chen JX, Berry LC, Tanner M, Myers PR, Meyrick BO. Nitric oxide donors regulate nitric oxide synthase in bovine pulmonary artery endothelium. *J Cellular Physiology.* 186:116-123, 2001, PMID: 11147806.
23. Chen JX, Berry LC, Meyrick BO. Glutathione mediates LPS-stimulated COX-2 expression via early transient P42/44 activation. *J Cellular Physiology.*197:86-93, 2003, PMID: 12942544.
24. Chen JX, Lawrence ML, Cunningham G, Christman BW, Meyrick B. Hsp90 and Akt Modulate Ang-1 Induced Angiogenesis via NO in Coronary Artery Endothelium. *J Appl Physiol.* 96: 612-620, 2004, PMID: 14555685.
25. Chen JX, Meyrick BO. Hypoxia Increases Hsp90 Binding to eNOS via a PI3Kinase-Akt Pathway in Porcine Coronary Artery Endothelium. *Lab Invest.* 84(2):182-190, 2004, PMID: 14661033.
26. Chen JX, Chen Y, DeBusk L, Lin W, Lin PC. Dual functional roles of Tie-2/angiopoietin in TNF-alpha-mediated angiogenesis. *Am J Physiol Heart Circ Physiol.* 287(1):H187-95, 2004, PMID: 15210451.

27. Pei J, Yan PK, Chen JX, Zhu BY, Lei XY, Yin WD, Liao DF. High-density lipoprotein 3 inhibits oxidized low-density lipoprotein-induced apoptosis via promoting cholesterol efflux in RAW264.7 cells. *Acta Pharmacologica Sin*. 27(2):151-7, 2006.
28. Chen JX, Zeng H, Lawrence ML, Sadikot RT, Blackwell TS, Meyrick B. Role of NADPH oxidase-derived reactive oxygen species (ROS) in angiotensin-1-induced angiogenesis. *Am J Physiol Heart Circ Physiol*, 291:1563-1572, 2006, PMID: 16679392.
29. Chen JX, Zeng H, Qin-Hui Tuo, Heidi Yu, Meyrick B, Judy Aschner. NADPH oxidase mediates myocardial Akt, ERK1/2 activation and angiogenesis after hypoxia/reperfusion. *Am J Physiol Heart Circ Physiol*, 292:H1664-1674, 2007, PMID: 17220182. PMCID: PMC2383323.
30. Tuo QH, Zeng H, Stinnett A, Yu HD, Aschner JL, Chen JX. Critical role of angiotensins/Tie-2 in hyperglycemic exacerbation of myocardial infarction and impaired angiogenesis. *Am J Physiol Heart Circ Physiol*, 294(6):H2547-57, 2008, PMID: 18408125.
31. Chen JX, Stinnett A. Disruption of Ang-1/Tie-2 signaling contributes to the impaired myocardial vascular maturation and angiogenesis in type II diabetic mice. *Arterioscler Thromb Vasc Biol*, 28:1606-1613, 2008. PMID: 18556567.
32. Chen JX, Stinnett A. Critical role of the NADPH oxidase subunit p47phox on vascular TLR expression and neointimal lesion formation in high fat diet-induced obesity. *Lab Invest*, 88:1316-1328; 2008. PMID: 18779779.
33. Chen JX, Stinnett A. Ang-1 gene therapy inhibits hypoxia-inducible factor-1alpha (HIF-1alpha)-prolyl-4-hydroxylase-2, stabilizes HIF-1alpha expression, and normalizes immature vasculature in db/db mice. *Diabetes*, 57(12):3335-43; 2008. PMID: 18835934. PMCID: PMC2584141.
34. Tuo QH, Xiong GZ, Zeng H, Yu HD, Sun SW, Ling HY, Zhu BY, Liao DF, Chen JX. Angiotensin-1 protects myocardial endothelial cell function blunted by angiotensin-2 and high glucose condition. *Acta Pharmacol Sin*, 32(1):45-51. 2011. PMID: 21113176
35. Chen JX, Tuo QH, Liao DF, Zeng H. Inhibition of protein tyrosine phosphatase improves impaired angiogenesis via enhancing Ang-1/Tie-2 signaling in diabetes. *Experimental Diabetes Research*, 2012;2012:836759
36. Chen JX, Zeng H, Reese J, Aschner JL, Barbara Meyrick. Overexpression of angiotensin-2 impairs myocardial angiogenesis and exacerbates cardiac fibrosis in the diabetic db/db mouse model. *Am J Physiol Heart Circ Physiol* 2012;302(4):H1003-12.
37. Zeng H, Li L, Chen JX. Overexpression of Angiotensin-1 increases CD133⁺/c-kit⁺ cells and reduces myocardial apoptosis in db/db mouse infarcted hearts. *PLoS One*. 2012;7(4):e35905.

38. Chen JX, O'Mara PW, Poole SD, Brown N, Ehinger NJ, Slaughter JC, Paria BC, Aschner JL, Reese J. Isoprostanes as physiological mediators of transition to newborn life: Novel mechanisms regulating patency of the term and preterm ductus arteriosus. *Pediatric Research* 72: 122-128, 2012.
39. Li L, Zeng H, Chen JX. Apelin-13 increases myocardial progenitor cells and improves repair of post-myocardial infarction. *Am J Physiol Heart Circ Physiol*, 2012;303 (5): H605-18.
40. Li L, Zeng H, Hou X, He X, Chen JX. Myocardial Injection of Apelin-Overexpressing Bone Marrow Cells Improves Cardiac Repair via Upregulation of Sirt3 after Myocardial Infarction. *PLoS ONE*. 2013; 8(9): e71041.
41. Zeng H, He X, Hou X, Li L, Chen JX. Apelin gene therapy increases myocardial vascular density and ameliorates diabetic cardiomyopathy via upregulation of Sirtuin 3. *Am J Physiol Heart Circ Physiol*, 2014, 306: H585-H597
42. Zeng H, Li L, Chen JX. Loss of sirt3 limits bone marrow cell-mediated angiogenesis and cardiac repair in post-myocardial infarction. *PLoS One*. 2014;9(9):e107011. PMID:25192254
43. Hou X, Zeng H, He X, Chen JX. Sirt3 is essential for apelin-induced angiogenesis in post-myocardial infarction of diabetes. *Journal of Cellular and Molecular Medicine* 2015;19(1):53-61. doi: 10.1111/jcmm.12453
44. Zeng H, Chen JX. Conditional knockout of prolyl hydroxylase domain protein 2 attenuates high fat-diet-induced cardiac dysfunction in mice. *PLoS One*. 2014;9(12):e115974. doi: 10.1371/journal.pone.0115974. eCollection 2014
45. Zeng H, Vaka VR , He X,Booz WG, Chen JX. High Fat Diet Induces Cardiac Remodeling and Dysfunction: Assessment of the Role Played by SIRT3 Loss. *Journal of Cellular and Molecular Medicine*. *J Cell Mol Med*. 2015;19(8):1847-56. doi: 10.1111/jcmm.12556.
46. Zeng,H., He,X., Tuo,Q.H., Liao,D.F., Zhang,G.Q., and Chen,JX. LPS causes pericyte loss and microvascular dysfunction via disruption of SIRT3/angiopoietins/Tie-2 and HIF-2 α /Notch3 pathways. *Sci. Rep.* 2016, *Sci. Rep.* 2016, 6:20931. doi: 10.1038/srep20931.
47. Zhang CP, Tian Y, Zhang M, Tuo QH, Chen JX, Liao DF. IDOL, inducible degrader of low-density lipoprotein receptor, serves as a potential therapeutic target for dyslipidemia. *Med Hypotheses*. 2016;86:138-42. doi: 10.1016/j.mehy.2015.11.010.
48. Qin L, Zhu N, Ao BX, Liu C, Shi YN, Du K, Chen JX, Zheng XL, Liao DF. Caveolae and Caveolin-1 Integrate Reverse Cholesterol Transport and Inflammation in Atherosclerosis. *Int J Mol Sci*. 2016 Mar 22;17(3). pii: E429. doi: 10.3390/ijms17030429.
49. He,X., Zeng,H., and Chen,JX. Ablation of SIRT3 causes coronary microvascular dysfunction and impairs cardiac recovery post myocardial ischemia. *International Journal of Cardiology*. 2016, 215:349-57.
50. Hou X, Zeng H, Tuo Q-H, Liao D-F, Chen J-X. Apelin gene therapy increases autophagy via activation of sirtuin 3 in diabetic heart. *Diabetes Res Open J*. 2015; 1(4): 84-91.

51. Wang S, Zeng H, Xie XJ, Tao YK, He X, Roman RJ, Aschner JL, Chen JX. Loss of prolyl hydroxylase domain protein 2 in vascular endothelium increases pericyte coverage and promotes pulmonary arterial remodeling. *Oncotarget*. 2016; 7(37):58848-58861. PMID: 27613846.
52. Sun S, Wen J, Qiu F, Yin Y, Xu G, Li T, Nie J, Xiong G, Zhang C, Liao D, Chen J, Tuo Q. Identification of the C-terminal domain of Daxx acts as a potential regulator of intracellular cholesterol synthesis in HepG2 cells. *Biochem Biophys Res Commun*. 2016 Nov 4;480(1):139-145. doi:10.1016/j.bbrc.2016.09.102.
53. Wang S, Zeng H, Chen ST, Zhou LY, Xie XJ, He X, Tao YK, Chen JX. Ablation of Endothelial Prolyl Hydroxylase Domain Protein 2 Promotes Renal Vascular Remodeling and Fibrosis in Mice. *J Cell Mol Med*. 2017 in press. PMID: 28266128
54. Tao YK, Zeng H, Zhang GQ, Chen S, Xie XJ, He X, Wang S, Wen H, Chen JX. Notch3 deficiency Impairs Coronary Microvascular Maturation and Reduces Cardiac Recovery after Myocardial Ischemia. *Int J Cardiol*. 2017; 236:413-422. PMID:28131704
55. Sun SW, Tong WJ, Guo ZF, Tuo QH, Lei XY, Zhang CP, Liao DF, Chen JX. Curcumin enhances vascular contractility via induction of myocardin in mouse smooth muscle cells. *Acta Pharmacol Sin*. 2017 May 1. doi: 10.1038/aps.2017.18. [Epub ahead of print]

Book Chapters:

Chen JX, Zeng H, Chen X, Su CY, Lai CC. Heme oxygenase, Ginkgo biloba extract and its terpenoids protect myocytes against oxidative injury. In: *Heme Oxygenase in Biology and Medicine*. NG Abraham, ed., 2002, pp. 399-408.

Abstracts:

Title; Deletion of Endothelial Sirt3 Causes Coronary Microvascular Dysfunction and HfpEF. Experimental Biology Meeting; San Diego, 2016

Title: Sirt3 regulates oxygen sensors and blood vessel formation in the heart. High blood pressure Research Scientific sessions: 09/13/2014.

Title: Apelin-13 Increases Myocardial Progenitor Cells and Improves Myocardial Remodeling of Post-myocardial Hypertension. 2012;60:A327

Title: Regulation Of Sirt3 And Autophagy By Bone Marrow Cells Therapy Improves Cardiac Repair In Post-myocardial Infarction Mice. *Circulation Research*. 2012;111:e386

Title: Apelin Reduces Myocardial Infarction Size and Promotes Angiogenesis by Increasing SDF-1/CXCR4 and AKT/eNOS/VEGF pathways *Circulation Research*. 2012;111:A145

Title: Ang-1 reduces myocardial infarction via upregulation of SDF-1/CXCR4 and recruiting hematopoietic progenitor cells in the diabetic db/db mouse model. *Circulation*. 2011.

Title: Overexpression of angiopoietin-2 promotes myocardial fibrosis and rarefaction in diabetic db/db mouse model. *FASEB JOURNAL* 2011. (Platform Presentation)

Title: Angiopoietin-1 protects ischemic heart exacerbated by hyperglycemia via increase of angiogenesis. *JOURNAL OF PHARMACOLOGICAL SCIENCES*; 260P-260P, 2010 (Poster)

Title: Inhibition of protein tyrosine phosphatase improves hyperglycemic impaired angiogenesis. *CIRCULATION*, 16: 25-25; 2007 (Poster)

Title: Leptin stimulates angiogenesis in myocardial endothelial cells: Involvement of p47phox NADPH oxidase. *FASEB JOURNAL* 21: A180-A180; 2007. (Platform Presentation)

Title: High glucose blunts angiopoietin-1 (Ang-1)-induced angiogenesis in myocardial endothelial cells via impairment of Akt and eNOS phosphorylation. *FASEB JOURNAL* 21: A130-A131; 2007. (Platform Presentation)

Title: Hypoxia/reoxygenation-induced myocardial angiogenesis: Role of NADPH oxidase derived reactive oxygen species (ROS)
CIRCULATION 114: 155-155; 2006. (Platform Presentation)

Title: Role of NADPH oxidase-derived reactive oxygen species (ROS) in angiopoietin-1-induced angiogenesis
FASEB JOURNAL 18: A385-A385; 2004. (Platform Presentation)

Title: Hypoxia increases heat shock protein 90 binding (Hsp90) to endothelial nitric oxide synthase (eNOS) via a P13-Akt pathway in porcine coronary artery endothelium (PCAEC).
FASEB JOURNAL 17: A805-A805; 2003 (Platform Presentation)

Oral Presentations at National Scientific Meetings:

Title: Hypoxia increases heat shock protein 90 binding (Hsp90) to endothelial nitric oxide synthase (eNOS) via a P13-Akt pathway in porcine coronary artery endothelium (PCAEC).
Experimental Biology Meeting; San Diego, 2003

Title: Role of NADPH oxidase-derived reactive oxygen species (ROS) in angiopoietin-1-induced angiogenesis. Experimental Biology Meeting; Washington DC, 2004

Title: Hypoxia/reoxygenation-induced myocardial angiogenesis: Role of NADPH oxidase derived reactive oxygen species (ROS); American Heart Association Meeting, Chicago, 2006

Title: Leptin stimulates angiogenesis in myocardial endothelial cells: Involvement of p47phox NADPH oxidase. Experimental Biology Meeting; Washington DC, 2007

Title: High glucose blunts angiopoietin-1 (Ang-1)-induced angiogenesis in myocardial endothelial cells via impairment of Akt and eNOS phosphorylation. Experimental Biology Meeting; Washington DC, 2007

Title: Sirt3 regulates oxygen sensors and blood vessel formation in the heart. Poster Presentation, 2013 High Blood Pressure Research (HBPR) in New Orleans, LA Sep 11, 2013

Title: Sirt3 is essential for apelin-gene therapy mediated cardiac repair in post-myocardial infarction of diabetes. High blood pressure Research Scientific sessions: 09/14/2014.

Title: SIRT3 Deficiency Impairs Hypoxic Signaling, Reprograms Basal Glycolytic Metabolism and Exacerbates Myocardial Ischemic Injury. Oral/Poster Presentation, 2015 Experimental Biology in Boston, MA, Mar 31, 2015

Title: Deletion of Endothelial Sirt3 Causes Coronary Microvascular Dysfunction and HFpEF. Poster Presentation, 2016 Experimental Biology in San Diego, CA, Apr 6, 2016

Title: Treatment with Prolyl Hydroxylase Inhibitor Reverses Pre-Existing Diastolic Dysfunction in the Aged SIRT3 Knockout Mice. Poster Presentation, 2017 Experimental Biology in Chicago, IL, April 24, 2017