

Special Issue on
**Nanotechnology Based Immunotherapeutic Strategies
for Cancer Treatment**

CALL FOR PAPERS

In clinic, traditional cancer treatment modalities, such as surgery, radiotherapy, and chemotherapy encounter many major challenges, including recurrence, metastasis, and significant side effects due to their off-target toxicities. Immunotherapy, by harnessing patients' immune systems to fight cancer, emerged as a powerful strategy since it improves long-term survival by preventing recurrence and metastasis to some degree. However, currently used immunotherapeutic strategies, such as immune checkpoint blockade and CAR T cell therapies, may overshoot its target and attack healthy tissues. While other strategies, such as cancer vaccination, fail to mount effective antitumor immunity due to strong immunosuppressive tumor microenvironment. Hence, there is greater necessity to develop novel tumor-targeted immunotherapies that offer unique advantage of on-target tumoricidal effects with decreased immune-associated toxicity.

For cancer therapy, undoubtedly, nanotechnology holds tremendous promise in developing tumor-targeted immunotherapies. It can remarkably increase the effectiveness of biologics, such as cancer neoantigens, and immunostimulatory molecules, by altering their colocalization, biodistribution, and release kinetics. Hence, the focus of this issue is to provide researchers an updated platform to openly discuss novel strategies/findings for engineering immune-nanoparticles that can effectively control cancer by precisely delivering various immune bioactive molecules to the desired tumor site/specific immune cells. In this regard, we invite researchers to contribute original, high-quality research articles as well as review articles that address innovative nanotechnology based immunotherapeutic strategies for cancer immunotherapy.

Potential topics include but are not limited to the following:

- ▶ Cancer nanovaccines: cancer neoantigens with or without adjuvants
- ▶ Artificial antigen presenting cells
- ▶ Delivery of immunostimulants (e.g., adjuvants, such as CpG, poly-ICLC, or other TLR ligands)
- ▶ Delivery of immunomodulators (e.g., checkpoint inhibitors, such as anti-CTLA-4 and anti-PD-1 receptors antibodies)
- ▶ Reverting suppressive activity of immune cells, N2 neutrophils, M2 macrophages, Tregs, and tolerogenic DCs
- ▶ Combinatorial therapies and other novel approaches

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

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

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