Lipid-based nanoformulations for peptide delivery

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Résumé en anglais
Nanoformulations have attracted a lot of attention because of their size-dependent properties. Among the array of nanoformulations, lipid nanoformulations (LNFs) have evoked increasing interest because of the advantages of their high degree of biocompatibility and versatility. The performance of lipid nanoformulations is greatly influenced by their composition and structure. Therapeutic peptides represent a growing share of the pharmaceutical market. However, the main challenge for their development into commercial products is their inherent physicochemical and biological instability. Important peptides such as insulin, calcitonin and cyclosporin A have been incorporated into LNFs. The association or encapsulation of peptides within lipid-based carriers has shown to protect the labile molecules against enzymatic degradation. This review describes strategies used for the formulation of peptides and some methods used for the assessment of association efficiency. The advantages and drawbacks of such carriers are also described.

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