

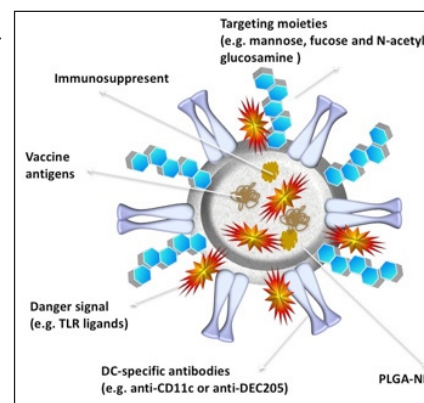
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Tailored nanoparticles for pharmaceutical applications

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Despite significant advances in recent years towards the development of new therapies, cancer is still a largely unmet medical need and the leading cause of death in industrialized countries. The main challenge in cancer therapy is the patients' immune suppression leading to tumor relapse and therapeutic failure. Chemotherapy agents are often accompanied by various side effects and poor pharmacokinetics profile. Advancements in nanoparticles as novel drug carriers are rapidly progressing and offer exciting promises. Polymeric nanoparticles have been developed, characterized and applied to enhance the efficacy of the immunotherapy and chemotherapy of cancer. The nanoparticles showed significantly superior efficacy compared to conventional treatments. The drawbacks and challenges of the current cancer treatments and different strategies to overcome the issues will be presented and discussed. Targeted nanoparticles have shown promising outcomes to add new tool for cancer therapy.



Recent Publications

1. Haddadi A, Jahan S T and Sadat S M A (2018) Design and immunological evaluation of anti-CD205-tailored PLGA-based nanoparticulate cancer vaccine. *Int J Nanomedicine*; 13: 367-386
2. Haddadi A and Rafiei P (2017) Docetaxel-loaded PLGA and PLGA-PEG NPs for IV application: pharmacokinetics and biodistribution. *Int J Nanomedicine*; 12: 935-947.

Biography

Azita Haddadi is currently working as an Associate Professor in the Division of Pharmacy at University of Saskatchewan. She has completed her PharmD and PhD in Pharmaceutical Sciences. She has also completed her 3-year Postdoctoral Fellowship followed by a Research Associate at the University of Alberta and as a Senior Scientist at the Quest PharmaTech Inc. Her research program focuses on overcoming the ongoing challenges in cancer therapy. The main emphasis of her research is to develop new biomedical and pharmaceutical nanotechnology strategies for cancer chemo-immunotherapy.

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