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## (57) Abstract:

The present invention provides annexin-V (ANX) coupled nanoparticles loaded with the antitumor agents for evaluating and treating tumors. The present invention provides a pharmaceutical composition for treating tumors comprising a nanoparticle encapsulated inclusion complex of an antitumor agent coupled with annexin-V (ANX) for specifically targeting cancer cells, wherein the inclusion complex comprises a cyclic-oligosaccharide and methotrexate (MTX). Further, the present invention provides a method of preparation of the said nanoparticle encapsulated inclusion complex coupled with annexin-V (ANX). The present invention thus provides a drug delivery system for treatment of tumors, especially cancers based on discriminate distribution of the drug to cancer cells specifically and not to the normal cells thereby reducing any side effect.

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