

GHUCCTS KL2 Visiting Scholars Seminar Series

"Deliver Nanomedicines to Lymph Nodes and Tumor to Potentiate Melanoma Immunotherapy"

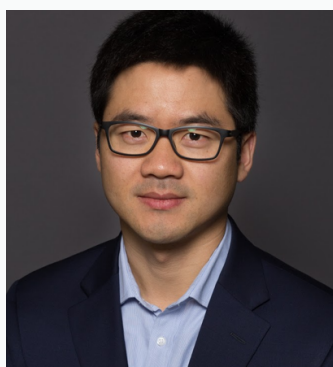
Wednesday, June 17, 2020

12PM - 1 PM



KEYNOTE SPEAKER

Guizhi Julian Zhu, PhD



Dr. Zhu is an Assistant Professor of Pharmaceutics, and Pharmaceutical Engineering and Sciences in Virginia Commonwealth University (VCU). He is also an NCATS KL2 Scholar, an associate member of VCU Massey Cancer Center, and a member of VCU Institute for Structural Biology, Drug Discovery and Development (ISB3D). He received PhD in Biomedical Sciences from the University of Florida, followed by a postdoc training on drug delivery and bioimaging in the National Institute of Biomedical Imaging and Bioengineering (NIBIB) of NIH. His multidisciplinary research group studies the delivery of immune drugs, often nucleic acid therapeutics, for the immunotherapy of cancer and autoimmune diseases. He has published over 80 peer-reviewed papers.

ABSTRACT

The ultimate goal of my research group is to develop clinically translatable cancer therapeutics. In this talk, we will discuss a novel and simple drug delivery systems based on reversibly albumin-binding prodrugs for efficient delivery to tissues and cells in cancer immunotherapy, gene therapy, and chemotherapy. We will discuss the delivery of multiple types of drugs including small molecule immunostimulants, oligonucleotides, peptides, and chemotherapeutics, for the delivery to tumor tissues or cells as well as lymphoid tissues and antigen-presenting cells. Such albumin-binding technology enhanced the in vivo half-lives and tissue delivery efficiencies by up to 2 orders of magnitudes, while reducing off-target dissemination and toxicities. The efficient drug delivery potentiated the therapeutic efficacy for tumor, including a combination melanoma immunotherapy based on albumin-binding vaccines and immune checkpoint blockade. Worth noting, the reversible albumin binder is derived from Evans blue that has been used in the clinic for nearly a century, and the resulting Evans blue derivative was validated for tumor or lymph node targeting with undetectable toxicities in clinic trials, which should facilitate the clinical translation of this type of drug delivery system.

QUESTIONS? Naya White
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LIVE STREAM:
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