

POLYMERIC NANOMICELLES FOR CANCER NANOMEDICINE - REVIEW

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Abstract

Cancer is a serious risk to human life. Some predictions show a considerable increase in new cases and deaths by 2050. Chemotherapy and other conventional treatments encounter issues with a lack of specificity, leading to severe side effects on healthy tissues and drug resistance. Nanotechnology with targeted drug delivery shows improved diagnostics and personalized treatments. Biocompatible and biodegradable self-assembling amphiphilic polymeric micelles are attractive vehicles for targeted drug delivery in cancer treatment, increasing the bioavailability and solubility of anticancer drugs in water. However, the transition to market applications meets some difficulties, mainly focused on patient's predisposition to develop drug allergies. Intensive studies are a paradigm for resolving all challenges and facilitating the translation of innovative nanotechnologies into everyday clinical practice. This review paper highlights the importance of applying organic polymeric nanocarriers in cancer nanomedicine.

Keywords: *cancer, drug delivery, nanocarriers, polymeric micelles.*