

Special Issue on
**Hybrid Nanoplatfoms for Precise
 Chemoimmunotherapy**

CALL FOR PAPERS

Current medical science has been making great strides in diagnosis and treatment of cancer; however, it still remains a big challenge and one of the major causes of mortality worldwide. Cancer, a fatal disease, is characterized by cooccurrence of multiple biological processes and, fundamentally, manifested by uncontrolled proliferation of cells followed by invasion and metastasis. It is always a big concern to select the most effective strategy for anticancer therapies in long term use, which can overcome associated adverse effects and also evade the menacing issue of multidrug resistance. In general, immune system of the body is not strong enough to singlehandedly tackle pathophysiological manifestations of cancer. However, what we can be sure of is that human body does recognize normal cell from a malignant one (howsoever small this quantum of recognition might be) and tries to actively respond against tumor cells. The notion that the human body was capable of being primed or trained to self-heal by manipulating the immune system seemed fallacy just a decade ago. However, with strong progression in frontiers of tumor immunology, it would not be a total exaggeration to assume that next plausible maneuver in clinically tackling cancer could lie in a combinatorial strategy amalgamating the circumstantially effective chemotherapy with a facilitatory immunomodulative regimen to obtain a focused counter measure free from incidences of adverse effects or subpar efficacy.

Nanomedicines have stamped their clinical utility and several nanotechnology driven products are in use to treat cancer. Due to nanometric size, these delivery platforms furnish a new way to deliver chemotherapeutics and immunotherapeutics in cancer cells by modulating their binding capacity with cell membrane and different cellular organelles, especially nucleus. Nanomedicines can accumulate in tumor microenvironment, providing high payload delivery to cancer cells avoiding nonspecific toxicity. They can protect the encapsulated therapeutic molecules from specific and nonspecific degradation and improve delivery in cancer stroma to provide an activation/or restoration of antitumor response. Introduction of a single particle based approach to furnish immunotherapy coupled chemotherapy could in fact address several deleterious indices of cancers. Keeping the above manifests in mind, this current issue is focused on the paradigm of utilizing nanoplatfom technologies for chemoimmunotherapy of cancer.

Potential topics include but are not limited to the following:

- ▶ Synthesis and characterization of nanomedicines that can furnish a chemoimmunotherapeutic response single handedly
- ▶ Fabrication of drug delivery system that can target cancer stroma cells and cancer cells using ligands, for example, antibodies, carbohydrates, aptamers, and peptides
- ▶ Screening of novel targets in tumor microenvironments through chemoimmunotherapeutic nanomedicines based approach
- ▶ Development of advanced drug delivery systems that can respond to biological and external stimuli including pH of the tumor microenvironment, enzymatic systems in the tumors microenvironment, heat, light, magnetic field, and ultrasound
- ▶ Simultaneous delivery of chemotherapeutics and oligonucleotides/peptides/proteins for combinations based chemoimmunotherapy
- ▶ Novel pharmacokinetic profiling of chemoimmunotherapeutic nanomedicines

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jdd/hnpci/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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