

Development of liposome formulations for the delivery across the blood brain barrier

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Reazione

Despite the high prevalence and socio-economic impact of central nervous system (CNS) diseases, their treatment is still an unmet need. Although new neuropharmaceuticals have the potential for treating specific CNS diseases, the treatment is often complicated by the drug inability to cross the blood brain barrier (BBB). Being the delivery of the drugs rather than their efficacy the crucial problem in the treatment of CNS diseases, the development of suitable nanocarriers able to cross the BBB and release the drug to the injured districts is a primary objective. We designed cationic liposomes *ad hoc* functionalized to cross BBB. The new formulations were characterized in terms of size, polydispersity, and stability. The formulations showing appropriate size and stability were investigated for their ability to interact with culture cells of brain tissues and of BBB. Their ability to cross BBB was evaluated on an *in vitro* BBB model.