

Research project

Development of a novel nano-emulsion platform for targeted delivery

Supervised by A/Prof Gordon Xu and Dr Li Li

- **Description:**

Cancer is one of the world's most devastating diseases, with more than 10 million new cases every year. Chemotherapy has been used for cancer treatment in a clinic. However, application of these anticancer drugs is restricted by poor water solubility, erratic absorption and varying bioavailability. To overcome these problems, advanced drug delivery systems are needed. Therefore, this project aims to develop a conjugated nano-emulsion platform for targeted delivery of hydrophobic drugs to enhance the permeability and bioavailability of the drugs. The efficacy of cellular delivery will be investigated.

- **Expected outcomes and deliverables: (e.g. skills obtained; publication potential; capacity to grow into an Honours project)**

This project involves synthesis and characterization of a conjugated nanoemulsion platform. The students are expected to master various preparation methods and characterization techniques and cell analysis techniques. It has capacity to grow into an PhD project and has a publication potential

- **Required prior experience;**

This project is suitable for the students with Chemistry, Science, Biomedical Science, Chemical Engineering, Biochemistry and Biotechnology.