Postdoctoral positions available in RNA metabolism lab

Gina Lee’s lab at University of California, Irvine is looking for postdoctoral candidates who will study RNA metabolism. The Lee lab uses molecular biological and mass spectrometry approaches to study signal transduction and metabolic networks that rewire RNA biogenesis in physiological and pathological conditions including cancer. Please visit our website: https://sites.uci.edu/ginalee/.

Our current focus is to identify oncogenic signaling and metabolic pathways that control chemical modifications of RNA; and to reveal how the RNA epi-trancriptomic landscapes influence transcriptome and proteome that govern cell growth, survival and differentiation. Successful candidates are expected to have one of the below expertise:

1. Molecular biology and biochemistry
2. RNA biology and bioinformatics
3. Cancer metabolism
4. Mouse models of cancer

Please send your letter of interest, CV/resume and contact information for three references to ginalee@uci.edu.
Research

RNA processing and quality control are pivotal nodes of gene expression control during cell fate decision and disease development. However, little is known about how this process is regulated by upstream signaling networks. My scientific focus is to reveal how signal transduction and metabolic pathways control RNA biogenesis in the context of human cancer. Our previous works revealed that the mitogen and nutrient-dependent, oncogenic mTORC1 signaling pathway promotes glutaminolysis and lipid synthesis by enhancing RNA translation and splicing of key metabolic enzymes, thereby supporting tumor growth. We currently study another important, yet poorly understood RNA processing, the chemical modification of RNA. We investigate 1) how oncogenic signaling and metabolic pathways control chemical modifications of RNA; and 2) how the epitranscriptomic landscapes influence the global transcriptome and proteome to govern cell growth, survival and differentiation. We will uncover new, exciting links between signal transduction, cellular metabolism, and the epitranscriptomic landscape of cells and organisms, inspiring novel therapeutic avenues for human diseases.

Education and Positions

2020- Assistant Professor, Dept. of Microbiology and Molecular Genetics and Chao Family Comprehensive Cancer Center, UC Irvine School of Medicine
2018-2019 Instructor, Dept. of Pharmacology and Meyer Cancer Center, Weill Cornell Medicine, Cornell University
2012-2017 Postdoctoral Fellow, Harvard Medical School and Weill Cornell Medicine
2006-2011 PhD, Korea Advanced Institute of Science and Technology (KAIST) and Seoul National University
2002-2005 BS, Dept. of Biological Science, KAIST

Fellowships and Grants

2014-2017 Postdoctoral Fellowship, Lymphangioleiomyomatosis (LAM) Foundation, USA
2013-2015 Postdoctoral Fellowship, Tuberous Sclerosis Complex (TSC) Alliance, USA
2012-2013 Postdoctoral Fellowship, National Research Foundation, Korea
2006-2010 Excellent Graduate Scholarship, KAIST
2002-2005 Superior Academic Performance Scholarship, KAIST
Awards and Honors

2019 Invited Talk, New England Bioscience Society, MA, USA
2019 Selected Oral Presentation, FASEB: Protein Kinase and Phosphorylation, CA, USA
2019 Breakout Prize for Junior Investigators, NY, USA
2019 Invited Talk, Starr Cancer Consortium, Annual Symposium, NY, USA
2018 Travel Grant Award, International Conference of Korean Society for Molecular and Cellular Biology, Korea
2017 Selected Oral Presentation, Keystone Symposia: PI3K Pathway in Cancer, NM, USA
2016-2019 Co-leader, Tri-Institute Cancer Metabolism Meeting (Memorial Sloan Kettering Cancer Center, Rockefeller University, Weill Cornell Medicine), NY, USA
2016 Scientific Review Panel, TSC Alliance Research Grant, MD, USA
2015 Invited Talk, International TSC Conference, UK
2012-2014 Conference Organizing Committee, New England Bioscience Society, MA, USA
2011 Travel Grant Award, Asia-Pacific Drosophila Research Conference, Taiwan
2010 Best Poster Award, FASEB Conference, AMPK: Central Regulatory System in Metabolism & Growth, Japan
2007 Chair Fund Recipient, Gordon Research Conference, Cancer Models & Mechanisms, Switzerland

Publications


Commentary: “SRPK2 acts downstream of mTORC1 to promote de novo lipogenesis” Cancer Discovery (2018).


