

Tentative Outline

Special Thematic Issue for the journal: Novel Drug Delivery System, Current Indian Science

Implications of Surface Modified Novel carriers for the treatment of cancer Section Editor: Dr. Neeraj Mishra

Scope of the Thematic Issue:

Cancer has developed as a leading cause of death worldwide. Even though traditional chemotherapy has been the keystone to combat cancer, it is associated with normal cell toxicity. Due to lack of specificity, conventional cancer treatments often cause severe side effects and toxicities. Current challenges of anticancer drug development include the site-specific delivery with low systemic toxicity. The development of multidrug resistance (MDR) is one of the major challenges to the success of traditional chemotherapy treatment in cancer patients. In World Over 70 lakhs of people die every year due to MDR. Also known as multidrug resistant bacteria (MDR), superbugs are bacteria that have evolved to escape the powerful grasp of our most powerful medical weapons, antibiotics. MDR both in cancer cell lines and human tumor tissues is most often associated with the overexpression of the ATP-binding cassette transporter, P-glycoprotein (Pgp), also known as multidrug resistance protein 1 (MRP1).

Various surface modified nanoparticulate approaches such as ligand and receptor-based targeting, triggered release methods, si RNA delivery, prodrug approach and analogue/chemical conjugation to treat cancer cells. Present thematic issue will educate the researchers in field of Biotechnology, Microbiology and Pharmaceutical sciences to understand the importance of surface modified nanoparticles targeting for the treatment of different type of cancer associated with MDR.

Keywords: Colon cancer, Probiotics, Surface modification, Cervical cancer, MDR, p- GP

Sub-topics:

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

- Nano-mediated drug delivery system for treatment of cancer.
- Advancement of Nanocarriers based therapeutics for effective management of Colorectal Cancer.
- Novel drug delivery strategies for the management of Breast Cancer.
- Recent approaches to overcome the MDR in colorectal cancer by using nanocarriers.
- Surface engineered nanostructured composites for targeting cancer cells.
- Microenvironment of tumor cell: Opportunities for target and treatment approach.

Tentative titles of the articles and list of contributors:

1. Recent approaches to overcome the MDR in colorectal cancer.
2. A comprehensive review on nanotheranostics-based approach for the treatment of triple-negative breast cancer.
3. Smart and Bioinspired nano-mediated drug delivery system for treatment of cancer.
4. Advancement of Nanocarriers based therapeutics for effective management of Colorectal Cancer.
5. Advancement of Nanocarriers based therapeutics for effective management of Colorectal Cancer

6. An Overview In Novel Drug Delivery System And Approaches For Management Of Breast Cancer Therapeutics.
7. Nanodelivery Systems: An Efficient and Target-Specific Approach for Drug-Resistant Cancer.
8. Surface engineered nanostructured composites for targeting cancer cells.
9. Microenvironment of tumor cell: Opportunities for target and treatment approach.

Schedule:

✧ Thematic issue submission deadline: 15 December 2022

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