

Abstract of Presentation

Note: This paper should be typed in “Times New Roman” of 12pt.

Presentation Title(Should be no more than 20 words):

Nanoparticles as a Potential Drug Carrier

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Abstract :

In recent years, significant effort has been devoted to develop nanotechnology for drug delivery in biocompatible nanocomposites such as nanoparticles, nanocapsules, micellar systems and conjugates. These systems, in general, can be used to provide targeted delivery of drugs, to improve oral bioavailability, to sustain drug/gene effect in target tissue to solubilize drugs for intravascular delivery and to improve the stability of therapeutic agents against enzymatic degradation.

Nanoparticles (NPs) are sub-micronized polymeric colloidal particles with therapeutic agent of interest encapsulated within their polymeric matrix, adsorbed or conjugated onto the surface. Chitosan has been a polymer of choice used in preparing polymeric NPs, because of its unique properties including acceptable biodegradability, biocompatibility, mucoadhesive properties, the ability to increase membrane permeability, and ability to degradation by lysozymes in serum.

In this study we formulate a model drug in a controlled release system providing an efficient control of the drug levels in blood, reducing its side effects and decreasing frequency of administration, thus improving patient compliance. This was achieved through complexation of the drug with CDs and encapsulating the complex in chitosan nanoparticles (CS NPs).