

*Stephenson School of Biomedical Engineering
Seminar Series Presents*

RENAL CLEARABLE NANOMEDICINES



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CEC Rm. 100

BIO: Dr. Jie Zheng currently holds Cecil H. and Ida Green Professor in Systems Biology in the chemistry department of The University of Texas at Dallas and also an adjunct full professor in the urology department at UTSW medical center. He received his Ph.D from Georgia Institute of Technology and had his postdoctoral training at Harvard University and Howard Hughes Medical Institute. In 2008, he joined UT Dallas as an assistant professor and was promoted to an associate professor with tenure in 2014 and a full professor in 2018. During the past decade, he received more than \$6 million funding support from NIH, CPRIT, Welch foundation, etc. Since joining UT Dallas, he has more than 50 publications in peer-reviewed journals including Nature Nanotech, Nature Reviews Materials with more than 6000 citations. His research interest is focused on fundamental understandings of in vivo transport and nano-bio interactions in the kidneys and developments of novel nanomedicines for early detection and treatments of cancer and kidney diseases. He is also the founder of ClearNano Inc. for commercializing the next generation of renal nanomedicines.

ABSTRACT: The kidney, as a major organ for blood filtration and waste elimination, plays a key role in the transport of nanomedicines in vivo. In the past decades, significant breakthroughs have been made in the fundamental understanding of how nanomedicines are transported in the kidneys and how they interact with different kidney compartments down to the nano scale and at the molecular level. In this talk, we will discuss different transport and nano-bio interaction mechanisms in the kidneys and present some examples of how to use these underlined principles to develop renal clearable nanomedicines for early detection of cancer and kidney dysfunction.

References:

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