

The Waterloo Institute for Nanotechnology

Presents

Nanoparticle Delivery of siRNA to Tumors

Professor Leaf Huang

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RNA interference is a powerful means for a loss-of-function therapy. Delivery of siRNA to tumor cells *in vivo* remains a challenging task. Professor Huang will describe a core/membrane type of nanoparticle in which siRNA is encapsulated in the core. The outer lipid membrane, a supported bilayer with enhanced stability, can be densely PEGylated and ligand-targeted to reduce the uptake by the reticuloendothelial system and enhance the uptake by the tumor. The core can be composed of acid-sensitive materials such as calcium phosphate to facilitate efficient endosome escape of the siRNA. Tumor growth inhibition by siRNA delivered by these nanoparticles has been demonstrated in several different tumor models.



Friday, September 16th, 2011
3:30 pm - 4:30 pm
Davis Centre 1302