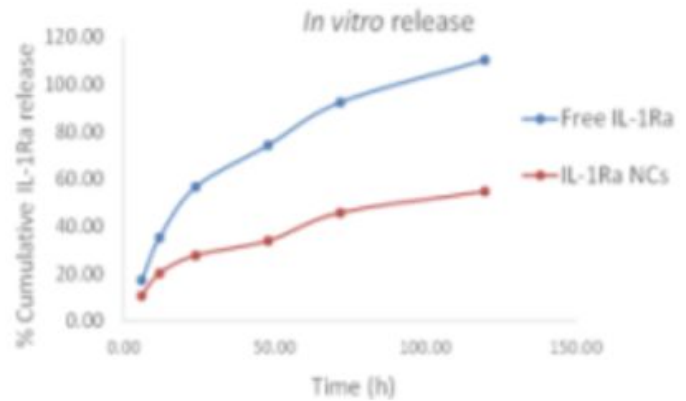




PENDING

(IN202311043001)

Polymeric nanocomplexes holding therapeutically active ingredient for sustained release and method of preparing the same



NEED

Effective and controlled delivery of therapeutic agents, such as proteins, peptides, and nucleic acids, is a critical challenge in drug delivery. Current systems often fail to provide sustained release, limiting their effectiveness in treating chronic conditions like diabetes and cancer.

TECHNOLOGY OVERVIEW

This invention introduces polymeric nanocomplexes that combine cationic and cholesterol-based polymers to achieve sustained release of therapeutic agents. The nanocomplexes, electrostatically interacting with proteins, peptides, or nucleic acids, offer a promising solution for controlled drug delivery, enhancing bioactivity and targeting specific diseases without chemical reactions, such as IL-1Ra.

TECHNOLOGY KEY FEATURES

The technology uses a unique combination of cationic and cholesterol-based polymers for sustained release of therapeutic agents. This approach ensures bioactivity, stability, and effective delivery without chemical reactions for diseases like diabetes and cancer.

[Read more here](#)

MARKET ANALYSIS

The global drug delivery market is projected to grow at a CAGR of 7.5%, reaching USD 13.0 billion by 2033. Key drivers include increasing chronic disease prevalence, advancements in biopharmaceuticals, and growing demand for targeted treatments. India's pharmaceutical industry is poised for growth, contributing significantly to global trends.

Target Industries

Pharmaceutical, Biotech, Healthcare, Pharmaceutical manufacturers focusing on biologics and protein-based therapies; Biotech companies working on gene therapies; Healthcare service providers integrating novel drug delivery systems for chronic conditions.

AT A GLANCE

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

Technology is available for licensing/ co-development.

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