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Nanotechnological advancements in the brain tumor therapy: a novel approach

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Abstract

Nanotechnological advancements over the past few years have led to the development of newer treatment strategies in brain cancer therapy which leads to the establishment of nano oncology. Nanostructures with high specificity, are best suitable to penetrate the blood-brain barrier (BBB). Their desired physicochemical properties, such as small sizes, shape, higher surface area to volume ratio, distinctive structural features, and the possibility to attach various substances on their surface transform them into potential transport carriers able to cross various cellular and tissue barriers, including the BBB. The review emphasizes nanotechnology-based treatment strategies for the exploration of brain tumors and highlights the current progress of different nanomaterials for the effective delivery of drugs for brain tumor therapy.

Keywords: blood–brain barrier; brain tumor; nanoparticles; nanotechnology; theranostics.

LinkOut – more resources

Miscellaneous

[NCI CPTAC Assay Portal](#)