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Liposomal formulations for specific drug delivery

Liposomes have received considerable scrutiny as possible vehicles for drug delivery due to properties such as sustained release, increased drug stability, ability to overcome drug resistance and targeting of specific tissues.

In this study, we have produced several liposomal formulations prepared by thin film hydration method. The different formulations were extensively characterized and preliminary tests were performed to evaluate their potential as specific drug delivery systems. The liposomes present very small values of size and polydispersity index, as well as lower cytotoxicity, which are compatible with intended in vivo applications. The incorporation of imaging and targeting agents in the liposomes was performed, what improved selectivity to the system, being the liposomes specifically internalized in target cells. The encapsulation of drugs was also performed and their effect analyzed in the target cells. In summary, the liposomal formulations obtained exhibit suitable characteristics to be used in vivo as specific drug delivery systems.