

Nano based Drug Delivery Systems for Treating Gliomas

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Abstract

The development of nanoparticle-based drug creations has cooperated with the opportunities to address and treat challenging sicknesses. Nanoparticles change in size but are usually ranging from an nm to nm. Through the moving around and tricking of size, surface qualities and material used, the nanoparticles can be developed into smart systems, encasing medically helpful and imaging agents as well as bearing sneaky silence property. Further, these systems can deliver drug to clearly stated tissues and provide controlled release therapy. This targeted and sustained drug delivery decreases the drug related poisonous quality and increase patient's obedience of less frequent dosing. Nanotechnology has proven helpful in the treatment of cancer, AIDS and many other disease, also providing moving ahead or up in medical testing to get information.

Keywords: Nanoparticles; glioma; Blood-brain tumor

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Introduction

Gliomas are the most common tumor of the central nervous system. However, the presence of the brain something that blocks or stops something blocks the effective delivery of drugs and leads to the treatment failure of different drugs [1]. The development of a nanoparticle drug delivery system (NDDS) can solve this problem. In this review, we summarized the brain something that blocks or stops something including the border between the blood and the brain that can be hard to get through (BBB), blood-brain tumor things that block or stop other things (BBTB), brain-brain and spinal cord fluid something that blocks or stops something (BCB), and nose-to-brain something that blocks or stops something, NDDS of glioma such as allowing something to happen without reacting or trying to stop it targeting systems, active targeting systems, and related to surrounding conditions or the health of the Earth able to reply or react targeting systems, and NDDS effectiveness improvement success plans of reaching goals and not having enough of something [2]. The research future of drug-targeted delivery systems for glioma is also discussed. Cancer remains the most threatening disease to human life and health. The cancer rate at which people die remains upsetting even though there is the existence of recent advances [3].

Nano targeted agents are drug delivery systems that integrate drugs into different nanocarriers to focus one's effort them in targeted tissues. This success plan way of reaching goals is also called a nanoparticle drug delivery system (NDDS) and offers

high drug firm and steady nature, sustained release possible greatness or power, and low drug poisonous quality to solve these issues. 12-15 NDDS can increase the blood-drug concentration, prolong the half-life, and reduce the drug delivery frequency by improving ability to be dissolved in something, firm and steady nature, and bioavailability of hydrophobic drugs. So, NDDS is an active area of research. However, the identification of a disease or problem and treatment of glioma remain very hard because the brain something that blocks or stops something restricts drug transport to the brain [4].

NDDS can be classified into allowing something to happen without reacting or trying to stop it targeting systems, active targeting systems, and related to surrounding conditions or the health of the Earth able to reply targeting systems according to their different modes of action. Part of the glioma drug delivery system and the relative machines used in Nano-carriers are mainly used in allowing something to happen without reacting or trying to stop it targeting systems to combine all the features of drugs such as nanoparticles, liposomes, and microspheres. Drug-containing nano-carriers are naturally surrounded through the body-structure-related process of cell endocytosis to accomplish (or gain with effort) targeted drug distribution. Besides, different targeted molecules act as rocket-fired weapons to change drug-carrying nano-carriers such as proteins, disease-fighters, small molecules, or nucleic acid aptamers [5]. These are common in active-targeting systems and deliver drugs through a related to movement or focus in a particular direction role to target

places. More than that, the physicochemical targeting system could understand the targeted distribution of drug-carrying nanocarriers in the body through physical and chemical effects such as magnetism, heat, sound, light, electricity, and pH.

Conclusion

Due to the serving or acting to prevent harm effect of the brain something that blocks or stops something on the brain, the medicine-based treatment of glioma still remains very hard. Brain-targeted drug delivery has attracted wide attention because of its slow release and controllable and targeted safety. Without any concern about the target, drug targeting is based on the interaction between the dosage form qualities of the drug delivery system and the specific body-structure-related pathological structure of the body. The development of biomimetic drugs similar in position or structure binding and unable to be harmed escape functions has been thought of as the most ideal other choice. These drugs use from the same body

tissues from the human body as carriers to quickly reach the target site after entering the human body.

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