

Tentative Outline

Special Thematic Issue for Current Topics in Medicinal Chemistry

Thematic Issue Title : Cellular and molecular targeted drug delivery:

Nanochemistry in medical theranostics

Guest Editor: Ali Yadollahpour

Aims & Scope: Nanotechnology has opened several fields in medical theranostics ranging from gene delivery to tissue targeting and engineering. Recent advances in nanotechnology have been extensively used in medical theranostics including in targeted drug delivery. Nanosystems with unique biological features have shown great potential for developing efficient cellular and molecular drug delivery techniques. The ideal features of a drug delivery system are a long circulation time, low immunogenicity, good biocompatibility, selective and specific targeting, and high penetrating ability against different barriers including vascular endothelium and blood-brain barrier. Nanochemistry is the pivotal aspect in developing such techniques. Nanochemistry, defined as the interface of chemistry and nanoscience, deals with synthesis, modifications and optimization of building blocks with different functions and biological features. These features depend on size, surface, shape and defect properties. Nanoparticles (NPs) synthesized by different techniques could improve therapeutic efficacy and diagnostic values of different conventional approaches. In this thematic issue, we will discuss the recent advances in cellular and molecular targeted drug delivery focusing on nanochemistry. This issue aims to cover the recent advances from the lab to the clinic in using targeted drug delivery systems based on nanosystems. The issue publishes review papers on the following subtopics. Eminent researchers interested in this topic are invited to participate in this thematic issue through writing a review paper in one of but are not limited to the following titles:

Keywords: Targeted drug delivery, Nanochemistry, Medical theranostics, Nanotechnology, Nanoparticles.

Subtopics:

The subtopics to be covered within this issue are listed below:

1. Synthesis and stabilization approaches of multifunctional NPs: from lab to clinic.
2. Physicochemical penetration enhancers in drug delivery systems.
3. Chemical gas-generating nanoparticles for tumor-targeted ultrasound imaging and ultrasound-triggered drug delivery
4. Ligand-Targeted Drug (LTD) Delivery: chemical engineering advances to reach maximal safety and minimal toxicity.
5. Nanochemistry and early cancer detection: molecular and cellular imaging
6. Nanochemistry in cancer treatment: radiosensitizers, magnetic hyperthermia
7. NPs in tissue targeting and mucosal delivery.
8. Cellular uptake and tumor penetrating enhancers
9. Magnetic nanoparticles in medical theranostics

Schedule:

- Manuscript submission deadline: 30 June, 2019
- Peer review due: 30 July, 2019
- Revision due: 20 August, 2019
- Announcement of acceptance by the guest editors: 30 August, 2019
- Final manuscripts due: September, 2019

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