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(54) Title of the invent	ion : A long acting injectable in situ gel for	mulation and a process of preparation thereof (71)Name of Applicant :
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(57) Abstract :

The present disclosure provides a solution to the problem of treating and/or management of periodontitis or gingivitis or gum diseases in subjects who are in need thereof. Existing formulations such as topical and gel formulations suffer with various limitations/ challenges in showing intended therapeutic effect. In light of these challenges, the present disclosure provides a formulation that tends to remain in solution form under non-physiological conditions and converts into a gel under physiological conditions due to a stimuli including but not limited to pH, temperature, ions and solvent in the oral cavity. The in situ gel formulation of melatonin as disclosed and claimed is a sustained drug delivery injection formulation to show the intended therapeutic effect in periodontitis.

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