



Chapter 6

Emergence of Polymer–Lipid Hybrid Systems in Healthcare Scenario

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ABSTRACT

Nanotechnology has drawn the attention of many researchers for the delivery of therapeutics used in various medical applications. Liposomes and polymeric nanoparticles represent promising nanocarriers that efficiently encapsulate drugs, which prevents their degradation along with the control and sustained drug release. Despite the many advantages of these formulations, some of the drawbacks associated with them limit their application to a certain extent. Therefore, there is need for a novel nanocarrier that possesses all of their individual advantages and excludes their drawbacks. Currently, researchers are focused on developing a novel platform that is a hybrid of a polymeric and liposomal-based carrier that combines the peculiarity of both and excludes their shortcomings. Lipid hybrid polymer nanoparticles (LPNs) contain the hydrophobic biodegradable polymeric core surrounded by a lipid layer for intensification of biocompatibility. This chapter includes an introduction of LPNs along with their advantages, composition, and method of preparation.

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