

Tentative Outline (Preliminary Proposal of Thematic Issue)

Special/Thematic Issue for the journal: Current Pharmaceutical Design (CPD)

Title of the Thematic Issue: Nano-therapeutics and Nano-diagnostics in Prevention, diagnosis and management of cancer: Current status and future perspectives

Guest Editor's Name: Gaurav Goyal

- **Scope of the Thematic Issue (Brief introduction / abstract explaining the Thematic Issue):**

Nanotechnology is reshaping health care strategies and is expected to exert a tremendous impact in the coming years offering better healthcare facilities. It has led to not only therapeutic drug delivery feasibility but also to diagnostics. Materials in the size of nano range (1–100 nm) used in the design, fabrication, regulation, and application of therapeutic drugs or devices are classified as medical nanotechnology and nanopharmacology. Delivery of more complex molecules to the specific site of action as well as gene therapy has pushed forward the nanoparticle-based drug delivery to its maximum. Areas that benefit from nano-based drug delivery systems are cancer, diabetes, infectious diseases, neurodegenerative diseases, blood disorders and orthopedic-related ailments. Moreover, development of nanotherapeutics with multi-functionalities has a considerable potential to fill the gaps that exist in the present therapeutic domain. In cancer treatment, nanomedicines have superiority over current therapeutic practices as they can effectively deliver the drug to the affected tissues, thus reducing drug toxicities. Along this line, polymeric conjugates of asparaginase and polymeric micelles of paclitaxel have recently been recommended for the treatment of various types of cancers. Nanotechnology-based therapeutics and diagnostics provide greater effectiveness with less or no toxicity concerns. Similarly, diagnostic imaging holds promising future applications with newer nano-level imaging elements. Advancements in nanotechnology have emerged to a newer direction which use nanorobotics for various applications in healthcare.

Keywords: Nanotechnology, diagnostics, nanorobotics, Cancers, Immunology, nanotherapeutics

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Nanotechnology
- Oncology
- Prevention and Early diagnosis of Cancer
- Nanomedicines and nanotherapeutics

Schedule:

- ✧ Complete Thematic issue submission deadline: 30 Aug 2022

Details of Guest Editor:

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