



## Application of Liposomes in Cancer

Guest Editor:

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### **Message from the Guest Editor**

Chemotherapy has a crucial role in cancer treatment; however, conventional cytotoxic drugs often lack specificity for targeting cancer cells. Additionally, many anticancer agents possess high toxicity, hydrophobic properties, and short half-lives, which limit their effectiveness in cancer therapy. The emergence of nanotechnology has paved the way for the development of efficient nanoscale drug delivery systems, known as nanoparticles, for various diseases. Among these delivery systems, lipid-based nanoparticles, including natural lipid nanoparticles (exosomes) as well as synthetic nanoparticles (liposomes), have been shown to be very effective in demonstrating the ability to: (1) enhance cancer chemotherapy; (2) reduce the cytotoxicity of anticancer drugs to normal tissues, thereby reducing their toxic side effects; (3) increase the solubility of hydrophobic drugs; and (4) provide prolonged and controlled release of drugs.





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