

Liver Targeted Drug Delivery System

Targeted drug delivery or site-specific drug delivery system has the potential to increase local drug concentrations and thereby increase the effectiveness of the medicines with fewer side effects. Liver diseases especially liver cancer is one of the most prevalent cancers, with a high mortality. Due to high toxicity and poor specificity of the chemotherapeutic agents the present method of treatment sometimes lead to systemic toxicity and adverse effects that are harmful for the patient. Targeted drug delivery can be a highly desirable strategy to improve the therapeutic outcome, with significantly decreased toxic side-effects compared to traditional chemotherapy. Previously most studies were based on conjugating carriers or drugs with targeting ligands, such as antibodies and sugars. The recent strategies use site specific drug carriers such as antibodies, peptides, natural and modified or synthetic polymers. Beside these, prodrugs are also investigated that are designed to cleave in a site-specific manner. Some prodrugs gain cell specificity whereas others gain specificity by using cell-specific surface receptors (e.g., bile acid transporter) that facilitate prodrug transport into liver cells. Till today very few delivery systems are marketed as liver targeted drug delivery system. I hope in near future liver targeted drug delivery system will be available to serve the mankind.



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