



सीएसआईआर-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान पालमपुर
- 176 061 (हि.प्र.)

CSIR-Institute of Himalayan Bioresource Technology
Palampur – 176 061 (H.P.)



CSIR-IHBT invites Expression of Interest (EOI)

for

“Production of Antibacterial cream comprising of peppermint oil nanoemulsion and cellulose nanocrystals of *Mentha piperita*”

CSIR-IHBT invites expression of interest (EOI) from interested parties from Industries / SMEs / Progressive Entrepreneurs for licensing technology of Process technology for production of an antibacterial cream composed of peppermint oil nanoemulsion as an active ingredient and cellulose nanocrystal as binding agent and base material. The peppermint oil nanoemulsion demonstrated superior antibacterial activity against *Staphylococcus aureus* and *Escherichia coli*, with MIC values of ~18.22 $\mu\text{L}/\text{mL}$ and ~35.25 $\mu\text{L}/\text{mL}$, respectively. The incorporation of plant based cellulose nanocrystals in a proper ratio, function as a carrier, binding agent and thickener for the developed cream and provide a superiorly stable and uniform textured matrix for the cream. The cellulose nanocrystals also contributing to enhanced and sustained delivery of the nanoemulsion from the matrix. This unique combination results in a cream formulation with improved antibacterial efficacy. The cream formulation can also be used as a base material for a large number of bioactive molecules for added advantages. This innovative approach holds promise for addressing bacterial infections which can be used for topical medication and in cosmeceuticals industry.

Application should include details of company profile and marketing strategies. The selected parties shall be called for discussions. Interested parties may send their Expression of Interest, in a sealed cover superscripting “Expression of Interest” addressed to

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OR

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