Tentative Outline

Special Thematic Issue for Current Drug Targets (CDT)

Nanoparticles approaches for tissue regeneration, diagnosis and therapeutic purposes

Guest Editor: Dr. Andrea Del Fattore

Aims & Scope:

Nanomedicine is the field of medical science which involves the application of nanotechnology and represents one of the most considerable and promising area of medicine, important for the diagnosis and treatment of several diseases. The use of nanoparticles (NPs) and/or extracellular vesicles (EVs) can open new frontiers in traditional medicine. Extracellular vesicles are composed of a lipid bilayer including transmembrane proteins and enclosing cytoplasmic components. Such vesicles can transmit signals by interaction at cell surface, by internalization into endocytic compartments, or by fusion with plasma membranes. EVs are a heterogeneous population including exosomes and microvesicles that differ in their size, origin and antigenic composition.

Particularly, in cancer therapy NPs/EVs represent a powerful tool since they overcome side-effects of conventional therapies. Indeed, while traditional cell-based therapeutics had numerous and severe limitations, including cytotoxicity to healthy cells, poor biodistribution and poor bioavailability, nanoparticles are being explored as vehicles to deliver drugs and/or therapeutic agents to target cells with high specificity and little-to-no cytotoxicity. Moreover, they can be used for diagnostic purposes.

We invite investigators to contribute original research articles as well as review articles that will describe the new scenary of nanomedicine. Potential topics include, but are not limited to:

- Nanoparticles to prevent immune activation
- Nanomedicine and cancer
- Nanotechnology and Regenerative Medicine.

Schedule:

✧ Manuscript submission deadline: December 2019

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