



## Nanoparticles for Targeting and Treating Macrophages

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### Message from the Guest Editor

Nanoparticles are nanomaterials with three external nanoscale dimensions with tunable physical, chemical, and biological characteristics. Regardless of the nanomaterial composition, macrophages can detect and incorporate these foreign bodies by phagocytosis. Recent investigations are taking advantage of this biological fact to design nanoparticles for specific macrophage targeting and treatment in a wide array of diseases. Macrophages are plastic cells from the innate immune system that play different roles in the development, homeostasis, tissue repair and immune response. Indeed, macrophage modulation is of vital importance in chronic inflammation, fibrosis, wound healing, and cancer. Nanoparticles can be modified by the addition of ligands to achieve specific macrophage targeting for drug or gene therapy. They can also be integrated in hydrogels or medical devices to attract and modulate macrophages and the innate immune response. The aim of this issue is to uncover all the different strategies to use nanoparticles to target and modulate macrophages.





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