

India to study marijuana-derived drugs

Plan afoot to research its uses in treatment of breast cancer and sickle cell anaemia, among others

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Three major science administrators in India – The Council of Scientific and Industrial Research, the Indian Council for Medical Research and the Department of Biotechnology -- are getting together to promote research in herbal drugs, some of which involve deriving new drugs from marijuana.

Among the first such studies likely to kick off is joint investigation by the CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM) and the Tata Memorial Centre (TMC), Mumbai.

Here researchers will test whether strains of marijuana grown at the CSIR-IIIM campus in Jammu could be effective in the treatment of breast cancer, sickle-cell anaemia as well as be “bio-equivalent” (similar in make-up and effect) to marijuana-derived drugs already approved by the United States

Soothing effect

Research says marijuana can be used for alleviating pain and muscle stiffness in multiple sclerosis and Parkinson's disease



With care: A grower sorts marijuana plants at a facility in Ontario, Canada. ■ REUTERS

Food and Drug Administration (U.S. FDA)

Restricted cultivation

Marijuana (or hemp), more formally parts of the cannabis super-family, is illegal for commercial cultivation though it grows as weed in several parts of the country. Uttarakhand, Jammu and – as of this month Uttar Pradesh – have allowed restricted cultivation of the plant for medical research.

One of the trials, said a

doctor associated with the study, was to check if the “feelings of bliss” induced by cannabis could be detected at the cellular level. “The effects of *bhaang* (marijuana consumed orally) have been known to induce a state of bliss. What we’d like to find out if those effects in the brain travel all the way into the cancerous cell and can change its profile,” said Rajendra Badwe, Director, Tata Memorial Centre and one of the investigators of the stu-

dy. The studies however are ‘long-term’ and could take 5-6 years, he said. The organisations were in the process of formally applying to the Drug Control General of India for permissions.

“There is an unmet need for terminal cancer patients and because of restrictions we have lost 50-60 years of valuable research into the properties of these plants,” said Ram Vishwakarma, Director, CSIR-IIIM.

The studies into the thera-

- There's no evidence of its curative properties so far

- CBD (cannabidiol) is a chemical component of marijuana. CBD does not cause intoxication or euphoria (the “high”) that comes from tetrahydrocannabinol (THC)

- It is THC (and not CBD) that is the primary psychoactive component of marijuana

- It is legal for medical purposes in several U.S. States and has been decriminalised – in varying degrees – in Uruguay, Costa Rica, Jamaica & Canada

- **Hemp, which refers to the cannabis plant in its entirety, is also used to derive seed-oil and its fibre is used to make fabric**

peutic potential of marijuana is part of a larger governmental thrust to making new drugs derived from herbs and plants that find mention in Ayurvedic and other traditional-medicine knowledge systems.

The U.S. FDA this year approved Epidiolex (cannabidiol) [CBD] oral solution for the treatment of seizures associated with two rare and severe forms of epilepsy, Lennox-Gastaut syndrome and Dravet syndrome.