Tentative Outline

Special Thematic Issue for the journal *Current Drug Delivery*

Title of the Thematic Issue: Materials chemistry and engineering for drug delivery

Section Editor: Wing-Fu Lai

Co-Guest Editor: Pu Zhang

- **Scope of the Thematic Issue:**

With advances in drug discovery and chemical technologies, over the years diverse agents have emerged for applications in diagnosis and treatment. Yet, direct administration of many of these therapeutic agents into a body may not be effective partly due to the presence of various biological barriers and immune responses, leading to low bioavailability and toxicity. One example is chemotherapeutic drugs, which may cause systemic toxicity upon improper administration. Development of effective strategies for effective delivery and controlled release of therapeutic agents is, therefore, of clinical importance. Regarding the practical potential of technologies for drug delivery, the objective of this thematic issue is to provide an updated account of recent advances in the synthesis, characterization, engineering and use of different carriers and formulation methods for delivery and sustained release of therapeutic agents. It is expected that this thematic issue will be a valuable resource for all academic, industrial and clinical researchers who wish to be kept informed about recent breakthroughs in delivery and formulation of agents in therapeutics and diagnosis.

Keywords: Drug discovery, chemical technologies, immune responses, therapeutic agents, clinical research, and diagnosis.

Tentative titles of the articles:

- Enzyme-responsive in situ self-assembly of peptide-based drug delivery systems
- Polymer-based gels as drug delivery systems: Recent advancements and progress
- Function and potential mechanism of arginine-rich cell-penetrating peptides in tumor-targeted drug delivery
- Exploration of conjugation chemistry in PEG-PLA polymeric system for improving the delivery of nanoparticle based-chemotherapeutic agents
- Recent advances in the development of carriers for the delivery of therapeutic agents
- Design and engineering of polymeric nanoparticles for delivery of proteins and peptides
- Antimicrobial and anti-inflammatory systems for delivery of proteins and peptides at endodontic reparative materials
- Recent advances in the application of targeting peptides modified delivery systems loaded with chemotherapeutic drugs in lung cancer
- Oral delivery of drugs using nanoparticulate systems
- Peptosomes as a novel delivery system for the application in biotechnology and medication
- Core-shell type lipid polymer hybrid nanocarriers: structures and biomedical applications

Schedule:

- ✧ Thematic issue submission deadline: March 31, 2023.

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