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Parachuri G. Rao, former director of the institute who has been retained by the Council of Scientific and Industrial Research as adviser, said lung cancer is very difficult to cure as radiation and chemotherapy are not effective. But the vapour of the volatile oils extracted from the *Litsea cubeba* seed, locally known as mejankori, can be inhaled directly into the lungs. In the case of lung cancer affected cells, it causes disintegration (apoptosis) and cell cycle arrest.

“If approval is obtained and the oil vaporiser is found to be as effective as when it was tried on a terminally-ill patient and in lab tests, then lung cancer may soon have effective treatment,” he said.

“The clinical trials are intended to establish the efficacy of the vaporiser as this will be a systematic treatment where a group will be using both known cancer treatments and our volatile oils and another group which will be only given our vaporiser. A lung cancer patient in whom the cancer had spread to his bones and who was given the vaporiser after he signed a consent form for the treatment was found to be free of cancer cells in the lungs after a biopsy done three months later by the hospital. He, however, was also undertaking other treatment,” Rao said.

Rao did not reveal the name of the patient or hospital because of privacy factors but showed this correspondent the medical reports.

The abstract of the research paper published in PLOS One, an international journal, states that non-small cell lung carcinoma is a major killer in cancer-related human death. Its therapeutic intervention requires superior efficient molecules as it often becomes resistant to present chemotherapy options.

“Here we report that vapour of volatile oil compounds obtained from *Litsea cubeba* seeds killed human NSCLC cells A 549 through the induction of apoptosis and cell cycle arrest,” the research says.

Those involved in the research from both NEIST and the Centre for Advanced Studies in Zoology, School of Life Sciences, Santiniketan University, Santiniketan, West Bengal are Soma Seal, Priyajit Chatterjee, Sushmita Bhattacharya, Durba Pal, Suman Dasgupta, Rakesh Kundu, Sandip Mukherjee, Shelley Bhattacharya, Mantu Bhuyan, Pranab R. Bhattacharyya, Gakul Baishya, Nabin C. Barua, Pranab K. Baruah, Parachuri G. Rao and Samir Bhattacharya.

The lung cancer cell line A 549 was a gift from Partha P. Banerjee, Georgetown University Medical Centre, Washington DC, which he obtained from American Type Culture Collection in the US.

Ahom royalty wore robes made of a cream-coloured muga produced by muga silkworms when they fed on leaves of the mejankori tree

NEIST discovered superior quality mejankori in the Northeast whose quality and quantity of oil is superior to those grown in China

Mejankori oil is in great demand in the perfumery and pharmaceutical industry at the international level

Now oil compounds of mejankori have been found by NEIST scientists to destroy and eliminate cancer cells and also blocked cancer cell proliferation in laboratory conditions

Lung cancer is one of the most prevalent cancers and a major cause of cancer-related deaths in approximately 1.4 million patients worldwide each year.