Targeted drug delivery and release enabled by nanobiotechnology

Prof. Li’s talk will be focused on two platform nanotechnologies developed in his lab for targeted drug delivery and release. These include a polymeric-drug conjugate platform and a lipid-based nanoparticle technology that can increase drug solubility and targeting to a variety of tissues including cancer. Drug release from these nanoparticles can also be programmed or guided by tissue-specific internal or external stimuli to achieve selective therapy. He will give an overview on these two systems, including the rational design, composition development and optimization, in vitro characterization and in vivo efficacy results. Future directions and perspectives for the field of nanobiotechnology-based drug delivery will also be discussed.

Biography

Shyh-Dar Li has received PhD in Pharmaceutical Sciences from University of North Carolina at Chapel Hill. He is currently the Angiotech Professor in Drug Delivery at the Faculty of Pharmaceutical Sciences, University of British Columbia. His research focuses on developing innovative drug delivery technologies to enhance drug targeting with a particular interest in lipid and polymer based nanoparticles. His research program has been supported by federal funding including National Institutes of Health, Canadian Institutes of Health Research, and Natural Sciences and Engineering Research Council in Canada. In addition to contributing scholar publications in peer-reviewed journals, his team has successfully licensed four drug delivery technologies to industry with one in phase II trials for brain cancer therapy.

shyh-dar.li@ubc.ca