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Advances in nanotechnology based drug delivery system of curcumin

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Curcumin, a naturally occuring polyphenolic compound, is known to have a wide range of therapeutic and pharmacological properties. Curcumin is bioactive ingredient of turmeric & it is use as spice and as nutritional supplement & isolated from rhizomes of *Curcuma longa* Linn. of family Zingiberaceae. It has a role as antioxidant, anti-inflammatory, anti-hyperlipidemic, anti-cancer, digestive, anti-allergic, antibacterial etc., but curcumin has main drawbacks such as instability, low solubility, poor bioavailability & rapid metabolism. Over a period of time, a lot of emphasis has been given to improve the biodistribution & all drawbacks of native curcumin, but it is only recently that application of the field of nanotherapeutics has significantly improved its therapeutic efficacy. Development of nanorange formulations of curcumin, popularly known as "Nanocurcumin." Nonotechnology drug delivery system of curcumin including liposomes, solid-lipid nanoparticles, micells, nanosuspension, nanoemulsion, self microemulsifying drug delivery system which provide promising result for curcumin to improve its biological activities. These attempts have given a strong platform to get all the biological benefits from this phytodrug, which was not significantly possible earlier. We also summarize the biological applications, patented technologies, and current status of the ongoing clinical trials related to nanocurcumin.

Biography

Rutuja Munot is studying in final year of B.pharmacy in Pad. Dr. D. Y. Patil college of Pharmacy, India.