

## Recent advances in carbohydrate-based paclitaxel delivery systems

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Paclitaxel (PTX) as the most important member of the taxane family is used against a wide range of cancers including breast, ovarian and lung cancers. However, the effectiveness of PTX in clinical practice is limited by its low water solubility and permeability in biological tissues. To address these limitations, PTX is formulated with Cremophor EL and dehydrated ethanol, known as Taxol®. Due to the adverse side effects of the formulation, efforts have been made in recent years to develop alternative PTX formulations. Polysaccharides, due to their low toxicity and biocompatibility, biodegradability, and ease of chemical modification are an excellent alternative to Cremophor EL for formulating PTX. This review focuses on recent advances to develop PTX formulations based on polysaccharides.

### Słowa kluczowe

Drug delivery, Carbohydrate polymers, Cancer therapy, Paclitaxel

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