Nanodrug delivery systems in cancer therapy

Andrew G. Mtewa, Jonathan T. Bvunzawabaya and Fanuel Lampiao

Abstract

Cancer burdens most world budgets particularly those in developing countries as current therapeutic options remain challenged with high costs affecting accessibility to many. At a drug designing and delivery scale, most chemotherapeutic agents are too hydrophobic, reducing bioavailability to biological targets. Other issues that challenge most current cancer drugs include drug resistance and poor selectivity leading to toxicity. Formulation of nanoparticles as drug carriers has in recent years proven to be a solution to many of the challenges that are posed by chemotherapy. Various drug carriers from the micro scale to the nanoscale have been discussed to determine how the technology can be used to reduce the burden of cancer in the future.