

Macromolecular Crystallography, Biophysics and Biochemistry

Positions are available at the University of Texas Medical Branch (UTMB) located in the greater Houston area in the research team of Dr. Gabrielle Rudenko. We study molecules that mediate the formation, maintenance and plasticity of synapses, the contact and communication point between neurons. Our proteins of interest organize and regulate protein interaction networks in the synaptic cleft and impact how neurons communicate with each other at synapses. Many of the proteins we study are implicated in neurological disease and serve as potential novel therapeutic targets.

We are looking for highly motivated, enthusiastic, hard working individuals who are interested in combining the fields of structural biology and neuroscience. Research projects involve protein over-expression and purification, x-ray crystallography, biochemical and biophysical techniques, proteomics, chemical biology and in collaboration electron microscopy and NMR.

Our laboratory is part of the endowed Sealy Center for Structural Biology and Molecular Biophysics and the Department of Pharmacology/Toxicology at UTMB. The Sealy Center provides access to exceptional facilities, training and experimental assistance. X-ray facilities include a high-brilliance FR-E Superbright x-ray generator, a Rigaku R-AXIS-IV dual 30cm Imaging Plate detector, a Bruker SMART 2K CCD and a Rigaku BioSAXS-1000 2D-Kratky camera (for solution scattering data). Biophysics facilities include equipment for analytical ultracentrifugation, fluorescence, MALDI-TOF mass spectrometry, dynamic light scattering, surface plasmon resonance, titration micro-calorimetry, and high throughput screening with the ThermoFluor HTS apparatus. In addition, the Electron Microscopy facilities house three modern JEOL cryo-electron microscopes (a 200 keV JEOL 2200FS cryo-EM with in-column electron energy filter and field emission gun, a 200 keV JEOL 2100 EM, and a 120 keV JEM1400 microscope) and the NMR facilities include three NMR spectrometers (Bruker Avance III 800, 750 and 600 MHz with cryoprobes). See <http://www.scsb.utmb.edu/resources/>

UTMB is part of the Texas Medical Center, the world's largest medical center located in greater Houston. UTMB has research facilities situated on Galveston Island offering a pleasant subtropical climate and miles of relaxing beaches. UTMB is located within commuting distance of Houston, the fourth largest city in the United States and a leader in the arts, education, and health care.

Qualifications: Applicants for post-doctoral positions should have received a Ph.D. degree in a field relevant to structural biology within in the last three years and have a strong publication record. Applicants with experience in cloning, bacterial/insect cell culture, protein purification and crystallization, and macromolecular structure determination are preferred. However, recent graduates with a strong background in protein over-expression and purification, and an exceptional interest in learning crystallography are also encouraged to apply. Good written and oral communication skills in English are essential as well as the ability and desire to work as part of a highly motivated, collaborative team. Applicants for graduate student positions should be member of the Graduate School at UTMB or plan to apply.

To apply please e-mail the following to gabrielle.rudenko@utmb.edu : CV, contact information for three references (address, phone and e-mail), a list of your experimental expertise and skills relevant to these positions and a research statement describing your past research experience and future goals (1-2 pages). Visa sponsorship is available for non-US nationals. For questions, please contact Dr. Gabrielle Rudenko at gabrielle.rudenko@utmb.edu or visit <http://scsb.utmb.edu/labgroups/rudenko/>
The University of Texas is a non-discriminatory, affirmative action employer.