2016, 28 - 30 September

ICONAN 2016

Conference Programme

Biophysical Characterization, Nanoscale Composition and Cell Uptake Studies of pH-Sensitive Drug Delivery Systems

Abstract

Nanocarrier-based chemotherapy is one of the few nanotechnology-based medical therapies that reached the clinics. This happened already in 1995, when the commercial liposomal anti cancer drug delivery formulation DOXIL® was introduced in the market. Albeit these early developments, still today nanotechnology-based drug delivery systems are far from reaching optimal selectivity and controlled release ability.
In our study we use different liposomal formulations designed for pH-sensitive drug release and study their biophysical characteristics, when used for trafficking paclitaxel (PTX) and doxorubicin (DOX), both widely used chemotherapeutic anti-cancer drugs.
Our work describes a combined spectroscopy and imaging approach to evaluate the biophysical properties of liposomal formulations. We study the nanoscale composition of the nanocarriers using molecular rulers in a fluorescence quenching assay, and analyze the cell uptake characteristics based on the autofluorescence of DOX using confocal microscopy.

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Topic Areas

Nanomedecine for cancer diagnosis & therapy , Nano-Imaging for diagnosis, therapy and delivery

Session

PS1 » Poster Session & Sponsors Exhibition (13:30 - Wednesday, 28th September, Patio 25)

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