The Botanical Medicine of Cannabinoids

A Florida Physician’s Course for Providing Low THC Cannabis
In the United States of America

Jeffrey S. Block, M.D.
Seeking relief from the intolerable symptoms of diseases is an instinctually-driven force of human nature, and serves as a powerful motivator to substance use:

The treatment of diseases is a societally-designated task given to responsible healers, and serves to motivate our privilege to humanely provide healthcare.

Historically when in its native and natural totality Cannabis has been used to treat symptoms of disease in humans, but current doubts exist regarding its safety and effectiveness in curing disease. Humans have cultivated and consumed the flowering tops of the female cannabis plants since virtually the beginning of recorded history. Cannabis-based textiles dating to 7,000 B.C. have been recovered in northern China, and the plant’s use as a medicinal and euphoric agent date back nearly as far. Marijuana’s individual chemical components are called cannabinoids, some of which may provide safe and effective relief of symptoms. Additional research into their effects is ongoing. Marijuana is a source of over 60 cannabinoids, including THC and CBD, as well as a host of other potentially bioactive molecules.
Mankind would like to think of itself as distinctively and instinctively unique; independent from less intelligent fauna and most certainly flora, but not so chemically! One only needs to look at a molecule of hemoglobin when compared to chlorophyll. The very lifeblood of a human’s oxygen carrying ability when viewed alongside the essence of the photosynthetic energy source in plants humbles us when we understand just how similar, and in fact dependent we are chemically.

**CHLOROPHYLL AND HEMOGLOBIN**

The human body naturally produces several cannabinoids called endocannabinoids. Endocannabinoids are endogenous cannabinoids and possess a similar molecular structure to herbal cannabinoids. Common endocannabinoids include anandamide and 2-AG. These molecules are synthesized and released on demand. Their effects are shorter-lasting than marijuana because the body breaks them down faster. Endocannabinoids and plant derived cannabinoids act as neuro-modulators and cytokine modulators by interacting with the body’s extensive cannabinoid receptor system, and thus regulate many of the body’s essential physiological functions including appetite, blood pressure, bone growth, tumor modulation, immunity, inflammation, pain sensation, memory, and muscle tone. Well over a dozen potential therapeutic properties are attributable to cannabinoids and include neuro-protective, anti-cancer, and anti-bacterial functions.
The United States first began restricting addictive drugs in the early 1900’s to help lead international agreements regulating trade, and by 1937, Congress imposed federal prohibitions outlawing cannabis’ recreational, industrial, and therapeutic use by the passage of the Marihuana Tax Act. The Controlled Substances Act (CSA) is part of the Comprehensive Drug Abuse Prevention and Control Act of 1970 that directs federal U.S. drug policy under which the manufacture, importation, possession, use and distribution of certain substances is regulated.
The United States Drug Enforcement Agency (DEA) was then established in 1973 and has designated five "schedules" for drugs or chemicals that can be used to make drugs. They define Schedule I “as drugs with no currently accepted medical use and a high potential for abuse”, further explaining that “Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence.” Along with other substances such as heroin and LSD, no prescriptions may be written for Cannabis under federal law, as it is currently designated as a Schedule 1 drug. Rescheduling marijuana would not make it legal for recreational use, but a lower schedule could potentially ease the restrictions on research into Cannabis.

The change of Cannabis from Federal DEA Schedule 1 status would permit more research.

A recent Federal Department of Justice guidance to prosecutors suggests wider social awareness of medical marijuana’s evolving role in national healthcare, by limiting criminal charges to “large-scale, for-profit commercial enterprises” and endorses four priorities for federal enforcement: preventing distribution of marijuana to minors, preventing revenue from going to a criminal enterprise, preventing trafficking of other illegal drugs, and preventing drugged driving. Once physicians move outside the physician–patient relationship and into the drug-trafficking arena, their speech and actions are not protected on either state or federal levels.
Over the past two decades, changes in several state’s laws seem to have become the prescribed method of choice to allow their citizens access to this federally prohibited drug. A current majority of Americans believe that physicians should be able to recommend marijuana to their seriously ill patients, and it appears as though a majority of states will soon permit the medical use of Cannabis.

Also called the “Compassionate Medical Cannabis Act of 2014”, this legislation provides a State protected environment that allows healers to provide their sick patients with a plant derived treatment known to have been used for thousands of years. By revising the term “cannabis” as previously described in Florida’s Comprehensive Drug Abuse Prevention and Control Act, Florida’s physicians are now permitted to order medical grade marijuana to bona-fide patients. The law specifies that compliant physicians need to carefully document their patient’s risk/benefit analyses and track outcome; and thus emphasizes high-quality patient care. The focus of SB1030 then, provides Florida’s physicians and patients not only with the opportunity to access a historically familiar and universal formulary, but also allows modern medicine an opportunity to conduct meaningful research into a potentially effective therapeutic use of medical marijuana.
FLORIDA’S SB1030 EMPHASIZES CANNABIDIOL MEDICINE

In 1513, the renaissance era Spring celebration called the “Feast of Flowers” was the inspiration for Ponce de Leon to so name the southeast section of America “Florida”: A fitting name for this region’s unique habitat so famously associated with plentiful water able to support the abundant plant life; aka “The Fountain of Youth”!

SB1030 recognizes that a particular non-psycho-active chemical component found in marijuana called cannabidiol (CBD) may appear to be effective in the treatment of intractable childhood epilepsy. CBD is found in relatively high concentrations in a cannabis strain known as “Charlotte's Web”, so nicknamed after Charlotte Figi, born October 18, 2006, whose story has led to her being described as "the girl who is changing medical marijuana laws across America."

“CHARLOTTE’S WEB”
is the name given to a select strain of medical cannabis containing low levels of the psycho-active tetrahydrocannabinol (THC) and high levels of cannabidiol (CBD).
For patients with medical conditions that chronically produce symptoms of seizures or severe and persistent muscle spasms, SB1030’s intent and focus is to allow Florida licensed physicians to offer the use of medical-grade cannabis containing predominately this compound to treat or alleviate such symptoms if no other satisfactory alternative treatment options exist. In addition, the method of administration cannot be by smoking because as with tobacco, the burning of cannabis changes helpful molecules into other compounds known to have unacceptable risks, and may also cause pulmonary damage. Vaporizing is not smoking, and is a permissible safer delivery method; and additional delivery methods are currently being investigated.

Cannabis administration can not be by smoking.

Vaporizing is an acceptable delivery method.

SB 1030 requires the Florida Medical Association or Florida Osteopathic Association to offer this 8-hour continuing educational curriculum intended for Florida state licensed allopathic and osteopathic physicians who wish to order medical marijuana for their patients. The course encompasses the clinical indications and contraindications for the appropriate use of low-THC cannabis, the appropriate delivery mechanisms, as well as the relevant state and federal laws that can apply.
In addition to providing clearly focused education goals concerning the known physiologic and pharmacologic actions of cannabinoids in promoting compassionate patient care, this course provides guidance for Florida physicians and encourages discussions on ethical practice. Moral responsibilities are of great concern within a federal environment positioned to enforce intolerance concerning cannabis when offered as an illegal drug known to have significant social consequences.

Seeking relief from the intolerable symptoms of diseases is an instinctually-driven force of human nature, and serves as a powerful motivator to substance use:

The treatment of diseases is a societally-designated task given to responsible healers, and serves to motivate our privilege to humanely provide healthcare.