Chinese Academy of Sciences

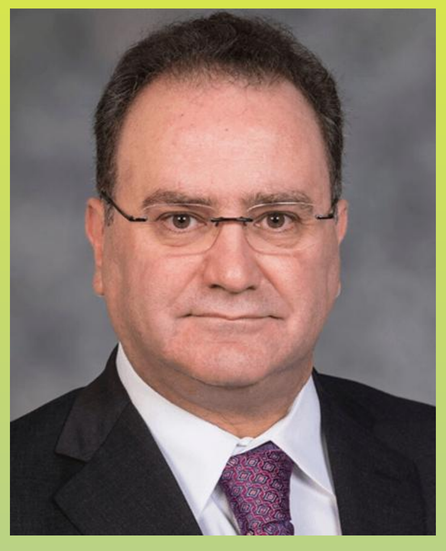
Key Lab for Biomedical Effects of Nanomaterials and Nanosafety

中科院纳米生物效应与安全性重点实验室

Nanosafety Lab. CAS

学术报告通知

CAS NS Forum (NO. 376)



演讲者： Antonios Mikos 美国莱斯大学教授

组织工程卓越中心主任

美国国立卫生研究院复杂组织工程中心主任

时　间： 2024 年 03月 12 日 (星期二), 下午15：00

地　点： 国家纳米科学中心，新楼三层第六会议室

主 持人：赵宇亮 院士

报告人简介:

Antonios G. Mikos is the Louis Calder Professor of Bioengineering and Chemical and Biomolecular Engineering at Rice University. He is the Director of the Biomaterials Lab, the Director of the Center for Excellence in Tissue Engineering, and the Director of the J.W. Cox Laboratory for Biomedical Engineering at Rice University.

Mikos is a Member of the National Academy of Engineering, a Member of the National Academy of Medicine, a Member of the International Academy of Medical and Biological Engineering, a Member of the Academia Europaea, a Member of the Chinese Academy of Engineering, a Member of the Academy of Medicine, Engineering and Science of Texas, and a Member of the Academy of Athens. He is a Founding Fellow of the Tissue Engineering and Regenerative Medicine International Society, a Fellow of the American Association for the Advancement of Science, a Fellow of the American Institute of Chemical Engineers, a Fellow of the American Institute for Medical and Biological Engineering, a Fellow of the Biomedical Engineering Society, a Fellow of the Controlled Release Society, a Fellow of the International Union of Societies for Biomaterials Science and Engineering, and a Fellow of the National Academy of Inventors.

Mikos' research focuses on the synthesis, processing, and evaluation of new biomaterials for use as scaffolds for tissue engineering, as carriers for controlled drug delivery, as non-viral vectors for gene therapy, and as platforms for disease modeling. His work has led to the development of novel orthopaedic, dental, cardiovascular, neurologic, and ophthalmologic biomaterials. He is the author of over 700 publications and 32 patents.

Ongoing projects in the Mikos Research Group include:

• Investigating novel 3D printing and bioprinting strategies for manufacturing biodegradable polymer scaffolds with precise geometries, physiologically relevant tissue architectures, and controlled release of biochemical signals to direct stem cell differentiation and tissue formation for bone and cartilage regeneration and repair;

• Synthesizing novel extracellular matrix-derived and nanomaterial-based bioinks for 3D printing and bioprinting;

• Fabricating injectable, in situ polymerizable, biodegradable composite scaffolds to deliver stem cells for osteochondral tissue engineering;

• Harnessing biomimetic strategies to promote articular cartilage regeneration;

• Designing tunable and electro-active scaffolds of decellularized extracellular matrix for skeletal muscle repair;

• Leveraging mechanically tunable polymeric scaffolds and in vitro bioreactors to examine the effects of mechanical forces and various cellular compartments within the tumor microenvironment on disease progression and drug resistance profiles of bone sarcomas; and

• Developing in vivo bioreactors for craniofacial reconstruction.

Contact information: Tel: 010-82544379