

Pharmacy

Department Seminar

Date: 8th May 2017

Time: 5pm

Venue: S4A Level 3
Room A & B

Lipid-Dendrimer Hybrid Nanosystems for the Smart Delivery of Anticancer Drug Combinations in Ovarian Cancer Treatments



Jinghua graduated from NTU with a B.Sc. (Chemistry and Biological Chemistry). She is pursuing her Ph.D. under the supervision of A/P Gigi Chiu. Her current research focus is on the rational design and development of nanoparticle based formulations for the application in ovarian cancer therapy.

The concept of combining chemotherapeutics has been evolving greatly in the past few decades. The rationale for the combinatorial approach is on targeting multiple pathways, overcoming drug resistance, in order to enhance therapeutic efficacy with acceptable toxicity. Now the sequence of drug administration is found to impact the therapeutic outcomes significantly. Certain drug sequences demonstrated improved efficacy and/or reduced toxicity in clinical studies.

Recently our research group reported a novel hybrid drug delivery nanosystem using lipid and PAMAM dendrimer for the delivery of paclitaxel in the treatment of ovarian cancer. This nanosystem showed improved drug loading efficiency as well as enhanced therapeutic efficacy in ovarian cancer xenograft.

In this seminar, we will present how the drug sequences in combination are relevant to the therapeutic efficacy in ovarian cancer. In addition, a lipid-dendrimer hybrid nanosystem has been developed for the delivery of drug combinations with desired release sequence.