

# Xuan Li

## Postdoctoral Research Fellow

Department of Physiology and Biophysics, University of Mississippi Medical Center.

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Address: 2500 North State Street, Jackson MS, 39216.

## EDUCATION

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**Doctor of Medicine (MD)** | 2003.9-2011.7, Beijing

**Peking University Health Science Center**

- The degree was eight-year program, PhD Equivalent.
- Dissertation: Multicenter Retrospective Study of Malleolar Fractures Treated by Operations, Mentor: Dr. Baoguo Jiang

## PROFESSION

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**Postdoctoral Research Fellow** | 2017.5-present, Jackson

**Center Department of Physiology, University of Mississippi Medical Center**

- Focused on cardiovascular diseases such as heart failure, ischemia heart disease, metabolic derangement induced cardiac dysfunction, etc., with specific research on response in heart under different stresses and molecular regulational mechanism in heart, etc.
- Only winner of 2019 Postdoctoral Publication Award by UMMC.

**Cardiac Surgeon** | 2011.8-2017.5, Beijing

**Department of Surgery, Fuwai Hospital**

- Participated in over 1600 operations that include most types of cardiovascular procedures, with overall mortality below 1%.
- Mentorship to graduate students on diagnoses, treatment and clinical research projects.
- 2014 Excellent-Performance Clinician of the hospital.

**Intern** | 2007.1-2011.7, Beijing

**The People's Hospital of Peking University**

- Systematically trained in surgery, internal medicine, gynecology and pediatrics.

## RESEARCH METHODS AND TECHNIQUES

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| • Left anterior descending artery ligation,           | • Cardiomyocyte isolation,                   | • Immunoprecipitation,                                      |
| • Transverse/abdominal aortic constriction,           | • Working heart,                             | • Mouse colony management,                                  |
| • TTC stain,  | • Glycolysis and glucose uptake Measurement, | • Genotyping,   |
| • Echocardiography incl. M-mode, B-mode, and Doppler, | • Langendorff,                               | • ATP level and reagent oxidative species measurement, etc. |
|   | • Western blot,                              |   |
|   | • Real-time PCR,                             |   |
|   | • TAC  |   |

## PRESENTATIONS

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- Oral presentation for 2019 CNAHA/ACRE/CAAC Joint Research Symposium: Empagliflozin Attenuates Heart Failure in Non-Diabetic Mice by Improving Myocardial Metabolism | 2019 Philadelphia
- Moderated digital poster presentation for 2019 American Heart Association (AHA)'s Scientific Sessions: Sestrin2-mTORC1 Signaling Mediates Myocardial Endoplasmic Reticulum Stress During Ischemia/reperfusion | 2019, Philadelphia
- Moderated digital poster presentation for 2019 AHA's Scientific Sessions: Empagliflozin Improves Heart Failure Caused by Pressure Overload by Regulating Cardiac Metabolism | 2019, Philadelphia
- Oral presentation for 2019 ASB Research Day: Sestrin2 Modulates ER Stress in Cardiovascular Disease | 2019, Jackson
- Oral presentation for 2019 UMMC Physiology and Biophysics Lecture Series: Sestrin2 Modulates in Myocardial Remodeling | 2019, Jackson
- Oral presentation for 2018 AHA's Scientific Sessions: The Metabolic Shift by Dichloroacetate Ameliorates Cardiac Dysfunction Caused by Ischemic Insults in Aging | 2018, Chicago
- Poster for 2018 AHA's Scientific Sessions: Sestrin2-AMPK Signaling Cascade Mediates Cardiac Endoplasmic Reticulum Homeostasis during Ischemia and Reperfusion | 2018, Chicago
- Oral presentation for 2018 UMMC Physiology and Biophysics lecture series: Metabolic Regulation is a Strategy to Limit Ischemia and Reperfusion Injury | 2018, Jackson
- Poster for 2017 American Heart Association's Scientific Sessions: Can Regulate Heart's Metabolic Pattern Improve the Prognosis of Ischemic Heart Failure? |2017, Anaheim
- Oral presentation for Surgical Treatment of Complex Congenital Heart Disease: Atrioventricular Valve Complications after Glenn Shunt for Single Ventricle |2014, Beijing
- Oral presentation for Complicated Case Discussion in Surgical Department: Death Cases of Severe Cyanotic Congenital Heart Disease: Lessons Learned | 2013, Beijing
- Oral presentation for BOA Annual Meeting and Beijing International Orthopedic Forum: Treatment of Distal Femoral Fractures with Open Reduction and Internal Fixation: A Multicenter Retro-Spective Investigation | 2010, Beijing
- Oral presentation for Residency Forum of Peking University People's Hospital: Case Report of Severe Lower Extremities Injuries Attacked by Giant Panda and Experience of Treatment | 2010, Beijing

## PEER-REVIEWED PUBLICATIONS

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- Obesity, Hypertension, and Cardiac Dysfunction: Novel Roles of Immunometabolism in Macrophage Activation and Inflammation. Mouton AJ, Li X, Hall ME, Hall J. *Circ Res.* 2020 Mar 13;126(6):789-806. doi: 10.1161/CIRCRESAHA.119.312321. Epub 2020 Mar 12.
- Empagliflozin attenuates ischemia and reperfusion injury through LKB1/AMPK signaling pathway. Lu Q, Liu J, Li X, Sun X, Zhang J, Ren D, Tong N, Li J. *Mol Cell Endocrinol.* 2020 Feb 5;501:110642. doi: 10.1016/j.mce.2019.110642. Epub 2019 Nov 21.
- Dichloroacetate ameliorates cardiac dysfunction caused by ischemic insults through AMPK signal pathway- not only shifts metabolism. Li X, Liu J, Hu H, Lu S, Lu Q, Quan N,

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Rousselle T, Patel MS, Li J. *Toxicol Sci.* 2019 Feb 1;167(2):604-617.

- AMPK: a therapeutic target of heart failure - not only metabolism regulation. Li X, Liu J, Lu Q, Ren D, Sun X, Rousselle T, Tan Y, Li J. *Biosci Rep.* 2019 Jan 3;39(1).
- AMPK: a balancer of the renin-angiotensin system. Liu J, Li X, Lu Q, Ren D, Sun X, Rousselle T, Li J, Leng J. *Biosci Rep.* 2019 Sep 3;39(9).
- AMPK is associated with the beneficial effects of antidiabetic agents on cardiovascular disease. Qingguo Lu, Dr. Xuan Li, Jia Liu, Xiaodong Sun, Thomas Rousselle, Di Ren, Nanwei Tong. *Biosci Rep.* 2019 Feb 15;39(2).
- The cardioprotective effects of carvedilol on ischemia and reperfusion injury by AMPK signaling pathway. Hu H, Li X, Ren D, Tan Y, Chen J, Yang L, Chen R, Li J, Zhu P. *Biomed Pharmacother.* 2019 Sep;117:109106.
- Activation of AMPK inhibits inflammatory response during hypoxia and reoxygenation through modulating JNK-mediated NF- $\kappa$ B pathway. Chen X, Li X, Zhang W, He J, Xu B, Lei B, Wang Z, Cates C, Rousselle T, Li J. *Metabolism.* 2018 Jun;83:256-270.
- Transcatheter Aortic Valve Implantation Using the J-Valve System: A 1-year Follow-up Study. Luo X, Wang X, Li X, Wang X, Xu F, Liu M, Yu B, Li F, Tong M, Wang W. *J Thorac Cardiovasc Surg.* 2017 Jul;154(1):46-55.
- A Retrospective Study of Posterior Malleolus Fractures, Hai-lin Xu, Xuan Li, Dian-ying Zhang, et al. *International Orthopaedics (SICOT).* 2012 36:1929–1936
- Modified Sakakibara Classification System for Ruptured Sinus of Valsalva Aneurysm, Xin-jin L, Xuan L, Bo P, et al. *J Thorac Cardiovasc Surg.* 2013 Oct;146(4):874-8. doi: 10.1016/j.jtcvs.2012.12.059. Epub 2013 Jan 11.
- Multicenter Follow-up Study of Ankle Fracture Surgery, XU Hai-lin, LIU Li-min, LI Xuan, et al. *Chin Med J* 2012;125(4):574-578
- Surgical Treatment for Hypertrophic Obstructive Cardiomyopathy Associated with Mitral Stenosis, LI Xuan, XU Fei, YU Bing, GUO Yan. *Journal of Cardiovascular & Pulmonary Diseases*, 2017; 36(4):33-6 (in Chinese)
- Surgical Treatment for Failed Interventional Cases in Congenial Heart Disease, Xuan L, Wei G, Dianyuan L, et al. *Chinese Journal of Thoracic and Cardiovascular Surgery*, 2015; 31(7): 391-3. (in Chinese)
- Analysis of Re-operation Results after Total Correction of Tetralogy of Fallot, Xuan L, Rui J, Jun Y, et al. *Journal of Cardiovascular & Pulmonary Diseases*, LI XUAN, March 2014; 33(2): 172-7 (in Chinese)
- Infant-Type Anomalous Origin of Left Coronary Artery from Pulmonary Artery: Analysis of Diagnosis and Surgical Treatment. *Chin Heart J.* LI XUAN, 2015;27( 6): 669-672. (in Chinese)
- Amplification Effects in Nerve Regeneration after Different Segment Injury: Experiment with Rabbit Median Nerve, *Natl Med J China*, LI XUAN, 2009 June;89(23):1645-1649. (in Chinese)

## **COLLABORATIVE PROJECTS**

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- The Mechanisms of Sodium Glucose Cotransporter 2 in Protecting Hearts from Injuries Induced by Obesity, Ischemia Reperfusion and Pressure Overload at University of Mississippi Medical Center (UMMC) | 2019-

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- The Role of Sestrin2 in Myocardial Ischemia Reperfusion Injury at UMMC | 2018-
  - The Mechanism of Cardio Protection of Carvedilol and Telmisartan during Ischemia at UMMC | 2017-2018
  - Morphological Shaping of Aortic Valve Using Preoperative 3D-Printing at Fuwai Hospital | 2015-2016
  - Treatment of Complicated Periarticular Fractures at PKUHSC | 2010-2011
  - Mechanism of Nerve Regeneration after Injuries and Repairs of Peripheral Nerves and Remodeling of Central Nervous System at PKUHSC | 2008-2010
  - Relationship between LMNA Gene Mutation and Charcot-Marie-Tooth Disease at PKUHSC | 2006, etc.

## REVIEWER BASE

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- Reviewer for *Texas Heart Institute Journal* |2018-
- Reviewer for *Biomedicine & Pharmacotherapy* |2018-
- Reviewer for *Biochemical Pharmacology* |2019-
- Reviewer for *Aging* |2019-
- Reviewer for *Medical Science Monitor* |2019-
- Reviewer for *Journal of Cardiovascular Pharmacology and Therapeutics* |2019-

## MEMBERSHIP AND TRAINING

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- American Physiological Society (APS) Membership |2020-
- American Heart Association(AHA)Membership |2018-
- Trainee of Prepared Future Faculty in Stony Brook University |2018,New York

## CERTIFICATIONS

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- Certificate of Licensed Doctor issued by P.R.C |2011
- Certificate of Professional Technical Qualification issued by P.R.C |2014
- Radiation Operation Permit filed by Fuwai Hospital |2016

## SOCIAL SERVICE

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- Practitioner for free clinics and sport games |2011-2015,Beijing; voluntary tutor at a poverty-stricken area |2005,Sichuan; always willing to help others such as reset his elbow dislocation for an infant on the train.

## HONOR AND AWARD

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- Winner of Young Investigator Award of 2019 CNAHA/ACRE/CAAC Joint Research Symposium
- Winner of 2019 Winner of 2019 BCVS Travel Grant
- Only winner of 2019 Postdoctoral Publication Award of UMMC | 2019, Jackson
- Excellent-Performance Clinician of Fuwai Hospital | 2014, Beijing
- Outstanding Contribution Award to Primary Health Practice at The People's Hospital of Peking University | 2009, Beijing
- First place in Oral Sessions of The People's Hospital of Peking University|2008, Beijing
- Excellent Presentation on Anatomy PBL at Peking University | 2006, Beijing
- Excellent Academic Performance Scholarship at Peking University|2003-2004, Beijing
- Hong Kong City University Scholarship at Peking University | 2004, Beijing