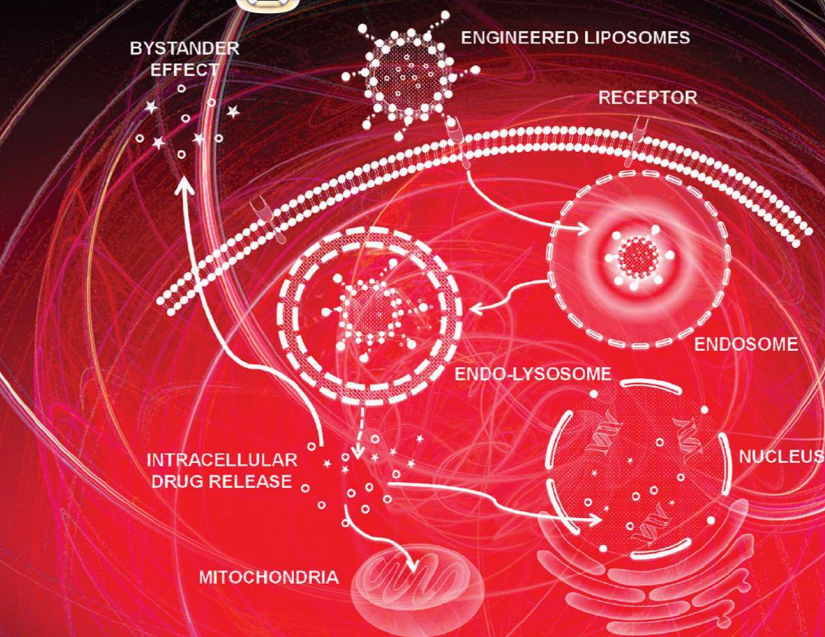


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Chapter 1

LIPOSOMES IN CANCER THERAPY

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ABSTRACT

Safe and effective cancer therapy demands a suitable nanocarrier which can target cancer cells in a selective manner. With the tremendous growth in nanotechnology, liposomes among various competing nanocarriers have shown promising milestones in cancer therapy. Liposomes revived the “magic bullet concept” in terms of safe and efficacious delivery of bioactive(s) to tumor site. Liposomes offer outstanding capabilities such as carrying capacity (both hydrophilic and hydrophobic bioactives) and possibilities for compositional and surface modifications. This chapter covers critical considerations for development of liposomes to target cancer cells with the use of Enhanced Permeability and Retention (EPR) effect and selective ligands such as folate, transferrin, and peptides etc. The gold standard to render long circulatory effects to conventional liposomes i.e., PEGylation has also been discussed in this chapter to resolve safety issues primarily concerned with active targeting approaches. Recent advances in fabrication of

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