



Jockey Club College of Veterinary
Medicine and Life Sciences

香港城市大學
City University of Hong Kong

in collaboration with Cornell University



Development of tailor-made nanomedicines and study on their in-vivo biofate

By

Prof. Ying ZHENG

PhD, Professor,

*State Key Laboratory of Quality Research in Chinese Medicine,
Institute of Chinese Medical Sciences, University of Macau*

Hong Kong Time

Date: 7 October 2021 (Thursday)

Time: 12:00pm – 1:00pm

Zoom: <https://cityu.zoom.us/j/93436463477?pwd=UnFPWDhxYTMwSTVkrRkQ3U093NE13QT09>

Meeting ID: 934 3646 3477

Password: 953545

****The seminar will be recorded and shared among JCC staff and students upon request.***

Abstract: Nowadays over 40% of new chemical entities (NCEs) under development and 60% of NCEs generated from high-throughput screening or combinatorial synthesis are water-insoluble, and poorly bioavailable with erratic absorption and poor bioactivity, presenting a major hurdle in dosage form development. To address solubility and related bioavailability issues for the Biopharmaceutics Classification System (BCS) Class II and Class IV compounds, my group has been developing many translational approaches (e.g., nanocrystals, nanoemulsion etc.) as well as the application of scalable technologies (e.g., flash nanoprecipitation, spray freeze drying etc.) for circumventing these delivery problems. After being delivered by systemic or topical route, understanding the biofate of nanomedicines in vivo is one of the most important issues for their bioactivity and toxicity. To meet these needs, we further utilized the FRET (fluorescence or Förster resonance energy transfer) imaging combined with cell monolayer model and visual zebrafish larvae model to elucidate the absorption, integrity, circulation and elimination behaviors of their nanomedicines in vivo at high spatiotemporal resolution, which will help formulation screening in the early development phases and accelerate translation research of nanomedicines in rodent.

Biography:



Prof. Zheng obtained her Ph.D in the School of Pharmacy, the Chinese University of Hong Kong. Prof. Zheng's research focuses on developing novel formulation strategies for poorly water-soluble extracts and active pharmaceutical ingredients (APIs) from Chinese Medicine for various delivery routes, and on an understanding of their transport mechanism across biological barriers as well as biofate in vivo. She has published more than 70 articles on peer-reviewed SCI indexed journals including *Advanced Drug Delivery Reviews*, *Small*, *Biomaterials*, *Journal of Controlled Release*, *Acta Pharmaceutica Sinica B* etc. Prof. Zheng also serves as an editorial board member of *Asian Journal of Pharmaceutical Science*, committee members of bioparticle professional committee in China, as well as the reviewer for many peer-reviewed international journals.

You are most welcomed to join!

Enquiries: Tatum Chan (3442 6762; chan.tatum@cityu.edu.hk)