



The Chinese University of Hong Kong

Department of Biomedical Engineering



Time: 10:30 am, 3 December 2018 (Monday)

Venue: Room 215, William M W Mong Engineering Building

Evans blue-based theranostics



Professor Xiaoyuan Chen (Shawn)

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Abstract

Theranostics (Rx/Dx) 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 (nanotheranostics). This talk will use Evans blue as an example to illustrate how this reversible albumin binder can be suitably for vasculature and lymphatic system imaging, as an enhancer to prolong circulation half-life of drugs for diabetes treatment, radioligand cancer therapy, cancer vaccine and cancer nano prodrug development.

Biography

Professor Xiaoyuan Chen (Shawn) received his PhD in Chemistry from the University of Idaho (1999). After two postdocs at Syracuse University and Washington University in St. Louis, he started his Assistant Professorship in 2002 and then moved to Stanford in 2004. He moved to NIH in 2009 and became a Senior Investigator and Chief of the Laboratory of Molecular Imaging and Nanomedicine (LOMIN) at the National Institute of Biomedical Imaging and Bioengineering (NIBIB), NIH. His current research interests include development of molecular imaging toolbox for better understanding of biology, early diagnosis of disease, monitoring therapy response, and guiding drug discovery/development. His lab puts special emphasis on high-sensitivity nanosensors for biomarker detection and theranostic nanomedicine for imaging, gene and drug delivery, and monitoring of treatment. Dr. Chen has published over 700 peer-reviewed papers (H-index = 124, total citations > 54,000 based on Google Scholar) and numerous books and book chapters. He is the founding editor of journal "Theranostics" (2017 IF = 8.537). He elected as AIMBE Fellow (2017), received Michael J. Welch, PhD Award (2019), ACS Bioconjugate Chemistry Lecturer Award (2016), NIH Director's Award (2014) and NIBIB Mentor Award (2012). He has served in the past as the President of Chinese-American Society of Nanomedicine and Nanobiotechnology (CASNN) and President of the Radiopharmaceutical Science Council (RPSC), Society of Nuclear Medicine and Molecular Imaging (SNMMI).

***** ALL ARE WELCOME *****

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