Tentative Outline

Special Thematic Issue for Current Drug Delivery

CURRENT TRENDS IN NANOMATERIALS: DRUG DELIVERY AND THEIR SENSITIVE ASSAYS

Guest Editors: **Dr. Ayhan Savaser & Dr. Ozgur Esim**

Scope of the Thematic Issue:

Nanotechnology have gained a significant attention for more than 50 years and still it is a popular term because of its future potential that can literally revolutionize each field in which it is being exploited. Nanotechnology is unique in that it represents not just one specific area, but a vast variety of disciplines ranging from basic material science to personal care applications. In drug delivery Nanoparticles can be used in targeted drug delivery at the site of disease to improve the drug uptake, the targeting of drugs to a specific site, and drug bioavailability. The development of novel drug delivery systems that can target the drug to its site of action is becoming an extremely important research area. For this purpose, several novel drug delivery systems and nearly every part of the body has been studied for administrating both classical and novel medicines. Therefore, promising ways of delivering poorly soluble drugs, peptides and proteins have been developed.

Considering the physicochemical properties of drugs and properties of target tissue, the development of a drug delivery system (DDS) is becoming increasingly important in the treatment of diseases, not only to facilitate drug efficacy, but also to attenuate adverse effects. The use of nanomaterials like nanosuspensions, solid lipid nanoparticles and liposomes and polymeric nanoparticles has led to the solution of various solubility-related problems of poorly soluble drugs, and drug targeting issues. Besides this, depending on their particle charge, surface properties and relative hydrophobicity, nanoparticles can be designed to be successfully used in overcoming physiological barriers. Various studies have also shown that administration of nanoparticles have reduced the systemic toxicity.

This thematic issue highlights a variety of nanomaterials used as drug delivery systems and methods that have been applied in the analysis of pharmaceuticals.

Keywords: Nanomaterıals, drug delivery system (DDS), nanotechnology, nanoparticles, material science, targeted drug delivery.

Subtopics:

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

- Nanomaterials based electrochemical sensors on anticancer drugs for biomedical applications
- Current status at drug delivery approaches and assay of anti-migraine drugs
- Lipid-coated nanosized drug delivery systems for an effective cancer therapy
- Recent advances in treatment of lung cancer: nanoparticle-based drug and siRNA delivery systems
- The application of core@shell quantum dots nanocomposites as smart nano- carriers in drug delivery and their analytical applications
- An overview on electrochemical sensors based on nanomaterials for determination of drugs of abuse
- The development of DNA nanomachines for drug delivery and electroanalytical applications
- Current progress on carbon based nanomaterials in analytical applications and drug delivery systems

Schedule:

- Manuscript submission deadline: 31st January 2020

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