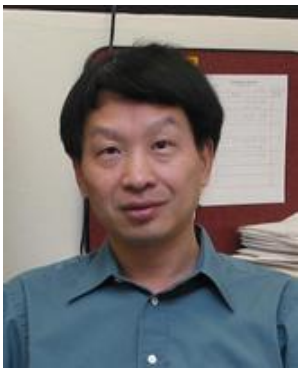
Feng Liu, Ph.D.

Professor, Department of Pharmacology
Location: 223B MED
Phone: (210) 567-3097
Fax: (210) 567-4303
E-mail: liuf@uthscsa.edu
Weblink:
http://pharmacology.uthscsa.edu/faculty/Liu.html



Our primary interest lies in studying the insulin signal transduction pathway, which is activated when the hormone insulin binds to its cell surface receptors, resulting in a cascade of biochemical reactions that culminates in regulation of cell growth, differentiation, and metabolism. Defects in any of the steps along this signaling cascade can result in insulin resistance, one of the primary contributors to developing Type 2 diabetes. Uncontrolled activation of this signaling pathway may promote tumor growth and cancer. In order to better understand the molecular mechanism of insulin signal transduction and insulin resistance, we are using molecular biology, biochemistry, and cell biology approaches as well as animal models to identify and characterize signaling components involved in insulin receptor signaling processes. It is our hope that better understanding of the signaling components involved in mediating insulin signal transduction will generate information that may be contributed to the development of new therapeutic drugs for the treatment of Type 2 diabetes and cancer.

We are also interested in investigating the link between insulin signaling and aging. Recent studies from invertebrates suggested that reducing insulin/IGF-1 signaling in the neurons can extend the life-span of these organisms. Whether reducing neuronal insulin/IGF-1 signaling in mammals extends their life-span remains to be established. We are currently developing animal models in order to determine whether neuronal insulin signaling plays a role in regulating mammalian longevity and aging.