India to Study Marijuana-Derived Drugs

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

- Scientists are preparing for India's first human clinical trials to test cannabis-based compounds on select diseases.
- Researchers will test whether strains of marijuana could be effective in the treatment of breast cancer, sickle-cell anaemia as well as for "bioequivalent" (similar in make-up and effect) to marijuana-derived drugs already approved by the United States Food and Drug Administration (U.S. FDA).
- The studies into the therapeutic potential of marijuana is part of a governmental thrust to produce new drugs derived from herbs and plants that find mention in Ayurvedic and other traditional medicine knowledge systems.
- India's move towards clinical trials of cannabis derivatives comes amid growing evidence of the safety and efficacy of medicinal cannabis in the treatment of cancer, multiple sclerosis and a rare but severe form of epilepsy.

Marijuana or Hemp

- Marijuana (or hemp), part of the cannabis super-family, is illegal for commercial cultivation though it grows as weed in several parts of the country. Uttarakhand, Jammu and — recently Uttar Pradesh — have allowed restricted cultivation of the plant for medical research.
- The Marijuana has two components CBD (cannabidiol) and THC (tetrahydrocannabinol).
- **CBD does not cause intoxication or euphoria** and has been successfully proven to provide relief to chronic pain without causing psychoactive side effects.
- It is **THC** which **is the primary psychoactive components** of Marijuana.

The 1985 Narcotic Drugs and Psychoactive Substances Act

- The NDPS Act 1985 bans commercial cultivation of cannabis.
- The bar does not apply to an edible preparation called bhang, which is allowed in some States.

1961 UN Single Convention on Narcotics Drugs

- The Single Convention on Narcotic Drugs of 1961 is an international treaty to prohibit production and supply of specific (nominally narcotic) drugs and of drugs with similar effects except under licence for specific purposes, such as medical treatment and research.
- The Single Convention refers to drug addiction as "a serious evil for the individual [that] is fraught with social and economic danger to mankind".

Marijuana Legalisation Debate

- Cannabis has been recognised for its medical use in 29 out of 51 US States, Canada, Australia and a significant number of another 20-odd countries across the world. In India, however, cannabisderived drugs are unavailable, illegal and cannot be prescribed by doctors.
- Apart from medical purposes, the cultural and economic significance have been used as an argument in the favour of cannabis legalization.
- Marijuana Should Be Legalized
 - Legalisation will curb crime
 - Evidence suggests that strict enforcement of the narcotics law based on prohibition tends to target the most defenceless members along the drug smuggling chain.
 - Prohibition strengthens the cartels they should be targeting. The big cartels and traffickers remain out of reach of the regular law enforcement machinery.
 - Filling jails with drug users and street-level suppliers only **stresses the criminal** justice system.
 - Legalization will also enhances security for all of society, as it helps undermine criminal markets.
 - Due to the drug's illegality, cannabis are sold underground and is a source of revenue for criminal gangs and terrorist organizations.
 - Cultural and Historical Significance
 - The **documented use of cannabis in India dates back to the Vedic period.** In the Atharva-veda, the 'bhang' plant finds a notable mention as one of nature's five sacred, distress-relieving plants. During the festival of Holi, the consumption of bhang is an integral part of the celebrations even today.
 - Indian Hemp Drugs Commission in 1894 found consumption of cannabis in colonial India extensive and determined that its use was very ancient, had some religious sanction, and was harmless in moderation.
 - The **commission recommended against complete ban** on its consumption as it can push consumer towards other hard drugs.
 - Until 1985, when NDPS Act was enacted, cannabis derivatives bhang, charas and ganja were regulated by the various state excise departments and legally sold by licensed shops.
 - Less Health Risk when compared to Alcohol
 - WHO study concluded that the public health risks from cannabis use were likely less severe than those posed by alcohol and tobacco, which are legal.
 - Business and Economic Possibilities
 - The legal **marijuana market** is currently worth **more than \$7 billion globally**, and is expected to hit \$31 billion by 2021.
 - The **fabric produced from hemp is of very high quality.** Hemp is also highly suitable as a technical fibre. India also has many startups working in this field like The mumbai-based The Bombay Hemp Co. (BOHECO).

Marijuana Should Remain Illegal

Marijuana Causes Psychosis

- Marijuana can trigger mental health related issues in its users. THC in marijuana has been proved to cause psychosis.
- Those who use it as adolescents or younger may be more likely to **develop mental health problems later in life.** In some cases, it can also make people feel nauseous, lethargic, forgetful, anxious, or confused.

• Marijuana is a gateway drug

- Cannabis has been engineered to become much more potent an addictive. Growers has decreased level of CBD and increased level of THC.
- A vulnerable person who will abuse it as a gateway drug before moving to more dangerous substances. In a study it was found that 45% who used marijuana also used other 'Hard' drugs.
- Marijuana damages organs
 - The World Health Organization has listed a number of diseases associated with the consumption of marijuana, including **impairment in cognitive functioning**, airway injury, bronchitis and lung inflammation.
- Regulations difficult to enforce
 - If marijuana will be available at a pharmacy with a prescription (like in the US) how

government will ensure that it's not bought for recreational purpose. Considering, cough syrups and inhalants are freely accessible and brought incessantly by addicts.

Way Forward

- Prohibiting and making it illegal has not prevented the availability of marijuana in the market nor its use by people.
- The **potential risks that cannabis poses illustrate why it is necessary to legally regulate this drug.** Rather than leaving the trade of cannabis in the hands of an unregulated criminal market, the drug should be safely produced by competent farmers, packaged and tested in suitable facilities, and sold by reputable and licensed vendors.
- Regulation allows cannabis buyers to know what they are consuming and moderate their intake in accordance with the THC level in the marketed marijuana.
- Imposing tax on cannabis sales can create revenue for the state. Tax collected could be spent on educating people about the risks of cannabis use, like public service information on alcohol and tobacco.

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