

TITLE

**Target nanoparticles:
An appealing drug
delivery platform**

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Over Recent years advancement in nanoparticles drug delivery is widely expected to change the landscape of pharmaceutical and biotechnology industries for the foreseeable future. Nanoparticles are solid colloidal matrix-like particles made of polymers or lipids. Generally administered by the intravenous route like liposomes, they have been developed for the targeted delivery of therapeutic or imaging agents. Their main advantages are the low number of excipients used in their formulations, the simple procedures for preparation, a high physical stability, and the possibility of sustained drug release that may be suitable in the treatment of chronic diseases. Nanomaterials have emerged as a promising strategy in delivering therapeutic molecules effectively to diseased sites. Furthermore, most nanomaterial surfaces can be decorated with targeting ligands, enhancing their ability to home to diseased tissues through multivalent interactions with tissue-specific receptors. Thus, targeted therapy provides a means to circumvent the toxicities and lack of treatment response of conventional systemic chemotherapy. Targeted liposomes, micelles, carbon nanotubes and dendrimers incorporated with therapeutic molecules have displayed impressive anticancer effects in animal studies, and these nanomaterials are considered to be close to clinical translation due to their biocompatibility. These carriers are designed in such a way that they are independent in the environments and selective at the pharmacological site. In addition, these nanomaterials have the capability to reverse multidrug resistance a major problem in chemotherapy. Finally, tumor-homing nanosystems that amplify tumor homing can also improve the delivery of compounds to tumors, providing imaging and therapeutic options that were previously unavailable.

Biography

Nahla has graduated from School of Pharmacy, Alexandria University, Egypt. She has got a master and PhD degree from Alexandria University. Now Nahla is working in King Saud University, College of Pharmacy. Nahla has more than 30 published papers in reputed journals. She participated in many scientific projects dealing with drug delivery platforms, nanoparticles and drug stability.