

PHARMACEUTICAL NANOTECHNOLOGY

Call for Papers for a Special Issue on the Application of Targeted Nanotechnology

Potential Guest Editors

Dr. Darryl Martin

Overview

This Special Issue will focus on the application of targeted nanotechnology for diagnostic and therapeutic purposes with the goal of improving human health.

Some areas of needed improvement for the nanomedicine field include the poor efficiency in crossing the blood-brain barrier (BBB) and the bladder permeability barrier (BPB). In addition, the residence time / bioadhesive force also is a factor as these nanoparticles play an important role in absorption across biological barriers. Specific areas include eye absorption during excess production of tears, bladder absorption during routine bladder filling and voiding, and nasal absorption during the production of excess aqueous secretions.

To overcome the abovementioned nanotechnology challenges, the main focus will be on targeted nanomedicine. Functionalized nanoparticles have the potential to improve treatment outcomes by bringing therapeutic payloads to specific areas of the body. In addition to their role in facilitating therapeutics, they have the potential to improve diagnostics. Functionalized nanoparticles can improve tumor detection, particularly for distant metastatic tumors.

This topic will bring together translational scientists, engineers, and physicians to discuss advancements in the nanomedicine field such as enhanced tumor targeting, payload release, biocompatibility, and bioadhesive force. These advancements should be evaluated in preclinical and/or clinical models.

As targeted therapies are evaluated for their efficacy in *in vivo* models, improvements to patient/rodent safety will need to be assessed before clinical approval of targeted nanoparticle platforms are implemented.

Topic areas included, but are not limited to:

- Targeted nanoparticles in a pre-clinical setting
- Clinical therapeutic applications
- Clinical diagnostic applications
- Improved payload release for specific areas of the body
- Tumor targeting
- New trends in nanomedicine
- Recent progress in targeted delivery

- Reducing particle toxicity
- Overcoming biological barriers
- Primary and metastatic tumor penetration
- Improving particle biocompatibility
- Diagnostic imaging in rodents
- Therapeutic interventions in rodents
- Anti-tumor properties
- Nanoparticle biodistribution

Notes for Prospective Authors

Prospective authors are invited to contribute high-quality papers by the submission deadline through the online submission system. The submission of a paper implies that the paper is original and has not been submitted for review or is not copyright-protected elsewhere and has not been presented by an author if accepted. All submitted papers will be refereed by experts in the field based on the criteria of originality, significance, quality, and clarity. The authors of accepted papers will have an opportunity to revise their papers and take consideration of the referees' comments and suggestions.