Pharmacy
Department Seminar

Date: 24 July 2017

Time: 5 pm

Venue: S4A Level 3
Rooms A & B

Role of serum albumin as a nanoparticulate carrier for nose-to-brain delivery of R-flurbiprofen: Implications for the treatment of Alzheimer's disease

Wong Ling Rong did her undergraduate studies in Chemistry at NUS. She went on to complete a Masters degree in Applied Physics at NTU while teaching at Republic Polytechnic. Ling Rong is currently working in Professor Paul Ho's group. Her research focuses on developing formulations for drug delivery to the brain for the treatment of AD.

Altering mitochondrial dysfunction represents a promising approach to treat Alzheimer's disease (AD). R-flurbiprofen (R-FP) was found to offer neuroprotective effects by inhibiting mitochondrial calcium overload induced by β-amyloid peptide toxicity in AD. However, poor brain penetration after oral administration posed a challenge to its further development for AD treatment. Intranasal delivery is one strategy used to enhance the delivery of potential therapeutic agents to the brain by leveraging on the existence of a direct nose-to-brain transport route.

In this seminar, we will discuss the potential of serum albumin as nanoparticulate carriers for the nose-to-brain delivery of R-FP to improve its brain accumulation. We will also discuss the effect of our nanoparticulate drug formulation on mitochondrial respiration in an AD cell model using extracellular flux analysis to measure real-time oxygen consumption rates of the cells.

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