Development of a Lipid-Base Drug Delivery System

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This study combines physical and computational techniques in an attempt to develop new vehicles to efficiently deliver drugs in the body. These entities, called cholestesomes, are being created using two cholesteryl esters, laurate and myristate. Various analytical techniques are being used to study the interactions of the cholesteryl esters and the progress of the project. These include differential scanning calorimetry (DSC) and gas chromatography/mass spectroscopy (GCMS). Molecular modeling using the SYBYL program is also being utilized to compare possible cholestesome conformations to similar vehicles that have been studied. The goal is to demonstrate the superiority of cholestesomes to alternative vehicles made of polymers such as polyethylene glycole, poloxamer, and polyamines.