The 261st MANA Special Seminar

A New Polymeric "Nanogel" Carrier System for Delivery of Small Hydrophobic Drugs

Chair: Dr. Takao Aoyagi (MANA PI)

Prof. Allan Hoffman

(Department of Bioengineering, University of Washington, USA)

In this talk I will describe a new carrier system for delivery of hydrophobic drugs. It is based on polymeric inclusion complexes formed by interaction of polymeric-drug conjugates (Poly-Drug) with polymeric cyclodextrins (Poly-CD). We have formed polymer-drug conjugates of Paclitaxel (PTX) with maleic anhydride copolymers. The PTX is linked to the backbone by a degradable ester bond. We also synthesized a maleic anhydride copolymer conjugated with beta-cyclodextrins (Poly-CD) where the CDs are also linked by degradable ester bonds to the backbone polymer. We then interacted the polymer-PTX with the polymer-CD to form an inclusion complex "nanogel". PTX drug was efficiently released from this nanogel over many hours in in vitro tests. In this seminar I will describe the synthesis and performance of this new drug delivery system.

Venue: **Auditorium, 1F, WPI - MANA Building**

Date: **May 17th, Thursday** ***Time:*** **15:30-16:15**

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