# Utilization of nanotechnology in conventional phytomedicine - A promising green therapy: An Updated Overview

[1] Shah Zahida, [2] Shafi Sabeeha

[1, 2] Department of Pharmaceutical Sciences, University of Kashmir, India.
E-mail: zahidashah117@gmail.com

**Background:** Since the dawn of human civilisation there is a use of phytomedicine or herbal drugs. The important phytoconstituents present in the plant can help alleviate chronic diseases. Because of the lesser side effects and cost effectiveness herbal drugs are endorsed over allopathic medicine. Use of Nanotechnology can bloom the phytomedicine technology as it will help in treating the chronic diseases by targeting the disease site because of their nanosize. Novel Nanoextractphytomedicine formulations offer greater advantage than conventional phytomedicines in many ways like Increase in the Solubility and bioavailability, greater biological activity, enhancement of stability, Controlled delivery of dosage forms and by encapsulating the drug it can provide protection from the physical and chemical degradation of the stomach.

**Objectives:** The objective of the study was to collect the data from various sources so as to emphasize the utilization of Nanotechnology in Phytomedicine.

**Study Design:** The study design was Meta analysis. The data collection was done from various systemic literature survey sources.

**Materials and Methods:** A systemic review literature survey shows that different types of nanopharmaceuticals can be prepared by adopting various techniques like High pressure homogenization, Complex Coacervation , Co-precipitation, Nanoprecipitation or solvent Displacement, Solvent emulsification diffusion, Supercritical fluid and Self-assembly methods.

**Results:** Analysis shows that Nanoparticulate phyto medicine can be an effective tool in targeting the Chronic diseases site like Cancer without binding the ligands and also the drug delivery is rapid as compared to the conventional phytomedicine besides several advantages also.

**Conclusion:** Employing Nanotechnology offers greater advantage in overcoming problems of conventional phytomedicine drug discovery by increasing solubility, bioavailabilty and increased patient compliance.

**Key Words:** Nanotechnology, Phytomedicine, Bioavailability, Encapsulation, Controlled drug delivery.



5th International Conference on Nanotechnology for Better Living (NBL-2019), Jointly organized by National Institute of Technology (NIT) Srinagar and Indian Institute of Technology (IIT) Kharagpur; April 7 – 11, 2019 at SKUAST, Shalimar Srinagar, Jammu and Kashmir, India; Editor: Dr. M. A. Shah and Prof. P. Banerji, ISBN:978-81-939516-0-6; Published by Applied Science Innovations Pvt. Ltd., Pune, Maharashtra, India.