

Mechanisms of Noncoding RNAs in Gene Regulation (RNA Biology, Protein Biochemistry, Biophysics, Structural Biology)

A postdoctoral research position is available in the laboratory of <u>Yunsun Nam</u>, in the Department of <u>Biochemistry</u> at <u>University of Texas Southwestern Medical Center</u> in <u>Dallas</u>, to study the mechanisms of noncoding RNAs. Our <u>laboratory</u> works on exciting projects dissecting the molecular mechanisms underlying RNA-mediated gene regulation. To form specific RNA-protein complexes important for normal gene expression, RNA utilizes both chemistry and structure. Thus, we use biochemical and biophysical methods to study how proteins and RNAs recognize each other. More specifically, we investigate core and regulatory mechanisms that govern RNA processing (maturation), modification (eg. methylation) and folding (via helicases) that impact the RNA function in the cell. The noncoding RNAs and RNA/protein complexes we study are relevant for normal development as well as diseases. Our current focus is to unravel how RNA-mediated gene regulation gone awry leads to cancer, and we use our mechanistic understanding to identify therapeutic avenues.

Postdoctoral scholars will have many opportunities to learn the newest methods in protein and nucleic acid biochemistry and biophysics, in addition to working in an exciting, fast-evolving field in biomedical sciences. We use various approaches, including cryo-electron microscopy (cryo-EM), X-ray crystallography, NMR spectroscopy, molecular biology, nucleic acid and protein biochemistry, genomics with next-generation sequencing, high-throughput screening for drug discovery, and cancer cell biology. The postdoctoral fellow will have ready access to the top-of-the-line equipment and resources necessary for the above approaches.

Candidates must hold a Ph.D. and/or M.D. degree. Experience in biochemistry and/or structural biology leading to publication in peer-reviewed journals is recommended.

Information on our postdoctoral training program, benefits, and a virtual tour can be found at http://www.utsouthwestern.edu/postdocs.

Interested individuals should send a CV, a statement of interests, and a list of three references as a single pdf file to:

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