Structural Biology and Biochemistry of Gene Regulation

A joint postdoctoral training position is available in the laboratories of Dr. W. Lee Kraus and Dr. Xin Liu in the Cecil H. and Ida Green Center for Reproductive Biology Sciences at UT Southwestern Medical Center to study signaling and gene regulation and molecular biophysics of gene regulation.

We are seeking a trainee interested in studying gene regulatory complexes, who will initiate and execute research projects investigating the molecular mechanisms by which proteins assemble into specific complexes for particular biological functions with a focus on the regulation of chromatin structure and transcription. The goal is to determine how macromolecular recognition and enzymatic regulation are accomplished, using biochemistry, structural biology, and molecular biology. The position will also include opportunities to learn and use genomics and bioinformatics, as well as cell and animal models. The Center also provides significant opportunities to engage in clinical/translational projects with clinicians working in the center.

The research in the Kraus lab covers a broad array of topics, including signaling, gene regulation, and genome function, especially in the areas of chromatin, transcription, epigenetics, RNA biology, and nuclear endpoints of cellular signaling pathways. The Kraus lab uses a wide variety of model systems and experimental approaches, including biochemistry, molecular biology, structural biology, animal models, genomics, proteomics, bioinformatics, and computational biology. The research in the Liu lab addresses a wide range of questions related to transcriptional regulation and chromatin dynamics underlying many fundamental biological processes, including differentiation, development, and oncogenesis. Current research is focused on elucidating the molecular and biophysical basis of chromatin organization, including chromatin looping and heterochromatin formation during gene activation and silencing, with a combined approach of structural biology, biochemistry, and chemical biology. As a joint postdoctoral fellow, the trainee will have immediate access to all the resources and expertise in both of the laboratories.

Candidates must hold a Ph.D. and/or M.D. degree. Experience in Biochemistry and Structural Biology leading to publication in peer-reviewed journals is required. Additional experience in Molecular Biology, Genomics, and/or Computational Biology is recommended.

Information on our postdoctoral training program and benefits can be found in our Postdoc Handbook or at http://www.utsouthwestern.edu/postdocs.

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

W. Lee Kraus, Ph.D.
UT Southwestern Medical Center
5323 Harry Hines Blvd.
Dallas, TX 75390-8511
lee.kraus@utsouthwestern.edu
https://www.utsouthwestern.edu/labs/kraus-lee/
https://www.utsouthwestern.edu/labs/liu-xin/

UT Southwestern Medical Center is committed to an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination, including harassment, on the basis of: race; color; religion; national origin; sex; including sexual harassment; age; disability; genetic information; citizenship status; and protected veteran status. In addition, it is UT Southwestern policy to prohibit discrimination on the basis of sexual orientation, gender identity, or gender expression.