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Dacarbazine loaded nano formulation for the effective treatment of melanoma

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Melanoma is one of the type of cancer of skin which generates from the pigment cells known as melanocytes of skin and covers global economic burden for the treatment. Regular exposure of skin of genetically susceptible person to ultra violet radiation range is the main cause of induction of melanoma in skin. Dacarbazine which is chemically imidazolecarboxamide is utilized as a drug of choice for the treatment of melanoma as well as Hodgkin's lymphoma cancer. Dacarbazine induces programmed cell death (apoptosis) in the cancerous cells of melanoma by inhibition of synthesis of DNA. Major drawback with this drug is its poor solubility in water, short shelf life in systemic circulation, low rate of response and severe adverse effect which limit its utility. In this study Dacarbazine in the form of nanoformulation (size >100nm) was utilized for augmenting the anticancer effect of chemotherapeutic drug. In current study Dacarbazine nanostructured lipid particles (DTIC-NLPs) were prepared by solvent diffusion method. In drug release study the drug shows depressed release in free form in comparison to DTIC-NLPs after 48 hrs in PBS (pH 7.4). MTT assay showed its strong cytotoxic potential as compare to simple Dacarbazine suspension.

Biography

Abdul Hafeez has completed his M Pharm in Pharmaceutics from Teerthankar Mahaveer University, Moradabad and pursuing doctoral studies from Glocal University, Saharanpur Uttar Pradesh India in Pharmaceutics department, Glocal School of Pharmacy, a premier rising university. He has published more than 10 papers in reputed journals and has been serving as an editorial board member of repute. He attended many national and international conferences. Recently he has given oral presentation in Asia Pharma Conference in Kuala Lumpur, Malaysia in July, 2016. He is a member of reputed pharmaceutical societies like Association of Pharmaceutical Teachers of India (APTI) and Indian Pharmacy Graduate Association (IPGA).

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