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Editorial

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Emerging Nanotechnologies in Pharmaceutical Sciences: Opportunities and Challenges

Mahmoud Elsabahy

Badr University in Cairo Research Center, Badr University in Cairo, Cairo 11829, Egypt

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It is my honor to serve as the Editor-in-Chief of Pharmaceuticals and Nanotech Connect, a newly established journal by *Scifiniti*, and to introduce its inaugural issue. Our journal provides a dynamic platform that bridges recent advancements in nanotechnology and conventional pharmaceutical sciences, fostering innovation and translational research while promoting the global integration of education, research, and practice in pharmacy and nanotechnology. The focus of this journal is to disseminate creative contributions that promote drug discovery, delivery, effectiveness, and safety, as well as nanoscale technologies that could enable future scientific advances.

It is known that the implementation of therapeutics and diagnostics, whether synthetic or natural, at the nanoscale has transformed traditional drug delivery systems. The approach has been demonstrated to enhance therapeutic effectiveness, reduce adverse reactions, and explore new possibilities for treating recurrent and complex diseases. For example, nanotechnology has enabled the delivery of drugs to previously inaccessible tissues or regions of the body. Moreover, it allows the selective identification of diseased cells and tissues while preserving healthy organs, thereby reducing toxicity. In fact, the design of nanoscale drug delivery systems, in which every nanometer of the device can be customized to suit a particular function or recognize a drug-targeting biomarker, has been demonstrated to affect therapeutic outcomes significantly.

Nevertheless, some issues persist in applying nanotechnology to pharmaceutical development and production. Among these challenges is the need for sophisticated equipment, which may delay production or increase costs, thereby imposing a financial burden on patients. It is also important to note that there can be a difference in in vivo performance and toxicity between nanoscale and bulk forms of a drug or material.

The journal welcomes studies in the fields of pharmaceutics, pharmaceutical technology, nanomedicine, drug delivery systems, drug design and targeting, pharmacokinetics and pharmacodynamics, pharmacogenetics, pharmacogenomics, and the clinical applications of nanopharmaceuticals. It also encompasses research in pharmaceutical industry practices, phytochemistry, medicinal and pharmaceutical chemistry, nanoinformatics, biotechnology, natural products, and medicinal plants.

Pharmaceuticals and Nanotech Connect aims to connect authors, researchers, investors, and policymakers to advance the future of nanomedicine and nanopharmaceuticals. It will be a dynamic platform to deliver scientific breakthroughs that utilize nanotechnologies in pharmaceuticals. I encourage my peers and readers to participate in this ongoing discussion and contribute to our shared body of knowledge, helping to establish new boundaries in the field of nanopharmaceuticals.

Dr. Mahmoud Elsabahy
Editor in Chief,
Pharmaceuticals and Nanotech Connect

Corresponding Author:
Mahmoud Elsabahy, Badr University in Cairo Research Center, Badr University in Cairo, Cairo 11829, Egypt, mahmoud.elsabahy@buc.edu.eg

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Conflicts of Interest

The author declares no conflicts of interest.

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