

THIRUVANANTHAPURAM

Herbal compound promises cure for liver cancer

WEED BRINGS HOPE



Solanum nigrum (Manithakkali)

DRASTIC INHIBITION of tumor growth	10 TIMES MORE EFFECTIVE than Sorafenib
NO SIDE EFFECTS observed	SCIENTISTS ISOLATE compound, file for patent
	SYNTHESIS on at NIIST

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A medicinal plant which grows as weed in wastelands across India could soon provide a potent cure for liver cancer.

An interdisciplinary team of scientists from four major institutes has reported that a compound derived from the leaves of *Solanum nigrum*, known as Manithakkali in

Malayalam, has remarkable efficacy in treating liver cancer.

Evaluation of the compound, a saponin named Uttroside B, has shown that it is 10 times more effective than Sorafenib, the only drug currently available for the treatment of hepatocellular carcinoma. The finding has been published in the latest issue of *Scientific Reports*, a journal published by the Nature group.

Widely used

The team has isolated the compound from the leaves of the plant. Also known as Black nightshade, *Solanum nigrum* belongs to the family Solanaceae and is widely used in traditional medicine for various ailments such as inflammation, jaundice, bronchitis, asthma, leprosy, and skin disorders. It is a rich source of anticancer molecules. The team comprising researchers from the Rajiv Gandhi Centre for Biotechnology, National Institute for Interdisciplinary Science and Technology (NIIST), Government Medical College, Thiruvananthapuram, and the National Chemical Laboratory, Pune, has also found that unlike Sorafenib, the plant-based compound does not cause noticeable side effects.

Laboratory tests showed drastic inhibition of tumour growth in mice. The team has filed for a patent on the finding and is exploring the possibility of a tie-up with the University of Oklahoma, USA, for clinical trials.

According to Ruby John Anto, cancer researcher at the RGCB and a lead author of the paper, various plant species of the Solanum family have been reported to have considerable amount of saponins which exhibit potent activity against different cancer cell lines. "In the present study, we found that uttroside B isolated from the leaves of *Solanum nigrum* has maximum effect against liver cancer cells."