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### Dacarbazine nanoformulation for the effective treatment of melanoma

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Melanoma is one of the types 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 limits its utility. In this study, Dacarbazine in the form of nanoformuation (size >100 nm) 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 hours in PBS (pH 7.4). MTT assay shows its strong cytotoxic potential as compare to simple Dacarbazine suspension.

#### **Biography**

Abdul Hafeez has completed his MPharm in Pharmaceutics from Teerthankar Mahaveer University, Moradabad, India and pursuing his Doctoral studies from Glocal University, India in Pharmaceutics Department. He has published more than 10 papers in reputed journals and has been serving as an Editorial Board Member of Repute. 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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