



## CURRICULUM VITAE

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**CURRENT POSITION:**

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**CURRENT RESEARCH INTERESTS:**

Cardiac mitochondrial dynamics and mitochondrial networks;  
Mitochondria-sarcoplasmic reticulum crosstalk;  
Calcium signal regulation in heart diseases;  
Autophagy and mitophagy in cardiac development and heart diseases.

**SELECTED PUBLICATIONS:**

1. Cao YP, Xu CL, Ye YY, He QH, Zhang XZ, Jia S, Qiao X, Zhang CL, Liu RX, Weng L, Liu YY, Liu L, **Zheng M**\*. Miro2 regulates inter-mitochondrial communication in the heart and protects against TAC-induced cardiac dysfunction. *Circ Res.* 2019 Sep 27; 125(8):728-743
2. Hu H, Jiang M, Cao Y, Zhang Z, Jiang B, Tian F, Feng J, Dou Y, Gorospe M, **Zheng M**, Zheng L, Yang Z, Wang W. HuR regulates phospholamban expression in isoproterenol-induced cardiac remodeling. *Cardiovasc Res.* 2019 Aug 2 [Epub ahead of print]
3. Cao YP, **Zheng M**\*. Mitochondrial dynamics and inter-mitochondrial communication in the heart. *Archives of Biochemistry and Biophysics.* 2019 Mar 15; 663:214-219
4. Ye J, Zheng Q, Jia S, Qiao X, Cao Y, Xu C, Weng L, Zhao L, Chen Y, Liu J, Wang T, Cheng H, **Zheng M**\*. Programmed Cell Death 5 Provides Negative Feedback on Cardiac Hypertrophy Through the Stabilization of SERCA2a Protein. *Hypertension.* 2018; 72(4): 889–901
5. **Zheng M**\*. Commentary: Mitochondrion: the central platform in the regulation of



- bioenergetics, signaling, and function. *Sheng Li Ke Xue Jin Zhan*. 2018; 49(1):1-2
6. Cao Y, **Zheng M\***. Intermitochondrial communication in cardiomyocytes. *Sheng Li Ke Xue Jin Zhan*. 2018; 49(1):14-19.
  7. Liu J, Wang X, **Zheng M\***, Luan Q\*. Lipopolysaccharide from *Porphyromonas gingivalis* promotes autophagy of human gingival fibroblasts through the PI3K/Akt/ mTOR signaling pathway. *Life Sciences*. 2018; Oct 15, 21:133-139
  8. Weng L, Jia S, Xu C, Ye J, Cao Y, Liu Y, **Zheng M\***. Nogo-C regulates post myocardial infarction fibrosis through the interaction with ER Ca<sup>2+</sup> leakage channel Sec61 $\alpha$  in mouse hearts. *Cell Death & Disease*. 2018, 9(6): 612.
  9. Jia Y, Wang M, Mao C, Yu F, Wang Y, Xiao R, Jiang C, Zheng L, Xu Q, **Zheng M**, Fu Y, Hu Q, Kong W. COMP-prohibitin 2 interaction maintains mitochondrial homeostasis and controls smooth muscle cell identity. *Cell Death & Disease*. 2018, 9(6):676.
  10. Liu J, Zeng J, Wang X, **Zheng M\***, Luan Q\*. p53 Mediates Lipopolysaccharide-induced Inflammation in Human Gingival Fibroblasts. *J Periodontology*. 2018; 89(9):1142-1151.
  11. Qiao X, Jia S, Ye J, Fang X, Zhang C, Cao Y, Xu C, Zhao L, Zhu Y, Wang L, **Zheng M\***. PTPIP51 regulates mouse cardiac ischemia/reperfusion through mediating the mitochondria-SR junction. *Scientific Reports*. 2017,7:45379
  12. Zhang W, Ren H, Xu CL, Zhu C, Wu H, Liu D, Wang J, Liu L, Li W, Ma Q, Du L, **Zheng M**, Zhang C, Liu J, Chen Q. Hypoxic mitophagy regulates mitochondrial quality and platelet activation and determines severity of I/R heart injury. *eLife*. 2016; 5: e21407.
  13. Jia S, Qiao X, Ye J, Fang X, Xu C, Cao Y, **Zheng M\***. Nogo-C Regulates Cardiomyocyte Apoptosis during Mouse Myocardial Infarction. *Cell Death & Disease*. 2016,7(10): e2432.
  14. Li X, Wang X, **Zheng M\***, Luan Q\*. Mitochondrial reactive oxygen species mediate the lipopolysaccharide-induced pro-inflammatory response in human gingival fibroblasts. *Exp Cell Res*. 2016, 347(1):212-221
  15. Feng J, Lv S, Ding Y, **Zheng M\***, Wang X\*. Homocysteine activates T cells by enhancing endoplasmic reticulum-mitochondria coupling and increasing mitochondrial respiration. *Protein & Cell*. 2016 Jun; 7(6): 391–402
  16. Shang W, Gao H, Lu F, Ma Q, Fang H, Sun T, Xu J, Ding Y, Lin Y, Wang Y, Wang X, Cheng H, **Zheng M\***. Cyclophilin D regulates mitochondrial flashes and metabolism in cardiac myocytes. *J Mol Cell Cardiol*. 2016 Feb; 91:63-71



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17. Ding Y, Gao H, Zhao L, Wang X, **Zheng M\***. Mitofusin 2-Deficiency Suppresses Cell Proliferation through Disturbance of Autophagy. *Plos One*. 2015 Mar 17; 10(3):e0121328. doi: 10.1371
18. Zhang W, Li K, Zhu X, Wu D, Shang W, Yuan X, Huang Z, **Zheng M**, Wang X, Yang D, Liu J, Cheng H. Subsarcolemmal Mitochondrial Flashes Induced by Hypochlorite Stimulation in Cardiac Myocytes. *Free Radic Res*. 2014; 48(9):1085-94
19. Zhang H, Shang W, Zhang X, Gu J, Wang X, **Zheng M**, Wang Y, Zhou Z, Cao JM, Ji G, Zhang R, Cheng H.  $\beta$ -Adrenergic-stimulated l-type channel  $Ca^{2+}$  entry mediates hypoxic  $Ca^{2+}$  overload in intact heart. *J Mol Cell Cardiol*. 2013; 65C:51-58
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21. Huang X, Sun L, Ji S, Zhao T, Zhang W, Xu J, Zhang J, Wang Y, Wang X, Franzini-Armstrong C\*, **Zheng M\***, Cheng H. Kissing and nanotunneling mediate intermitochondrial communication in the heart. *Proc Natl Acad Sci U S A*. 2013; 110(8):2846-2851.
22. Zhang H, Gomez AM, Wang X, Yan Y, **Zheng M**, Cheng H. ROS regulation of microdomain  $Ca^{2+}$  signaling at the dyads. *Cardiovascular Research* 2013; 98(2):248-58.
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25. Zhao T, Huang X, Han L, Wang X, Cheng H, Zhao Y, Chen Q, Chen J, Cheng H, Xiao R, **Zheng M\***. Central Role of Mitofusin 2 in Autophagosome-Lysosome Fusion in Cardiomyocytes. *J Biol Chem*. 2012; 287(28):23615-25
26. Wang X, Jian C, Zhang X, Huang Z, Xu J, Hou T, Shang W, Ding Y, Zhang W, Ouyang M, Wang Y, Yang Z, **Zheng M**, Cheng H. Superoxide flashes: elemental events of mitochondrial ROS signaling in the heart. *J Mol Cell Cardiol*. 2012;52:940-8
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- Cheng H. Superoxide flashes reveal novel properties of mitochondrial reactive oxygen species excitability in cardiomyocytes. *Biophys J*. 2012;102(5):1011-21.
28. Wei C, Wang X, **Zheng M**, Cheng H. Calcium gradients underlying cell migration. *Curr Opin Cell Biol*. 2012; 24:254-61
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44. Zheng M, Reynolds C, Jo SH, Wersto R, Han QD, Xiao RP. Intracellular Acidosis-Activated p38 MAPK Signaling and Its Essential Role in Cardiomyocyte hypoxic injury. *FASEB J.* 2005; 19:109-11
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