

Multifunctional nanoassemblies of block copolymers for future cancer therapy

REVIEW ARTICLE

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Abstract Nanoassemblies from amphiphilic block copolymers are promising nanomedicine platforms for cancer diagnosis and therapy due to their relatively small size, high loading capacity of drugs, controlled drug release, *in vivo* stability and prolonged blood circulation. Recent clinical trials with self-assembled polymeric micelles incorporating anticancer drugs have shown improved antitumor activity and decreased side effects encouraging the further development of nanoassemblies for drug delivery. This review summarizes recent approaches considering stimuli-responsive, multifunctionality and more advanced architectures, such as vesicles or worm-like micelles, for tumor-specific drug and gene delivery.

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