

Tentative Outline

Special Issue for Current Medicinal Chemistry

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Title of Thematic Issue

Current intellectual glance over nanoparticles in cancer and neurodegenerative research

Aims & Scope:

Nanoparticles are a highly fascinating technologically, and are fundamentally important particles due to their large surface area in relation to their volume. They provide numerous advantages in their application to the life- and environmental-sciences consequent to their particle size (1-100 nm), which can be smaller than the size of a virus; thereby allowing them to potentially strongly adhere to surfactant and other biological materials. In this regard, nanoparticles represent promising agents for attaching biological entities to without changing their functions. There are numerous areas across the sciences where these engineered particles could be hugely beneficial; many of them inadequately explored. To aid understand the fuller potential and efficacies of these particles, more research is needed, and the results brought into the limelight to allow them to be more fully and rapidly applied. Their evaluation in the areas of anticancer, antimicrobial, antiviral, anti-carcinogenic, sensory agents with newer techniques, and environmental applications should be encouraged.

The recent and continuing implementation of nanoparticles into biomedical research has gained huge and well-deserved importance. One of many of the highly promising areas is the synthesis of bioactive nanoparticles across various domains. In this regards, metallic nanoparticles are being increasingly utilized across multiple studies focused to mitigate disabling and fatal lifestyle associated diseases. The eco-friendly (green) synthesis routes for these bio metallic nanoparticles are of the high demand to support research to reduce toxicity and augment efficacy, and this can

result from enhanced tissue permeation, more effective drug delivery to the disease site, and a prolonged circulation time to maintain therapeutic drug levels. Nanoparticles are increasingly playing a critical role in the Veterinary sciences to both mitigate disease and improve animal nutrition. Likewise, a developing area still in its relative infancy, this veterinary research domain should be emphasized, particularly in relation to its agricultural relevance that is of great global importance. Researchers, academicians (of relevant fields), pharmacists, material scientists, physicists, biologists, computational scientists in the discipline of Artificial intelligence and deep machine learning are also welcomed to contribute to this special issue. It is envisioned that the issue will explore trends of nanoparticle implementation across a broad-spectrum of disciplines, as the knowledge domain naturally coalesces the fields of natural sciences together with physics, chemistry, engineering, material sciences, computational sciences with the biological sciences to provide different unique formulations of nanostructures to support multiple scientific advancements.

Keywords: Nanoparticles, material scientists, natural sciences, virus.

Schedule: Submission deadline is 31st August 2021

