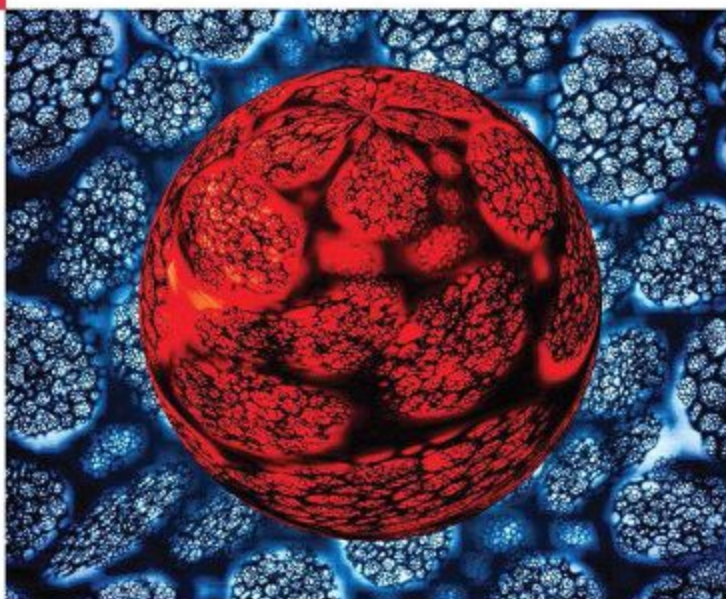


Nanomedicine for the Treatment of Disease

From Concept to Application



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Nanomedicine for the Diagnosis and Treatment of Cancer

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ABSTRACT

Cell annexation is an intrinsic cellular pathway whereby cells reciprocate to extracellular stimuli to drift and restrain the structure of their extracellular matrix (ECM) to evolve, reconstruct, and protect the body's tissues. In cancer cells, this process becomes peculiarly (varying from the usual) regulated and lead to cancer metastasis. So for the diagnosis and treatment (theranostic) of this unwanted cellular growth, researchers have worked on many potential molecular/therapeutic targets of cancer cell invasion. We aim to provide a perspective on how the advances in cancer biology and the field of nanomedicine can be combined to offer new solutions for treating cancer metastasis. Nanomedicine is an emerging technology which gives potential solution for approaching cancer metastasis by improving the specificity and potency of therapeutics delivered to invasive cancer cells. In this chapter, we describe different types of nanomedicines such as quantum dots (QDs), different nanoparticulate systems including silver nanoparticles, gold nanoparticles (GNPs), etc. For the diagnosis of cancer different types of testing procedures are applied to confirm the presence of disease and distinguish the correct tumor type, location, and stage. At present different types of cancer therapies are being used in the treatment of cancer like