ABOUT THE LECTURE

Nanomedicine has great potential to offer effective treatment against devastating diseases by providing locally sustained release of significant quantities of therapeutic agents, especially when the route of administration allows for direct access to the diseased tissues. Polymeric nanomaterials have emerged as promising candidates for therapeutic delivery. This presentation will highlight the rational design, development, and application of well-defined polymeric nanomaterials toward effective disease treatment. Particular foci of the presentation will be an illustration of two novel strategies to construct well-defined nanotherapeutics that allow for improved pharmacokinetics and therapeutic efficacy.

ABOUT THE SPEAKER

Dr. Zhang received his Ph.D degree in chemistry under the direction of Prof. Karen Wooley from Texas A&M University In 2015. His graduate research studied the design and development of polymeric materials, especially polyphosphoester-based degradable polymers, for the delivery of therapeutic agents. After obtaining his Ph.D degree, Dr. Zhang joined the Laboratory of Molecular Imaging and Nanomedicine at National Institutes of Health, and worked on drug/gene delivery, in particular, theranostic nanomedicine for imaging and treatment. In 2018, Dr. Zhang brought his expertise in nanomedicine back to Texas A&M University, with a focus on targeted nanomaterials for osteosarcoma lung metastases and urinary tract infection using glucose-derived synthetic polymers. Since 2020, Dr. Zhang has been an Assistant Professor in the Department of Chemistry at the University of Miami.