

Designing Self-Assembled Nanomaterials for Targeted Drug Delivery to the Central Nervous System

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Different nanotechnology platforms have been developed to improve the performance of drugs. Self-assembled polymeric nanoparticles produced by the spontaneous aggregation of amphiphilic block and graft copolymers in water emerged as one of the most versatile strategies to encapsulate and deliver hydrophobic small-molecule ones owing their high chemical flexibility and modularity to tailor the nanoparticle “building blocks” and their size, hydrophilic-lipophilic balance, and surface properties. In this talk, I will present two self-assembled nano-drug delivery systems for targeting the central nervous system to tackle the challenges in diffuse midline gliomas and autism spectrum disorder.

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