

Evaluation of Sterotex HM in optimization of curcumin loaded solid lipid nanoparticles

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Bioavailability issues are one of the challenging tasks for the formulation of BCS class II and class IV drugs. Many newer excipients and technologies have been employed to attain enhanced bioavailability. In this line, application of lipids for bioavailability enhancement of poor soluble drugs is promising. The present investigation was focussed to evaluate Sterotex HM in optimization of Solid lipid nanoparticles (SLN) solid lipid nanoparticles. Curcumin was selected as model drug for the optimization of SLN. 2³ factorial designs were adopted and eight formulations were prepared with two levels of lipid, surfactant and co-surfactant. High shear homogenization method was used to prepare curcumin SLN. Prepared formulations were subjected to various evaluations such as morphology, particle size, zeta potential and drug content. The particle size and zeta potential were used as the response for the optimization of prepared formulations using design expert. Among all the formulations, SLN prepared using ratio of 1:2:0.2 lipid: surfactant: co-surfactant (CU F3) was found to be better with particle size, PDI, zeta potential and drug content of 101.4nm, 0.033, -42.8mV and 42.5% respectively. The results reveal that the low lipid concentration with high surfactant will be useful for achieving uniform nanoparticles. Further, the in vivo studies can be performed to claim the potency of the curcumin SLN.

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eClinical solutions: Boosting the clinical trial efficiency

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eClinical solutions are a combination of technology, products, and services that work together as solutions to automate the management or conduct of clinical trials with the aim of replacing manual, ad hoc or paper-driven methods. eClinical solutions refer to a number of different technologies, such as EDC solutions (Electronic Data Capture), CTMS (Clinical Trials Management System), Randomization and Trial Supply Management systems, IVRS (Interactive Voice Response Systems), electronic patient diaries and other common types of electronic solutions widely used in clinical trials. Early trends and talk around eClinical focused around how data from disparate systems could be integrated to remove duplication of data and activities. One way in which eClinical has changed the way in which we do business is that integration of key clinical trial systems have become expected rather than exceptional. Vendors and sponsors are investing in infrastructure and standards to ensure capabilities can be scaled up and applications integrated in a rapid, efficient, and supportable manner—like the cargo industry analogy. The market for eClinical solutions can be analyzed with respect to three delivery modes, i.e. licensed enterprise (on-premise), web hosted (on-demand), and cloud-based. eClinical solutions are being used more frequently in upstream site on-boarding and qualification processes, and in managing site-sponsor collaboration during a clinical trial. A large number of investigator groups are still ignorant of the benefits offered by eClinical solutions and continue to depend on paper-based work or spreadsheets. Compliance benefits and user-friendly access of software are yet to penetrate the clinical trial community well.

Biography

I am S.Vidya pursuing 1st M.Pharmacy at JSS College of Pharmacy, Mysore. I had pursued my bachelor degree in pharmacy from JSS College of Pharmacy, Ooty. I attended few international conferences and seminars

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