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(57) Abstract :

This invention relates to a Chitosan Nanogel. The invention, particularly relates to a biodegradable nanogel comprising a Chitosan (naturally occurring biodegradable polymer) and a Temozolomide (DNA alkylating Prodrug agent) for the treatment of melanoma (skin cancer) and preparation method thereof. The biodegradable nanogel can be applied either topically or transdermally to the patient. The biodegradable nanogel comprises 0.4 % w/v Chitosan and 200 mg of Temozolomide and further which is stable in the acidic pH range from 5 to 6. The biodegradable nanogel comprising a Chitosan and a Temozolomide prepared by a bio-friendly process is also disclosed. This present invention clearly demonstrate the higher therapeutic benefits of Temozolomide-Chitosan nanogel when cocktailed shows enhance and biocompatible potential of this nanoformulation against melanoma, promising the better future of drug delivery system against the most lethal disease cancer.

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