Tony Hu

Weatherhead Presidential Chair in Biotechnology Innovation at Tulane University

New Orleans, LA, US

Tony Hu is a pioneer in developing advanced diagnostics for personalized medicine and COVID-19 research.

Biography

Hu joins Tulane University School of Medicine as the Weatherhead Presidential Chair in Biotechnology Innovation and will lead the school?s newly created Center of Cellular and Molecular Diagnosis. He exemplifies the interdisciplinary focus of the presidential professors with a primary appointment in the Department of Biochemistry and Molecular Biology and secondary appointments in the School of Science and Engineering, School of Public Health and Tropical Medicine and the Tulane National Primate Research Center. Hu previously served as professor at the Biodesign Institute at Arizona State University?s Virginia G. Piper Center for Personalized Diagnostics and at ASU?s School of Biological and Health Systems Engineering. His research focuses on developing and validating highly sensitive blood tests that rely on nanotechnology-based strategies to find previously undetectable biomarkers of diseases. These diagnostics can also be used to develop personalized medicine tailored to a patient?s specific genetic strain of disease. Hu?s research aims to fill current unmet clinical needs for early disease detection, better predictors of disease progression and real-time monitoring of therapy response to improve patient outcomes. He has assembled a diverse research team with backgrounds in biochemistry, mass spectrometry, nanofabrication and biomedical engineering to address these challenges. Hu will establish the Center of Cellular and Molecular Diagnosis to leverage both new and existing platforms for the improved analysis of diagnostic factors found in liquid biopsy samples, including proteins, nucleic acids and extracellular vesicles, which are tiny particles of material released by living cells. The new center?s mission will be to promote interactions between diverse teams of researchers to accelerate the discovery and clinical development of more effective diagnostic biomarkers. HU has published more than 70 journal articles and has received 10 U.S. and international patents in this area since his first faculty appointment in 2011. Three of his innovations have been licensed by US-based companies and are under development for commercialization. His research team has received grant support from the National Institutes of Health, the Department of Defense and the Gates, Johns Dunn and Kostas Cockrell family foundations.

Areas of Expertise

COVID-10 (Coronavirus), Nanoengineering, Biotechnology Innovation, Biomaterials, Biomedical Engineering, Biochemistry, Personalized Medicine, Analytical Chemistry

Education

University of Texas-Austin

PhD Biomedical engineering

University of Texas Health Science Center-Houston
Postdoctoral fellow Nanomedicine

University of Texas-Austin
Master's Degree Chemistry and Biochemistry

Lanzhou University
B.A. Organic Chemistry
