

Platform for lipid based nanocarriers' formulation components and their potential effects: A literature review

Farid, R.M.^{a,b}, Youssef, N.A.H.A.^a, Kassem, A.A.^{b,c}

^a Department of Pharmaceutics, Faculty of Pharmacy and Drug Manufacturing, Pharos University in Alexandria, Alexandria, Egypt

^b Department of Pharmaceutics, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt

^c Department of Pharmaceutical Sciences, Faculty of Pharmacy, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

Abstract:

Background: Lipid based nanocarriers have gained recently enormous interest for pharmaceutical application. They have the potential to provide controlled drug release and to target the drug to a specific area. In addition, lipid based nanocarriers can improve the bioavailability of drugs suffering from high hepatic first-pass metabolism, by enhancing their transport via the lymphatic system. The main components of lipid based nanocarriers are lipids and surfactants. Both have great influence on the prepared lipid based systems characteristics. The criteria for their selection are much related to physicochemical properties of the drug and the required administration route. This work gives an overview on the effect of both the type and amount of lipids and surfactants used in the manufacture of lipid based nanocarriers on their behavior and characteristics. Conclusion: Recent studies revealed that the properties of the final product including; particle size, homogeneity, drug loading capacity, zeta potential, drug release profile, stability, permeability, pharmacokinetic properties, crystallinity and cytotoxicity, may be significantly influenced not only by the type but also the amount of the lipids and/or surfactants included in the formulation of the lipid based nanocarriers. © 2017 Bentham Science Publishers.

Reference:

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