Tentative Outline

Special Thematic Issue for Current Gene Therapy

Title of thematic issue: Gene therapy & Cell therapy

Guest Editors:

Marcelo Bispo de Jesus

Aims & Scope: Offering a powerful therapeutic approach, Gene therapy & Cell therapy will soon become a reality and hopefully improve the treatment of many pathologies like cancer, comorbidities, infectious diseases, and inherited and somatic mutations. Accelerating the development of Gene therapy & Cell therapy requires the combined effort of the development and improvement of gene delivery systems and cellular strategies, followed by their *in vitro* and *in vivo* evaluation regarding efficiency and safety. The molecular mechanisms bring new insights to the clinical applications, which, in return, adjust the usability of these new tools. Therefore, in this special issue, experts from the field provide their opinion about the latest tools, strategies for the safe design, synthesis, and evaluation of gene delivery systems and cell therapy, aiming to accelerate their clinical translation.

Keywords: lipid nanoparticles, polymeric nanoparticles, gene delivery, gene therapy, cell therapy, tissue regeneration

Subtopics:

The subtopics to be covered within this issue are listed below:

- *Mesenchymal Stromal Cells (MSCs): ideal warhorse for cellular therapies to treat angiogenesis-related diseases*
- *New approaches in Gene Therapy for Cancer Treatment*
- *Ultrasound-mediated gene delivery*
- *Polymeric Platforms towards the Delivery of Nucleic Acids inside the Cells: Current Status, Challenges and Opportunities*
- *Tissue Engineering and Regenerative Medicine*
- *pH-sensitive gene carrier for cancer therapy*
- *Gene therapy based on lipid nanoparticles as non-viral vectors for Glioblastoma treatment Toxicity of pIDUA / cationic nanoemulsions in an MPS I model*

Schedule:

- ✧ Manuscript submission deadline: 02/02/2021
- ✧ Peer Review Due: 03/30/2021
- ✧ Revision Due: 04/30/2021
- ✧ Announcement of acceptance by the Guest Editors: 05/20/2021
- ✧ Final manuscripts due: 06/20/2021

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