

Special Issue on Advances in Gene Delivery Systems

Call for Papers

Gene therapy can be defined as incorporation of genetic material (i.e., DNA or RNA) in the cellular gene regulation system, either to correct the expression of a malfunctioning gene or to modulate the cellular functions through expression of the newly incorporated gene. However, the effective functioning of genetic material is hampered by rapid degradation by the nucleases present in the *in vitro* and *in vivo* milieu. To circumvent this issue and achieve efficient and targeted gene delivery, numerous vectors have been developed, broadly categorized as viral and nonviral vectors. The viral vectors owing to their naturally evolved transduction properties were initially proposed as potential carriers due to site specificity, but their large clinical application is hindered because of immunogenicity and pathogenicity. Later, a wide variety of nonviral vectors were engineered from polycationic lipids, polypeptides, histones, and other chromosomal proteins, hydrogel polymers, calcium phosphate nanoparticles, metallic nanoparticles, and cationic polymers.

We invite researchers to submit original research as well as review articles that will stimulate the quest towards development of safe, efficient, and target-oriented delivery vectors for gene therapy. We are interested in articles that explore various dimensions of gene delivery (i.e., right from preparation, characterization of novel vectors to their *in vitro* and *in vivo* studies in animal models or humans). Potential topics include, but are not limited to:

- Exploring novel strategies for preparation of gene delivery vectors
- Advances in tools and techniques for characterization of gene delivery vectors
- *In vitro* studies dealing with efficient and target directed gene delivery via vectors
- Explore the cytotoxicity potential of novel vectors employed for gene delivery
- Chemical and biochemical manipulations of vectors to achieve disease specific gene delivery such as cancer

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complete manuscript through the journal Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/biomaterials/agds/> according to the following timetable:

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| Manuscript Due | Friday, 25 July 2014 |
| First Round of Reviews | Friday, 17 October 2014 |
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