

# MEDICINAL AND THERAPEUTIC USES OF *CANNABIS SATIVA* L.

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**Abstract.** The *Cannabis* plant has a long history of use as medicine, with historical evidence dating back to 2737 BCE (Mohamed Ben Amar, 2006). *Cannabis* is one of the 50 "fundamental" herbs of traditional Chinese medicine (Wong, Ming, 1976), and is prescribed to for a broad range of indications.

Medical cannabis is illegal in most countries. A number of governments, including the U.S. Federal Government, allow treatment with one or more specific low doses of synthetic cannabinoids for one or more disorders.

Medical cannabis refers to the parts of the herb cannabis used as a physician-recommended form of medicine or herbal therapy, or to synthetic forms of specific cannabinoids such as THC as a physician-recommended form of medicine. The *Cannabis* plant has a long history of use as medicine, with historical evidence dating back to 2737 BCE (Mohamed Ben Amar, 2006). *Cannabis* is one of the 50 "fundamental" herbs of traditional Chinese medicine (Wong, Ming, 1976), and is prescribed to for a broad range of indications.

Arab scientists explained the curative properties of hemp according to the principles of the humoral theory they learned from the Greeks. As is well-known, this theory assumes that each simple possesses a characteristic, "temperament", determined by its degrees of "heat", "cold", "wetness" and "dryness". Similarly, they largely accepted

the opinion of Galen (1821-1833, VI pp. 549 f. and XII, p. 8), who talks of the desiccating and warming power of hemp. was the seeds, and to a lesser extent the leaves. Methods of preparation differ according to the ailment to be treated, using the oil obtained from the seeds and the juice from the leaves and green seeds.

It was administered externally in the form of ointment in the nose, orally or in drops into the ears. Only very rarely is the actual dose which should be used in each treatment mentioned. It seems that it was commonly used as a simple medicament (Lozano Indalecio, 2001).

Use. Medical cannabis is illegal in most countries. A number of governments, including the U.S. Federal Government, allow treatment with one or more specific low doses of synthetic cannabinoids for one or more disorders.

Supporters of medical cannabis argue that cannabis does have several well-documented beneficial effects (Aggarwal SK et al., 2009; "IACM 5th Conference on Cannabinoids in Medicine; Joy, Janet E. et al., 1999). Among these are: the amelioration of nausea and vomiting, stimulation of hunger in chemotherapy and AIDS patients, lowered intraocular eye pressure (shown to be effective for treating glaucoma), as well as gastrointestinal illness. Its effectiveness as an analgesic has been suggested—and disputed—as well.

There are several methods for administration of dosage, including vaporizing or smoking dried buds, drinking, or eating extracts, and taking capsules. The

comparable efficiency of these methods was the subject of an investigative study<sup>[6]</sup> conducted by the National Institutes of Health.

Synthetic cannabinoids are available as prescription drugs in some countries. Examples are Marinol (The United States and Canada) and Cesamet (Canada, Mexico, the United Kingdom, and the United States).

While utilizing cannabis for recreational purposes is illegal in many parts of the world, many countries are beginning to entertain varying levels of decriminalization for medical usage, including Canada, Austria, Germany, Switzerland, the Netherlands, Czech Republic, Spain, Israel, Italy, Finland, and Portugal. In the United States, federal law outlaws all use of herb parts from Cannabis, while some states have approved use of herb parts from Cannabis as medical cannabis in conflict with federal law. The United States Supreme Court has ruled in *United States v. Oakland Cannabis Buyers' Coop* and *Gonzales v. Raich* that the federal government has a right to regulate and criminalize cannabis, even for medical purposes. A person can therefore be prosecuted for a cannabis-related crime even if it is medical cannabis that is legal according to the laws of this state (<http://intraspec.ca>).

The results of a series of randomized, placebo-controlled clinical trials assessing the efficacy of inhaled marijuana consistently show that cannabis holds therapeutic value comparable to conventional medications, according to the findings of a report issued to the California state legislature by the California Center for Medicinal Cannabis Research (CMCR).

Four of the five placebo-controlled trials demonstrated that marijuana significantly alleviated neuropathy, a difficult to treat type of pain resulting from nerve damage.

"There is good evidence now that cannabinoids (the active compounds in the *Cannabis sativa* L.) may be either an adjunct or a first-line treatment for ... neuropathy," said Dr. Igor Grant, Director of the CMCR, at a news conference. He added that the efficacy of smoked marijuana was "very consistent," and that its pain-relieving effects were "comparable to the better existing treatments" presently available by prescription.

A fifth study showed that smoked cannabis reduced the spasticity associated with multiple sclerosis. A separate study conducted by the CMCR established that the vaporization of cannabis – a process that heats the substance to a temperature where active cannabinoid vapors form, but below the point of combustion – is a "safe and effective" delivery mode for patients who desire the rapid onset of action associated with inhalation while avoiding the respiratory risks of smoking.

Two additional clinical trials remain ongoing.

The CMCR program was founded in 2000 following an \$8.7 million appropriation from the California state legislature. The studies are some of the first placebo-controlled clinical trials to assess the safety and efficacy of inhaled cannabis as a medicine to take place in over two decades.

Placebo-controlled clinical crossover trials are considered to be the 'gold standard' method for assessing the efficacy of drugs under the US FDA-approval process.

"These scientists created an unparalleled program of systematic research, focused on science-based answers rather than political or social beliefs," said former California Senator John Vasconcellos, who sponsored the legislation in 1999 to

launch the CMCR. Vasconcellos called the studies' design "state of art," and suggested that the CMCR's findings "ought to settle the issue" of whether or not medical marijuana is a safe and effective medical treatment for patients (<http://intraspec.ca>).

Arab scientists were several centuries ahead of our current knowledge of the curative power of *Cannabis sativa* (L.). They knew and used its diuretic, anti-emetic, anti-epileptic, anti-inflammatory and pain-killing virtues, among others. For this reason, it seems reasonable to suggest that the data to be found in Arabic literature could be considered as a possible basis for future research on the therapeutic potential of cannabis and hemp seeds. This would seem to be particularly necessary if we take into account that currently, the traditional use of the plant among Arab Islamic peoples of the world has almost completely disappeared due to the legal restrictions which prohibit its cultivation and use (Lozano Indalecio, 2001).

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