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**Development of nano drug delivery system to treat basal cell carcinoma****G N K Ganesh**

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Nano emulsions are the novel carriers which offer major enhancements in therapeutics through site specificity, their capacity to escape from multi-drug resistance and to reduce side effects due to its self-assembled nature that is inherently receptive to its direct environment and the flexibility of the components which can be combined to result in structures with multiple responsive functionalities. The aim of the study was to prepare nanoemulsion gel containing Imiquimod by spontaneous emulsification method by using oleic acid as oil, Labrasol as a surfactant and PEG-600 as a co-surfactant which found to be compatible by FT-IR. The optimized formulation after thermodynamic studies is subjected for various evaluations. The particle/globule size of optimized formulation was found to be 127 nm with 29 mV zeta potential. The TEM analysis reveals that droplets in the nanoemulsion appear dark and the droplet size was in agreement with the results obtained from droplet size analysis using zetasizer. *In vitro* release study using franz-diffusion cells resulted in the cumulative release from nanoemulgel and marketed cream at the end of 24 hours were  $65.12 \pm 1.23$  and  $43.41 \pm 1.21$ , respectively and the flux calculation shows the linear drug release of the formulation indicating a zero-order kinetics rather than marketed cream. Percentage hemolysis was found to be less than 5% for formulation and marketed cream. *In vitro* cytotoxicity study using HaCat cell lines reveals the IC<sub>50</sub> values of the plain drug (IQ), prepared nanoemulgel and marketed cream to be 182.2 µg/ml, 260 µg/ml and 200 µg/ml, respectively.

**Biography**

G N K Ganesh has completed his PhD from Jagadguru Sri Shivarathreeshwara University, Mysore. Presently he is working as a Professor in JSS College of Pharmacy, India. He has published more than 30 papers in reputed journals and has been serving as an Editorial Board Member of 3 reputed journals. He has presented many papers in both national and international conferences. He has more than 15 years of experience in both academic and research.

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