

Bioactive reprogrammed nano-herbal formulation for photothermal therapy-based cancer theranostics

APPLICATION

The product is a ready to use and easily injectable nano herbal gel Nano-herbal photo thermal therapy for cancer theranostics. The herbal gel is a reprogrammed with the aid of the modern nanotechnology which improves the bioavailability and reduces the high dosages

INNOVATOR

Deepak Bharadwaj PVP

NIPER Guwahati

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 3 (Hypothesis testing and initial proof of concept)

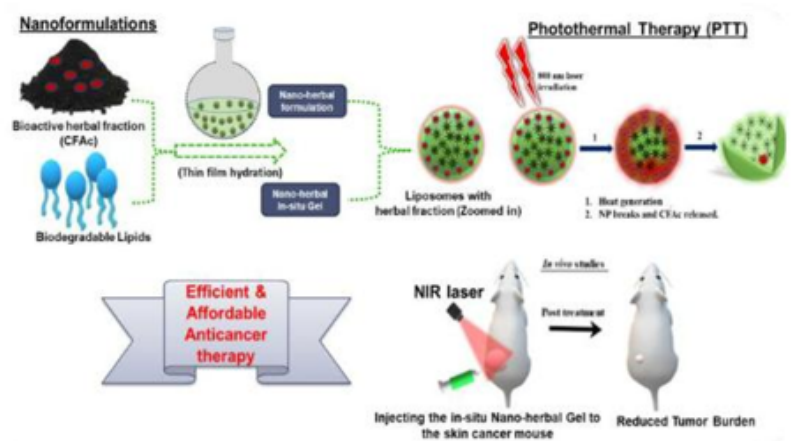
INTELLECTUAL PROPERTY

IP filing process is under progress

PROBLEM ADDRESSED

The current nano-herbal gel-based product addresses a translatable solution for the treatment of accessible superficial tumors in humans and veterinary animals. In India, among all the cancer patients, 60 of them are suffering from superficial cancers skin, breast, and oral. Similarly, the areas of veterinary oncology requires new strategies to provide them with efficient treatment regimens. Many of them had already lost their vital organs due to surgeries like glossectomy, mandibulectomy or neck dissection. Many of these surgeries are due to improper diagnosis or treatment at early stages. The proposed product can be used as a sustainable and efficient therapeutic model for the management of the tumors in both humans and veterinary animals.

PROCESS FLOW



ABOUT THE TECHNOLOGY

The aid of light-based therapies ameliorates the adverse effects and improves the bioavailability which can reduce the typical large dosages, especially in chronic diseases like cancer. The technology is being used is Photothermal-based ablation of cancer cells, referred to as photothermal therapy PTT which is a futuristic application of nanotechnology for the management of cancers.

USP

- The product is a multi-functional agent which inhibit the growth of cancer cells using light and its inherent anti cancer properties.
- The nano-herbal gel will be a sustainable, cost-effective, and novel method for the management of the tumors of superficial origin.

END USERS/CUSTOMERS

Ayurvedic Practitioners, Clinical and Veterinary Oncologists.

FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE grant of INR 25 Lakhs