Polysaccharide-based nano drug-carrying particle diagnosis and treatment system

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Abstract:
Nanomedicine has a great promising aspect because of their specific advantage for tumor treatment. However, traditional chemotherapy can not meet the requirements of current cancer treatment. Multi-modal cooperative treatment is the future of cancer treatment. We have proposed a nano-system containing drug loading and diagnosis to further reduce the pain of patients during treatment. This system has the functions of drug sustained release and diagnostic imaging. It is non-toxic, which can be degraded and metabolized by body-self. Chitosan aerogel is the core framework, which is used to load model drug. The core will be wrapped with two more layers, functioning stimulus response, biological modification. This core-shell structure product can effectively achieve tumor targeted therapy and sustained release effect. Magnetic modification will be carried out to further functionalize diagnosis and treatment system. This diagnosis and treatment system is extremely likely to become an indispensable utensil for cancer treatment in the future.

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