UC San Diego
JACOBS SCHOOL OF ENGINEERING
Aiiso Yufeng Li Family Department of Chemical and Nano Engineering

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DISTINGUISHED SEMINAR

Tuesday, March 25th, 2025
11:00 AM - 12:00 PM
SME 248

Dr. Shawn Chen, PhD

"Cancer Theranostics"

Nasrat Muzayyin Chair Professor
Medicine and Technology
National University of Singapore

Abstract: Theranostics, the combination of ther(apy) and (diag)nostics, aims to develop molecular diagnostic tests and targeted therapeutics with the goals of individualizing treatment by targeting therapy to an individual's specific disease subtype and genetic profile. It can be diagnosis followed by therapy to stratify patients who will likely respond to a given treatment. It can also be therapy followed by diagnosis to monitor early response to treatment and predict treatment efficacy. It is also possible that diagnostics and therapeutics are co-developed This talk will give a few examples of radiotheranostics and nanotheranostics especially mRNA formulas that are already clinically used or in the process of clinical translation.

Bio: Prof. Xiaoyuan (Shawn) Chen is Nasrat Muzayyin Chair Professor in Medicine and Technology, National University of Singapore. He is the founding editor of journal Theranostics. He was elected as AIMBE Fellow (2017), SNMMI Fellow (2020), Member of European Academy of Sciences (2024), Member of Academia Europaea (MAE, 2024), and Member of Singapore National Academy of Science (SNAS, 2024), received NUS School of Medicine Best Researcher of the Year (2025), JBN Trailblazer Award (2023), SNMMI Michael J. Welch Award (2019), ACS Bioconjugate Chemistry Lecturer Award (2016), NIH Director's Award (2014), and NIBIB Mentor Award (2012). He became a member of the Advanced Materials Hall of Fame (2023). He is also the Past President of the Radiopharmaceutical Science Council (RPSC), Society of Nuclear Medicine and Molecular Imaging (SNMMI). His research is largely focused on the development of various forms of theranostics (combination of diagnostics and therapeutics, e.g. radiotheranostics, nanotheranostics, immunotheranostics, magnetotheranostics, phototheranostics, etc.) that can be clinically translatable.

Seminar Host: Liangfang Zhang