Phytoantioxidants and Nanotherapeutics

Mithun Rudrapal (Editor)

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DESCRIPTION

Phytoantioxidants and Nanotherapeutics

Discover the medicinal importance of antioxidant herbal medicines, phytochemicals, and nanodelivery systems for a wide range of diseases

Phytomedicine has been—and continues to be—central to many cultures and societies due to its low toxicity, low cost, accessibility, and efficacy in treating difficult diseases. In fact, many plant-derived bioactive natural products serve as potential sources of drug leads or therapeutic agents in the treatment of a wide range of human diseases. When combined with nanotechnology, phytomedicine has the potential to affect and impact a tissue-specific site, which can reduce drug dosage and side effects while improving activity.

*Phytoantioxidants and Nanotherapeutics* offers a comprehensive look at the significant role that phytomedicine-derived antioxidants play on the field of medicine, particularly when combined with the nanotechnology-derived drug delivery systems. The book thoroughly covers the herbs, plant extracts, and other dietary elements that may be used as sources of natural antioxidants and similarly highlights the use of phytomedicine-derived bioactive compounds including plant polyphenols and flavonoids to reducing the impact of oxidative stress induced human diseases. The text also demonstrates the biochemical and therapeutic targets of nanodrugs and discusses nanostructure toxicity, while emphasizing the challenges and regulatory issues involved with nanophytotherapeutics.

*Phytoantioxidants and Nanotherapeutics* readers will also find:

- A helpful bridge between the cutting-edge field of nanotechnology delivery and phytotherapeutics
- The potential role of bioactive phytochemicals, particularly polyphenolic compounds and flavonoids, in oxidative stress-induced diseases

- Description of the latest developments on nanotherapeutics of phytoantioxidants for the treatment of certain chronic human diseases, such as cancer, inflammations, diabetes, viral, bacterial and parasitic infections, nervous system disorders, cardiovascular disorders, and neurological diseases.

*Phytoantioxidants and Nanotherapeutics* is a useful reference for drug manufacturers and drug developers, formulation scientists, biomedical scientists, medicinal chemists, phytochemists, healthcare providers, and academics and researchers.

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**ABOUT THE AUTHOR**

**Mithun Rudrapal, PhD, FIC,** is presently working as Associate Professor and Head at the Department of Pharmaceutical Chemistry, Rasiklal M. Dhariwal Institute of Pharmaceutical Education and Research (Affiliated to Savitribai Phule Pune University), Pune, Maharashtra, India. Dr. Rudrapal has been actively engaged in teaching and research in the field of Pharmaceutical and Allied Sciences for more than 12 years. He has over 100 publications in peer-reviewed international journals to his credit and has filed a number of Indian patents. In addition, Dr. Rudrapal is the author or editor of over a dozen published or forthcoming books.

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