JIAYI LIU

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EDUCATION

Sep 2021 - Current

Doctor of Philosophy in Molecular Biosciences
Rutgers University

Aug 2016 - Jun 2019

Master of Medicine in Pediatrics (*US equivalency: M.S.*)
School of Medicine, Shanghai Jiao Tong University, China

Sep 2011 - Jun 2016

Bachelor of Medicine in Clinical Medicine (*US equivalency: M.D.*)
Medical College of Soochow University, China

POSITIONS

May 2019 - June 2021

Research Assistant
The University of Texas Health Science Center at Houston, TX

- Design, write, and curate R and Python scripts to analyze the NGS data for a U54 Center under the Cancer Systems Biology Consortium.
  - Infer copy number alterations, annotate cell types, identify phenotypes of the metastatic cancer cells using scRNA-Seq data.
  - Model sub-clone evolutions using whole-exom sequencing data.
  - Profile the phenotypic and genotypic dynamics by integrating clinical and NGS data.
- Develop and maintain the bioinformatic pipeline scripts for the bioinformatics working group supporting the Cancer Systems Biology Consortium.

Jun 2018 - May 2019

Visiting Researcher
Medical Oncology, City of Hope National Medical Center, CA

- Studied the role of gut microbiota in the of cancer treatment-related toxicity.
  - Collected and prepared fecal samples for sequencing.
  - Analyzed 16s rDNA sequencing data.
- Analyzed the RNA-Seq data from The Cancer Genome Atlas

Sep 2016 - Jun 2018

Graduate Researcher
Shanghai Children's Medical Center Affiliated to the School of Medicine, Shanghai Jiao Tong University, China

- Studied the role of the gut microbiota in the development of neonatal necrotizing enterocolitis.
- Conducted a clinical trial to study the role of probiotics in preventing and relieving the symptoms of Hirchsprung-Associated Enterocolitis.

- In-patient services: prescribed parenteral nutrition for preterm and post-operative patients.
- Out-patient services at the Department of Nutrition.

Jun 2015 - Jun 2016

Intern Physician

Children's Hospital of Soochow University, Suzhou, China;

Ippokrateio General Hospital of Athens, Greece;

First Affiliated Hospital of Soochow University, Suzhou, China;

- Clinical rotations in departments of: General Surgery, Internal Medicine, OB&GYN and Pediatrics.

SKILLS & QUALIFICATIONS

WET LAB

- Molecular Biology
  - DNA and RNA extractions from human and animal samples
  - PCR
  - Gel electrophoresis
- Immuno-assay: IHC and ELISA
- Laboratory rodent husbandry, anesthesia, surgery, injection, blood and fecal samplings, and necropsy

COMPUTA-TIONAL

- Proficiency in: R, Bash/Shell, Python, Markdown, LaTeX
- Proficiency in analyzing whole-exome sequencing (WES) and RNA-Seq data
- Familiar with NCBI, Ensembl and TCGA database
- Statistical implementations for large genomic datasets
- Familiar with UNIX/LINUX environment and version control systems (Git)

CLINICAL

- People's Republic of China Board Certification in Medicine

PUBLICATIONS

1. **Liu, J.**, Li, Y., Feng, Y., Pan, L., Xie, Z., Yan, Z., . . . Hong, L. (2019). Patterned progression of gut microbiota associated with necrotizing enterocolitis and late onset sepsis in preterm infants: A prospective study in a Chinese neonatal intensive care unit. *PeerJ, 7*. doi:10.7717/peerj.7310
2. Srivastava, S., Pang, K. M., Iida, M., Nelson, M. S., **Liu, J.**, Nam, A., . . . Salgia, R. (2020). Activation of EPHA2-ROBO1 heterodimer by SLIT2 attenuates non-canonical signaling and proliferation in squamous cell carcinomas. IScience, 101692. doi:10.1016/j.isci.2020.101692
3. Chi, F., **Liu, J.**, Brady, S. W., Cosgrove, P. A., Nath, A., Mcquerry, J. A., . . . Bild, A. H. (2020). A 'one-two punch' therapy strategy to target chemoresistance in estrogen receptor cancer. *Translational Oncology* doi:10.1016/j.tranon.2020.100946