

Curriculum Vitae

JIAO LIU, M.D.

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PROFILE

- **Key Background:**
 - ABMGG Diplomate Certified in Laboratory Genetics and Genomics
 - Clinical medicine education background
 - Two-year clinical practice in Anesthesiology
 - Nine-year biomedical research experiences in kidney and liver tumor development
 - Strong capability in experiment design, troubleshooting, and teamwork
- **Immigration Status:**
 - *U.S. Permanent Resident*

EDUCATION

- **Bachelor of Medicine (2003-2008) (U.S.M.D. equivalent)**
Jiangnan University, Wuhan, Hubei, China
- **Master of Anesthesiology (2008-2010)**
Tongji Medical College of Huazhong University of Science and Technology,
Wuhan, Hubei, China

PROFESSIONAL EXPERIENCES

2022-current

Cytogenetics Laboratory Director, Assistant Professor in Hayward
Genetics Center of Tulane University

2019-2022

**Laboratory Genetics and Genomics Fellow (including Cytogenetics and
Molecular Genetics)** (ABMGG-accredited Fellowship Program) in
Hayward Genetics Center of Tulane University

2017-2019

Research Associate III in the Cancer Center of Louisiana State University
Health Science Center (LSUHSC). Investigate the correlation between
obesity and liver cancer development and explore the related treatment

2010-2017

Research Associate in Pediatric Nephrology of Tulane University.
Understand the metabolic mechanisms during kidney development

2008-2010

Assistant Anesthesiologist in Department of Anesthesiology at Wuhan
Union Hospital (China), responsible for performing anesthesia on patient

2007-2008

Internship at Wuhan No.1 Hospital for multi-departmental rotations,
including departments of Respiratory, Cardiology, Nephrology and
Electrocardiography, etc.

PROFESSIONAL SKILLS

- Molecular Genetics techniques (including performance and analysis of Next Generation Sequencing, Comparative Genomic Hybridization, Sanger sequencing, Capillary Electrophoresis, immunohistochemistry staining, in situ hybridization, Western blot, real-time PCR, molecular cloning, etc.)
- Cytogenetics techniques (including performance and analysis of G-banding, Fluorescent in situ hybridization)

- Extraction of cell, nucleic acids and proteins from in vitro cell/organ culture, liquid biopsy and fresh tissue
- Rodent colony maintenance, handling and surgeries, and rodent drug delivery via intraperitoneal (IP) and intravenous (IV) injection
- Functional metabolic analysis in live cells
- Magnetic-activated cell sorting (MACS)
- Tissue and Cell culture, and the corresponding transfections.
- Fluorescence microscopy and confocal microscopy
- Statistical analysis with Prism and Excel.

PUBLICATION

1. Maria Dulfary Sanchez-Pino, William S. Richardson, Jovanny Zabaleta, Ramesh Thylur, Andrew G. Chapple, **Jiao Liu**, Yonghyan Kim, Michelle Ponder, and Augusto C. Ochoa. *Increased inflammatory Low-Density Neutrophils in Morbid Obesity*. eBioMedicine (Part of THE LANCET discovery Science). Published March 2022.
2. Hongbing Liu, Shaowei Chen, Xiao Yao, Yuwen Li, Chao-Hui Chen, **Jiao Liu**, Zubaida Saifudeen, and Samir S. El-Dahr. *Histone deacetylases 1 and 2 regulate the transcriptional programs of nephron progenitors and renal vesicles*. Development. doi: 10.1242/dev.153619. Published 30 April 2018.
3. Samir S. El-Dahr, Yuwen Li, **Jiao Liu**, Elleny Gutierrez, Kathleen S. Hering-Smith, Sabina Signoretti, J-C Pignon, Satrajit Sinha, and Zubaida Saifudeen. *P63+ Ureteric Bud Tip Cells are Progenitors of Intercalated Cells*. JCI Insight. 2017;2(9):e89996. doi:10.1172/jci.insight.89996.
4. **Jiao Liu**, Francesca Edgington-Giordano, Anna Abrams, Prasad Katakam, Zubaida Saifudeen. *Regulation of Nephron Progenitor Cell Self-Renewal By Intermediary Metabolism*. Journal of the American Society of

Nephrology(JASN) November 2017, 28 (11) 3323-3335; DOI:
<https://doi.org/10.1681/ASN.2016111246>.

5. **Jiao Liu**, Yuwen Li, Wencheng Li, Aaron Brown, Melody Baddoo, Marilyn Li, Thomas Carroll, Leif Oxburgh, Yumei Feng, Zubaida Saifudeen. *p53 enables metabolic fitness and self-renewal of nephron progenitor cells*. *Development* 2015 142: 1228-1241; DIO: 10.1242/dev.111617
6. Wencheng Li, **Jiao Liu**, Sean L. Hammond, Ronald B. Tjalkens, Zubaida Saifudeen, Yumei Feng. *Angiotensin II regulates brain (pro)renin receptor expression through activation of cAMP response element-binding protein*. *American Journal of Physiology - Regulatory, Integrative and Comparative Physiology* Published 15 July 2015 Vol. 309 no. 2, R138-R147 DOI: 10.1152/ajpregu.00319.2014
7. Yuwen Li, **Jiao Liu**, Nathan McLaughlin, Dimcho Bachvarov, Zubaida Saifudeen, Samir S. El-Dahr. *Genome-wide analysis of the p53 gene regulatory network in the developing mouse kidney*. *Physiological Genomics* Published 15 October 2013 Vol. 45 no. 20, 948-964 DOI: 10.1152/physiolgenomics.00113.2013
8. Zubaida Saifudeen, **Jiao Liu**, Susana Dipp, Xiao Yao, Yuwen Li, Nathaniel McLaughlin, Karam Aboudehen, Samir S. El-Dahr. *A p53-Pax2 Pathway in Kidney Development: Implications for Nephrogenesis*. *PLoS One*. 2012; 7(9): e44869. Published online 2012 Sep 12. DOI: 10.1371/journal.pone.0044869
9. Liu H, Zhou T, **Liu J**, Tong Y, Shanewise JS. *Inferior wall diverticulum of left ventricle coexisting with mental retardation and atrial septal defect*. *Middle East J Anesthesiology*. 2012 Oct;21(6):895-8.
10. Zhou M, Xia H, Xu Y, Xin N, **Liu J**, Zhang S. *Anesthetic action of volatile anesthetics by using Paramecium as a model*. *Journal of Huazhong University*

of Science and Technology. Medical Science, 2012 Jun;32(3):410-4. Epub 2012 Jun.

CONFERENCE ABSTRACT & PRESENTATION

1. **Jiao Liu**, Samir S. El-Dahr, Zubaida R. Saifudeen." Metabolic Fitness in Nephron Progenitor Renewal." ASN,11/2014 Philadelphia, USA.
2. Yuwen Li, **Jiao Liu**, Marilyn Li, Samir S. El-Dahr, Zubaida R. Saifudeen." p53 Promotes Adhesion of Six2+ Cells within the Nephron Progenitor Niche " ASN, 11/2013 Atlanta, USA
3. **Jiao Liu**, Zubaida Saifudeen, Samir El-Dahr. "P53 Regulates progenitor cell renewal and survival in the nephrogenic niche of the developing kidney" SSPR: 02/2013, New Orleans, LA, USA
4. Zubaida Saifudeen, **Jiao Liu**, Yuwen Li, Thomas Carroll and Saimir S. El-Dahr."P53 Regulates Progenitor Cell Renewal in the Nephrogenic Niche of the Developing Kidney". ASN Annual Meeting poster presentation, 11/2012, San Diego, USA.
5. Zubaida Saifudeen, **Jiao Liu**, Yuwen Li, Susana Dipp, and S.S.El-Dahr. "P53 in the cap mesenchyme regulates nephron endowment", ASN Annual Meeting poster presentation, 11/2011, Philadelphia, USA.
6. Henry Liu¹, **Jiao Liu**¹, Marilyn M. Li¹, Mingbing Chen², Juan Tan², Santiago Gomez¹, Michael Yarborough¹, Sabrina Bent¹, Alan Kaye³, Francis A. Rosinia¹. "Effects of Milrinone on gene expressions related to endothelial cell adhesion in cultured cardiomyocytes" ASA: 10/2013 San Francisco, California
7. Henry Liu, **Jiao Liu**, Marilyn M. Li, Charles Fox, Santiago Gomez, Francis A. Rosinia, Alan Kaye. Effects of Milrinone on gene expressions related to activation of peritoneal macrophages in cultured rat cardiomyocytes. SCA: 4/2013 Miami, Florida

8. Yiru Tong, **Jiao Liu**, Nakeisha Pierre, Sabrina Bent, Ting Zhou, You Shang, Santiago Gomez, Francis A. Rosinia, Alan D. Kaye, Henry Liu. Effects of epinephrine on Williams-Beuren Syndrome-related gene expressions in cultured cardiomyocytes. ASA: 10/2012 Washington DC
9. Henry Liu, M.D., **Jiao Liu**, M.D., Ting Zhou, M.D., Yiru Tong, M.D., Santiago Gomez, M.D., Nakeisha Pierre, M.D., Charles Fox, M.D., Amanda Gelineau, M.D., Alan Kaye, M.D., Ph.D., Francis Rosinia, M.D. Effects of Epinephrine on Myocardial Ischemia-Related Gene Expression in Cultured Rat Cardiomyocytes . ASA: 10/2012 Washington DC
10. Liu H, **Liu J**, Kalarickal PL, Bent S, Fox CJ, Rosinia FA, Li MM, Kaye AD. Changes of gene expression related to activation of peritoneal and epithelial macrophages induced by digoxin exposure in cultured rat cardiomyocytes. SCA Annual Meeting 2012, Boston, USA
11. Henry Liu, M.D., **Jiao Liu**, M.D., Philip L. Kalarickal, M.D., MPH, Sabrina Bent, M.D., Charles J. Fox, M.D., Frank A. Rosinia, M.D., Marilyn M. Li, M.D., Alan Kaye, M.D., Ph.D. Changes of gene expression related to activation of peritoneal and epithelial macrophages induced by digoxin exposure in cultured rat cardiomyocytes. SCA: 4/2012, Savannah, Georgia.
12. Henry Liu, MD, **Jiao Liu**, MD, Xiaofeng Hu, MD, PhD, Judson Mehl, M.D., Okeisha Pierre, MD, Charles J. Fox, MD, Marilyn M. Li, MD, Alan D. Kaye, PhD, MD. Effects of epinephrine and milrinone on the gene expression levels of myocardial hypertrophy-related genes in cultured rat cardiomyocytes. ASA:2011 Chicago, Illinois