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Polymeric prodrugs: Recent achievements and general strategies

Neeraj Agrawal

Pacific College of Pharmacy, India

It is well known that polymeric prodrug or polymer-drug conjugate is an effective and fast growing technique for improved use of drugs for therapeutic applications. Polymer conjugated drugs generally exhibit prolonged half-life, higher stability, water solubility, lower immunogenicity and antigenicity and specific targeting to tissues or cells.

The potential of the polymer-drug conjugates have already been proved by success of many products in the market for the treatment of different diseases. The discussion on the topic will cover a description of polymeric drug delivery systems along with recent advancements that have been made in the area of polymer therapeutics.

The points that will be addressed in the talk include: Rational for design of polymer-drug conjugates, requirements for selection of drug candidate for polymeric prodrug, requirements for selecting polymers as candidate drug carriers, classification of polymers, design and synthesis of polymeric prodrugs, strategies to reduce steric hindrances exhibited by polymers and the bio-components, strategies to enhance the reactivity of polymer and the drug by incorporation of spacers, structure-activity relationship of conjugates (SAR) and passive and active targeting of polymer-drug conjugates to specific site of drug action.