

Research Centers in Minority Institutions (UTSA)  
Institute for Integration of Medicine & Science (UTHSA) &  
UTSA-UTHSA Joint Graduate Program in Biomedical Engineering  
invite you to attend

## Seminars in Translational Research

*"Building the Capacity for Translational Research"*

### **Kumar Sharma, M.D.**

The UT Health San Antonio  
Hillis Professor of Medicine, Chief, Division of Nephrology  
Vice Chair of Research, Department of Medicine



#### **Metabolic Reprogramming in Kidney Disease**

Diabetic kidney disease (DKD) is the leading cause of morbidity and mortality in diabetic patients. Defining risk factors for DKD using a reductionism approach has proven challenging. Integrative omics based systems biology tools have shed new insights into our understanding of DKD and have provided several key breakthroughs for identifying novel predictive and diagnostic biomarkers. In this review, we highlight the role of Warburg effect in DKD and potential regulating factors such as sphingomyelin and fumarate in shifting glucose flux from complete oxidation in mitochondria to the glycolytic pathway and its principal branches. With the development of high sensitive instruments and more advanced automatic bioinformatics tools, we believe that omics analyses and imaging techniques will focus more on singular cell level studies, which will allow in depth understanding of DKD and pave the path for personalized kidney precision medicine.

**Friday, January 19th, 2018**

**9:00—10:00 AM**

**The UT Health San Antonio**

**Greehey Children's Cancer Research Institute**

**Room 2.160**

For more information contact Kelsey Russel, Institute for Integration of Medicine & Science  
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**UTSA RCMi**  
Research Centers in Minority Institutions

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