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10:10 AM
Whitaker 100



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Molecular Imaging and
Nanomedicine
NIH/NIBIB

“Cancer Nanotheranostics”

Theranostics (Rx/Dx) aims to develop molecular diagnostic tests and targeted therapeutics with the goals of individualizing treatment with therapy targeted to an individual's disease subtype and genetic profile. Theranostics 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. This talk will give examples of how our lab designs and uses theranostic probes, or nanobiosensors, for ultrasensitive biomarker detection in vitro, for in vivo molecular imaging of cancer hallmarks, and and to make nanoparticle platforms for co-delivery of imaging labels and therapeutic genes and drug molecules.

Dr. Xiaoyuan (Shawn) Chen received his PhD in Chemistry from the University of Idaho (1999), and completed postdoctoral associate positions at Syracuse University and Washington University in St. Louis. Dr. Chen then joined the departments of radiology at University of Southern California (2002) and then Stanford (2004) until he moved to NIH in 2009 to lead the Laboratory of Molecular Imaging and Nanomedicine. Dr. Chen is an AIMBE Fellow, and has served as President of Chinese-American Society of Nanomedicine and Nanobiotechnology, the Radiopharmaceutical Science Council (RPSC), and the Society of Nuclear Medicine and Molecular Imaging (SNMMI). Dr. Chen has published over 600 peer-reviewed papers (H-index >100) and numerous books and book chapters. He is the founding editor of journal “Theranostics” and received multiple awards for his work include the ACS Bioconjugate Chemistry Lecturer Award (2016), NIH Director’s Award (2014), NIBIB Mentor Award (2012) and 1000 talent plan B (2010).



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