Patent Search

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Abstract:

The invention discloses a method for isolating a biopolymer from gossypium herbaceum seeds and formulating bionanoparticles loaded with Zidovudine and using the gossypium herbaceum biopolymer as a nanocarrier. The biopolymer from gossypium herbaceum isolated by simplified and economical process and subjected for physica spectral studies, which includes IR, NMR, DSC and UV spectroscopy which confirms its polymeric nature. The biopolymer was devoid of acute toxicity. The different Zidovuc nanoparticles were prepared using nanocarriers and other coprocessing agents and evaluated for its retardability, in vitro release studies, dispersibility and particle size determination. The results suggests that the nanocarrlers show promising retardability and the formulation is feasible for for lung specificity.

Complete Specification

DEVELOPMENT PROCESS OF ZIDOVUDINE
BIO-NANOPARTICLES FOR LUNG
SPECIFICITY
3
COMPLETE SPECIFICATION
BACKGROUND OF INVENTION
BIO-POLYMER:
Biopolymers are polymers produced by living organisms. Since they are polymers, biopolymers contain monomeric units that are covalently bonded to form larger structures. There are three main classes ofbiopolymers based on the differing monomeric units used and the structure ofthe biopolymer formed: polynucleotides, which are long polymers composed of 13 or more nucleotide monomers; polypeptides, which are short polymers of amino acids; and polysaccharides, which are often linear bonded polymeric carbohydrate structures. Cellulose is the most common organic compound and biopolymer on Earth. About 33 percent ofall plant matter is cellulose. The cellulose content ofcotton is 90 percent and that ofwood

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