



सीएसआईआर-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान
पालमपुर – 176 061 (हि.प्र.) भारत
CSIR-Institute of Himalayan Bioresource Technology
Palampur – 176 061 (H.P.) India



CSIR-IHBT invites Expression of Interest (EOI)
for

**“*In vitro* system of *Ferula assafoetida* (Iranian heeng) for
secondary metabolite production”**

CSIR-IHBT invites expression of interest (EOI) from interested parties from Industries / SMEs / Progressive Entrepreneurs for licensing technology for a Commercial micropropagation protocol of *Ferula assafoetida* (iranian heeng)

Ferula assa-foetida (heeng) is a monocarpic perennial medicinal plant belonging to the family Apiaceae and is native to the high-altitude arid regions of Afghanistan. India is the major consumer of asafoetida (heeng) as well as its secondary supplier/re-exporter. The global asafoetida market is projected to reach approximately US\$ 850.835 million by 2029, growing at a compound annual growth rate (CAGR) of 8.8%. It is rich in resin (40–64%), endogenous gum (around 25%), and volatile essential oils (10–17%), which contain coumarins, sesquiterpenes, and terpenoids known for their diverse therapeutic properties. *In vitro* propagation offers an effective and viable strategy for the conservation, sustainable cultivation, and enhanced phytochemical production of this species.

Some of the Salient Features are as:

- Developed a high-frequency and reliable *in vitro* system for producing calli of *Ferula assa-foetida* (Iranian heeng).
- Optimized protocol for future biotechnological applications, including secondary metabolite production, and genetic improvement.

The 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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In vitro system of *Ferula assafoetida* (afghani heeng) for secondary metabolite production

Ferula assa-foetida (heeng), a monocarpic perennial herb of the Apiaceae, is native to high-altitude arid regions of Afghanistan and is rich in resins, gums, and essential oils containing coumarins, sesquiterpenes, and terpenoids with diverse therapeutic activities. Despite wide medicinal use and economic importance, the species faces poor germination, limited cultivation, and vulnerability due to overharvesting. *In vitro* callus proliferation offers a promising strategy for enhanced phytochemical production.

Market Potential

The global asafoetida market is expected to grow at a CAGR of 8.8%, reaching a market size of US\$850.835 million in 2029. (<https://www.knowledge-sourcing.com/report/assafoetida-market>)

Salient features

- Developed a high-frequency and reliable *in vitro* system for producing calli of *Ferula assa-foetida* (Iranian heeng).
- Optimized protocol for future biotechnological applications, including secondary metabolite production, and genetic improvement.

