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DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

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TECHNOLOGY
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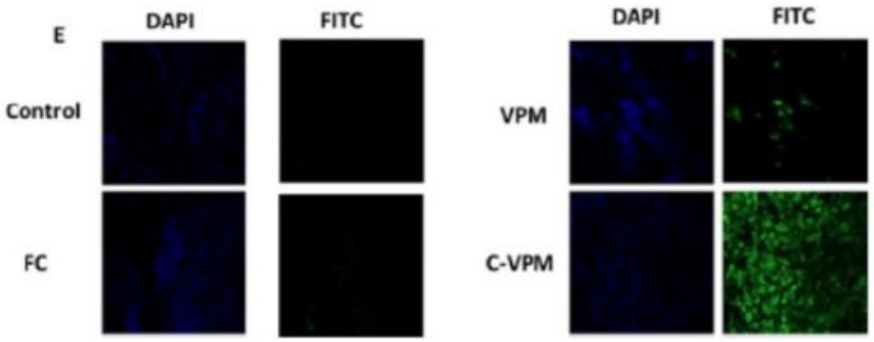
GRANTED

(IN452324) A nano-micellar composition for drug delivery and method of preparing the same



NEED

Chemotherapy faces significant challenges in drug delivery, including poor bioavailability and systemic toxicity. This invention offers a solution by encapsulating curcumin in a nano-micellar system for targeted, efficient delivery.

MARKET ANALYSIS

The global market for nanomedicine is expected to grow at a CAGR of 10.4% from 2023 to 2033, driven by advancements in drug delivery systems for cancer and chronic diseases. (Source: Grand View Research, 2023)

TECHNOLOGY OVERVIEW

This invention involves a nano-micellar drug delivery system that encapsulates curcumin, a chemotherapeutic agent, in an amphiphilic polymer micelle, improving its bioavailability and targeted delivery. The system includes a hydrophilic compound, lipid, amino-acid linker, and coupling agents.

Target Industries

1) Pharmaceutical companies focused on cancer therapeutics and targeted drug delivery. 2) Biotechnology firms specializing in drug formulations and nanomedicine. 3) Healthcare providers adopting advanced drug delivery systems for oncology treatments.

TECHNOLOGY KEY FEATURES

1) Nano-micellar drug delivery system using amphiphilic polymers. 2) Enhanced delivery of curcumin, a chemotherapeutic agent, with improved bioavailability. 3) Precise composition ratios for controlled drug release and targeted delivery.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

Read more here

Technology is available for licensing/ co-development.

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