

Curriculum vitae

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Research Interests

Our research aims are not just theoretical but practical applications. We have been engaged in long-term cross-organ communication and dialogue research on the pathogenesis of cardiovascular and metabolic diseases. We focus on the pathogenesis of cardiometabolic diseases caused by metabolic hormones and obesity. We have made significant progress in understanding the theory of FGF21 metabolic regulation, which has practical implications for maintaining blood glucose, blood pressure stability, anti-atherosclerosis, and anti-MASH. Our research also aims to identify new targets for developing anti-myocardial infarction, anti-heart failure, and anti-vascular calcification drugs.

Selected grants

1. Organ-crosstalk between Liver and heart and its role on the pathogenesis of cardiovascular disease. The National Key Research and Development Program of China, 2025.1-2027.12. CNY 2100000.00 (No: 2023ZD0503102)
2. Exercise induces liver metabolism and its beneficial effects. The National Key Research and Development Program of China, 2021.1-2025.12. CNY 8640000.00 (No: 2020YFA0803801)
3. Adipokines and Cardiovascular disease. The China National Funds for Distinguished Young Scientists, 2020.1-2024.12. CNY 4000000.00 (No: 81925004)
4. FGF21 protects against hypertension and its potential mechanism. The Natural Science Foundation of China, 2018.1-2021.12. CNY 520000.00 (No: 82073843)
5. FGF21 protects against atherosclerosis and its potential mechanism. The Natural Science Foundation of China, 2014.1-2017.12. CNY 800000.00 (No: 91439123)
6. The mechanism of FGF21 triggering insulin sensitivity and glucose-lowering. The Natural Science Foundation of China, 2014.1-2017.12. (No: 81471075)

Selected publications

1. Wu F, Zhao R, Gan J, Zheng D, Peng Y, Wu M, Sun F, An R, Xu A, Chen, M, Li Y, Lei W, **Lin Z**. PYGM protects against myocardial infarction by promoting glycogenolysis and improving autophagic flux. *Circulation* 2025 (final revision) (Corresponding author) **IF 35.56**
2. Zhang K, Gan J, Lei W, Zhen D, Yang J, Wen C, Gao X, Li X, Du J, Xu A, Liu X, Li Y, Wu F, **Lin Z**. FGF21 protects against HFpEF by improving cardiac mitochondrial bioenergetics in mice. *Nature Communication*. 2025 (Accepted) (Corresponding author) **IF 16.62**
3. Chen G, Gan J, Wu F, Zhou Z, Duan Z, Zhang K, Wang S, Jin H, Li Y, Zhang C, **Lin Z**. Inhibition of Scep1 attenuates myocardial infarction by improving mitochondrial bioenergetics. *European Heart J*. 2025 Feb 11: ehaf032. doi: 10.1093/eurheartj/ehaf032. (Corresponding author) **IF 37.62**
4. Dan Z, Huang Z, Lei W, Zhang K, Xie W, Jin H, Wu M, Wang N, Li X, Xu A, Zhou H, Wu F, Li Y, **Lin Z**. Bone Morphogenetic Protein 9 Protects against Myocardial Infarction by Improving Lymphatic Drainage Function and Triggering DECR1-Mediated Mitochondrial Bioenergetics. *Circulation* 2024 Nov 19;150(21):1684-1701. (Corresponding author) **IF 35.56**
5. Xie W, Gan J, Zhou X, Tian H, Pan X, Liu W, Li X, Du J, Xu A, Zheng M, Wu F, Li Y, **Lin Z**. Myocardial infarction accelerates the progression of MASH by triggering immunoinflammatory response and induction of periostin. *Cell Metabolism*, 2024 Jun 4;36(6):1269-1286.e9 (Corresponding author) **IF 27.287**
6. Gan J, Duan Z, Tang L, Liu Z, Tian H, Wu M, Bi Y, Pan X, Wang W, Gao X, Wang N, **Lin Z**, Yang H. Fibroblast growth factor 21 resistance is associated with body shape in patients with type 2 diabetes complicating hypertension. *Front Cardiovasc Med*. 2023 Jun 22;10:1168047. doi: 10.3389/fcvm.2023.1168047. (co-corresponding author)
7. Gan J, Shi Y, Zhao R, Li D, Jin H, Wu M, Liu Z, Li X, Xu A, Li Y, **Lin Z**, Wu F. Adipose c-Jun NH2-terminal kinase promotes angiotensin II-induced and deoxycorticosterone acetate salt-induced hypertension and vascular dysfunction by inhibition of adiponectin production and activation of SGK1 in mice. *J Hypertension*. 2024 May 1;42(5):856-872. (co-corresponding author)
8. Lin Z, Zhang D, Zhang X, Guo W, Wang W, Zhang Y, Liu Z, Bi Y, Wu M, **Lin Z**, Lu X. Extracellular status of thrombospondin-2 in type 2 diabetes mellitus and utility as a biomarker in the determination of early diabetic kidney disease. *BMC Nephrol*. 2023 May 31;24(1):154. doi: 10.1186/s12882-023-03216-z. (co-corresponding author)
9. Liu Z, Peng Y, Li S, Lin Y, Huang Y, Chen W, Bao C, Zhou Z, **Lin Z**, Chen L. Increased circulating FGF21 level predicts the burden of metabolic demands and risk of vascular diseases in adults with type 2 diabetes. *BMC Endocr Disord*, 23(1), 272. (co-corresponding author)
10. Gan J, Zheng Y, Yu Q, Zhang Y, Xie W, Shi Y, Yu N, Yan Y, **Lin Z**, Yang H. Serum Lipocalin-2 Levels Are Increased and Independently Associated With Early-Stage Renal Damage and Carotid Atherosclerotic Plaque in Patients With T2DM. *Front Endocrinol (Lausanne)*. 2022 Apr 25; 13:855616. doi: 10.3389/fendo.2022.855616. (co-corresponding author)
11. Xie W, Li D, Shi Y, Yu N, Yan Y, Zhang Y, Yu Q, Li Y, Du J, **Lin Z**, Wu F. Serum FGF21 Levels Predict the MACE in Patients With Myocardial Infarction After Coronary Artery Bypass Graft Surgery. *Front Cardiovasc Med*. 2022 Apr 6; 9:850517. doi: 10.3389/fcvm. 2022.850517. (co-corresponding author)
12. Chen Q, Li J, Ma J, Yang X, Ni M, Zhang Y, Li X, **Lin Z**, Gong F. Fibroblast growth factor 21 alleviates acute pancreatitis via activation of the Sirt1-autophagy signaling pathway. *J Cell Mol Med*. 2020 May;24(9):5341-5351. doi: 10.1111/jcmm.15190. (co-corresponding author)

13. Chen Q, Ma J, Yang X, Li Q, **Lin Z**, Gong F. SIRT1 Mediates Effects of FGF21 to Ameliorate Cisplatin-Induced Acute Kidney Injury. *Front Pharmacol*. 2020 Mar 10; 11: 241. doi: 10.3389/fphar.2020.00241. (co-corresponding author)
14. Geng L, Liao B, Jin L, Huang Z, Triggler CR, Ding H, Zhang J, **Lin Z**, and Xu A. Exercise Alleviates obesity-induced Metabolic Dysfunction via Enhancing FGF21 Sensitivity in Adipose Tissues. *Cell Reports*, 2019 Mar 5;26(10):2738-2752. (co-corresponding author)
15. Pan X, Shao Y, Wu F, Wang Y, Xiong R, Zheng J, Tian H, Wang B, Wang Y, Zhang Y, Han Z, Qu A, Xu H, Lu A, Yang T, Li X, Xu A, Du J, **Lin Z**. FGF21 prevents angiotensin II-induced hypertension and vascular dysfunction by activation of angiotensin-converting enzyme 2/angiotensin-(1-7) axis in mice. *Cell Metabolism*, 2018 Jun 5, 27, 1323–1337 (corresponding author) **IF 27.287**
16. Wu F, Wang B, Zhang S, Shi L, Wang Y, Xiong R, Pan X, Gong F, Li X, **Lin Z**. FGF21 ameliorates diabetic cardiomyopathy by activating the AMPK-paraoxonase 1 signaling axis in mice. *Clin Sci (Lond)*. 2017 Jul 7;131(15):1877-1893(co-corresponding author)
17. **Lin Z**, Pan X, Wu F, Ye D, Zhang Y, Wang Y, Jin L, Lian Q, Huang Y, Ding H, Triggler C, Wang K, Li X, Xu A. FGF21 Prevents Atherosclerosis by Suppression of Hepatic Srebp-2 and Induction of Adiponectin in Mice. *Circulation*, 2015, 131(21):1861-71. **IF 35.56. Top 1% of highly cited paper.**
18. **Lin Z**, Wu F, Lin S, Pan X, Jin L, Lu T, Shi L, Wang Y, Xu A, Li X. Adiponectin protects against acetaminophen-induced mitochondrial dysfunction and acute liver injury by promoting autophagy in mice. *J Hepatol*. 2014 Oct; 61(4):825-31. **IF 26.8**
19. Pan X, Lu T, Wu F, Jin L, Zhang Y, Shi L, Li X, **Lin Z**. Circulating complement-C1q TNF-related protein 1 levels are increased in patients with type 2 diabetes and are associated with insulin sensitivity in Chinese subjects. *PLoS One*. 2014 May 14;9(5):e94478 (corresponding author)
20. **Lin Z**, Tian H, Lam KS, Lin S, Hoo RC, Konishi M, Itoh N, Wang Y, Bornstein SR, Xu A, Li X. Adiponectin Mediates the Metabolic Effects of FGF21 on Glucose Homeostasis and Insulin Sensitivity in Mice. *Cell Metabolism*. 2013 May 7;17(5):779-89. **IF 27.287, Top 1% of highly cited paper.**
21. **Lin Z**, Gong Q, Wu C, Yu J, Lu T, Pan X, Lin S, Li X. Dynamic change of serum FGF21 levels in response to glucose challenge in humans. *Journal of Clinical Endocrinology and Metabolism*. 2012 Jul;97(7): E1224-8.
22. Gong Q, Wu F, Pan X, Yu J, Li Y, Lu T, Li X, **Lin Z**. Soluble C-X-C chemokine ligand 16 levels are increased in gout patients. *Clinical Biochemistry*. 2012 Nov;45(16-17):1368-73. (corresponding author) .
23. **Lin Z**, Gong Q, Zhou Z, Zhang W, Liao S, Liu Y, Yan X, Pan X, Lin S, Li X. Increased plasma CXCL16 levels in patients with chronic kidney diseases. *European J Clin Invest*. 2011 Aug;41(8):836-45.
24. **Lin Z**, Zhou Z, Liu Y, Gong Q, Yan X, Xiao J, Wang X, Lin S, Feng W, Li X. Circulating FGF21 levels are progressively increased from the early to end stages of chronic kidney diseases and are associated with renal function in Chinese. *PLoS One*. 2011 Apr 15;6(4): e18398.
25. **Lin Z**, Wu Z, Yin X, Liu Y, Yan X, Lin S, Xiao J, Wang X, Feng W, Li X. Serum Levels of FGF-21 Are Increased in Coronary Heart Disease Patients and Are Independently Associated with Adverse Lipid Profile. *PLoS One*. 2010 Dec 29;5(12):e15534.