



Poly(iohexol) Nanoparticles As Contrast Agents for In Vivo X-ray Computed Tomography Imaging

Qian Yin, M-CNTC Trainee

Qian is a PhD student in the Department of Materials Science and Engineering at the University of Illinois at Urbana-Champaign

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Time: 12:00 – 12:30 p.m. Central (10:00 – 10:30 a.m. Pacific)
Location: 1000 MNTL at Illinois (KL 361 at UC Merced)

Abstract:

X-ray computed tomography (CT) is one of the most frequently used clinical diagnostic tools. Current clinically used CT contrast agents are largely based on iodinated small molecules. When used in vivo, however, they always get eliminated from body rapidly, leading to a very narrow time window for CT imaging and failing to provide sufficient contrast for the regions of interest. In this presentation, biocompatible poly(iohexol) nanoparticles, prepared through cross-linking of iohexol and hexamethylene diisocyanate followed by co-precipitation of the resulting cross-linked polymer with mPEG-polylactide, were utilized as contrast agents for in vivo CT imaging. Compared to small-molecule contrast agents, poly(iohexol) nanoparticles exhibited substantially protracted retention within the tumor bed and a 36-fold increase in CT contrast 4 h post injection, which makes it possible to acquire CT images with improved diagnosis accuracy over a broad time frame without multiple administrations.

Seminar Presented by:

