Department of Biomedical Engineering
UNIVERSITY OF WISCONSIN–MADISON

Spring 2026 Seminar Series

From Engineering Predictive Human Tissue Platforms to Advancing the Impact of Wisconsin Biomedical Engineering

Salman R. Khetani, PhD
Professor
Associate Department Head
Acting Associate Dean for Graduate Studies
Department of Biomedical Engineering
University of Illinois Chicago

The convergence of patient-specific human cell sources, microengineering, and data science is accelerating the adoption of New Approach Methodologies (NAMs) that reduce reliance on animal studies. Against this backdrop, my lab develops highly functional, long-lasting in vitro human tissue platforms for drug metabolism and toxicity testing, disease modeling, and regenerative medicine. We emphasize reproducibility, scalability, and ease of use to enable broad adoption by end users. We leverage these systems to uncover cellular and molecular mechanisms that drive major human diseases and to inform more effective therapeutics, including metabolic dysfunction–associated steatotic liver disease, alcohol-associated liver disease, hepatitis B viral infection, inflammatory bowel disease, lung fibrosis, and atrial fibrillation. We are further extending our platforms into reproductive and developmental health, where clinical guidance is often limited, and advancing vascularized, implantable human liver tissue surrogates as a bridge-to-transplantation strategy for patients with end-stage organ failure.

ABOUT the SPEAKER

Dr. Salman Khetani holds Bachelor of Science degrees in Electrical Engineering and Biomedical Engineering from Marquette University and MS and PhD degrees in Bioengineering from the University of California, San Diego, where he was a National Science Foundation Graduate Fellow. He completed postdoctoral training at the Massachusetts Institute of Technology. As a co-founder and director of research at Hepregen Corporation, Dr. Khetani led the development and commercialization of engineered liver models for pharmaceutical drug testing that are still used today. He began his academic career at Colorado State University and joined University of Illinois Chicago (UIC) in 2015, where he is the Robert Uyetani Collegiate Professor and directs the Microfabricated Tissue Models Laboratory.

Dr. Khetani has secured the NSF CAREER Award and multiple awards for teaching, mentoring, and research excellence. He has raised over $11 million in sponsored research funding, and his work has been cited nearly 8,000 times, earning an h-index of 39. He has mentored nearly six dozen trainees at the undergraduate, graduate, and postdoctoral levels.

In addition to his research program, Dr. Khetani serves in key academic leadership roles at UIC as Associate Department Head and Director of Graduate Studies in Biomedical Engineering, and as the Acting Associate Dean for Graduate Studies in the College of Engineering. In these roles, he has led initiatives spanning graduate education and recruitment, student support and mentoring, and transparent, data-informed processes that strengthen program quality and scholarly community.

Monday, February 2 at Noon
1003 Engineering Centers (Tong Auditorium)