



Nanoparticle Delivery to Tumors: Challenges and Advances

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Message from the Guest Editors

Dear Colleagues,

Nanoparticles have emerged as versatile drug delivery vehicles for applications in oncology and other pathologies. However, although several types of nanoparticles have been developed, their effective delivery to tumors is still a major challenge, especially nanoparticles ≥ 100 nm in diameter. Enhanced vascular permeability in tumors has been shown to play an essential role in the delivery of nanoparticles of this diameter range to tumors, through the enhanced permeability and retention (EPR) effect. Furthermore, the poor clinical performance of some nanoparticles has been partially attributed to variabilities in the vascular permeability within tumors and within different patient populations. Consequently, tumor-priming strategies designed specifically to enhance tumor vascular permeability and subsequently increase the delivery of nanoparticles to tumors are currently being explored. In this Special Issue, we shall cover some of the challenges associated with delivering nanoparticles to tumors, and some advances that have been made to increase the delivery efficiency of nanoparticles to tumors.

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