



Thomas Jefferson University Sidney Kimmel Medical College

Postdoctoral Research on tRNA Epigenetic Biology

Postdoctoral positions are available with Professor Ya-Ming Hou at Thomas Jefferson University, Sidney Kimmel Medical College. We focus on tRNA epigenetic changes and explore their roles in gene expression at the codon level and in response to cellular stress, which are new concepts at the cutting edge of molecular biology and central dogma. We use a synthetic biology approach with CRISPR/Cas-edited genomes to determine how modifications in tRNA impact cell fitness at the codon level. Our lab is intellectually stimulating and encouraging global networking. Current projects are tRNA epigenetic biology:

- (1) In response to environmental stress
- (2) In discovery of new bacterial physiology and antibiotic therapeutics
- (3) In neurodegenerative diseases.

For more information, please see the following publications and our website:

Cell Systems, 8, 302-314 (2019). PMID: [30981730](#) (Featured in Faculty 1000 Prime)
Nucleic Acids Res. 46, e37 (2018). PMID: [29361055](#)
Nucleic Acids Res. 45, 4081-4093 (2017). PMID: [27956502](#)
PNAS 113, 15096-15101 (2016). PMID: [27849575](#) (Featured in PNAS commentary)
Nat Struct Mol Biol, 10, 941-948 (2016). PMID: [27571175](#). (Featured in Science)
Nature Communications, 6:7226 (2015). PMID: [26009254](#)
Chem and Biol (Cell Press) 21, 1351-1360 (2014). PMID: [25219964](#)
Nature 510, 507-511 (2014). PMID: [24919148](#) (Featured in Nature News and Views)
Nat. Communications. 2:329 (2011). PMID: [21629262](#)

<https://houlaboratory.com/research>

<https://www.jefferson.edu/university/research/researcher/researcher-faculty/hou-laboratory.html>

Candidates with a recent Ph.D. and a passion for basic research are encouraged to apply. Experience in RNA-seq, high-throughput data analysis, fluorescence microscopy, cell culture, molecular biology, protein enzymology, nucleic acids research, and mitochondrial research is preferred.

Please send a cover letter, CV, and contact information of three references to:

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