WE NEED TO RESCHEDULE CANNABIS

A sane solution to an irrational standoff

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As state after state legalizes medical marijuana, the United States is moving back to the future. Prior to the enactment of the Controlled Substances Act (CSA) in 1970, multiple formulations of cannabis-based medications were used as standard treatments for many of the same indications for which medical marijuana is now touted to be beneficial. For more than a century, cannabis was listed on the U.S. Pharmacopeia; but with the advent of the CSA, it was branded a Schedule I drug, a designation indicating that it had no medical value and a high risk of abuse.1,2

The Schedule I designation spat in the face of 5,000 years of cannabis use in folk medicine throughout the world. And while folk medicine per se doesn’t meet federal standards of what constitutes legitimate (meaning Food and Drug Administration-approved) medication, neither does the science justify the demonization of cannabis. In 1970, the chemical structure of delta-9-tetrahydrocannabinol (THC), the principal active ingredient in medical marijuana, had been elucidated for only six years. That was the extent of our knowledge about the properties of cannabis. We did not yet understand the ubiquitous nature of the modulatory endocannabinoid system, as it wasn’t until 1988 that the CB1 receptor would be cloned, and the early 1990s before the CB2 receptor would be discovered and the extent of the endocannabinoid system appreciated.1,3

Indeed, the last several decades of scientific discoveries suggest that marijuana is anything but a product devoid of medical value. Even as current federal bureaucracy stymies efficient development of cannabis-based pharmaceuticals, researchers posit therapeutic targets for cannabinoids ranging from gastrointestinal disorders and cancers to autoimmune dysfunctions and neurological derangements.3-6

Analyzing our anxiety

Admittedly, the medical marijuana product that’s currently available challenges our ideas about what constitutes a legitimate medication. First, it is a raw plant containing at least 60 distinct cannabinoids among nearly 500 discrete chemical compounds, the vast majority of which are uncharacterized, let alone studied.7-9 Moreover, the concentrations of THC and cannabidiol (CBD), marijuana’s two known active ingredients, are essentially idiosyncratic, depending on the strain.8,10 Amateur Luther Burbanks-qua-drug dealers have bred strains containing up to 30 percent THC and minimal CBD in order to intensify the high the user feels.11 (The presence of CBD would otherwise dampen the effects of THC.) Cultivators have also developed strains such as Charlotte’s Web, which minimizes the amount of THC and maximizes CBD and is purported to be effective against treatment-resistant epilepsy in children. Thus, marijuana buyers have little guarantee of what they are purchasing, whether the drug comes from a dealer or a state-authorized distributor.

Convoluted bureaucracy stymies study

Unlike any other medication, medical marijuana is typically smoked, invoking intense concern in a profession sensitized to the health consequences of exposure to tobacco smoke. Moreover, users decide for themselves how much is the right amount, titrating their inhalation to their symptoms, thereby challenging a system premised on the prescriber—usually a physician—decreeing the amount and frequency of dosing based on approved standards derived from a series of FDA-ordained trials designed to establish that the benefits of a proposed medication outweigh its risks. All of this occurs against the reality that cannabis is the most popular illicit drug in the United States.12

On its website, the National Institute of Drug Abuse (NIDA) contends disingenuously that research-grade cannabis is readily available for legitimate research.13 The definition of what NIDA considers “legitimate” notwithstanding, the process for gaining research approval is cumbersome at best, more byzantine than Byzantium at worst—a complexity that is the direct result of cannabis’ Schedule I status. For starters, to do clinical research using cannabis, a would-be investigator must gain the approval of not one but two federal agencies: the Drug Enforcement Administration (DEA) for issuance of a license and the FDA for approval of a protocol authorizing use as an Investigational New Drug. The researcher would then have to petition a third agency, NIDA, for the right to use the only federally acceptable research-grade botanical cannabis, a strain from the 1970s grown to order on a farm under the auspices of the University of Mississippi.

The petition could then only go forward when one of two other agencies has authorized the planned research. The three-stage NIH process would include not only peer-review but also subsequent review by both the NIH National Advisory Council and NIDA’s director “who makes the final decision on the merit of an application … based on peer review, public health significance, and institution priorities.” The other route involves a Department of Health and Human Services review that would deem whether or not the proposal has scientific
validity. Only after endorsement by at least four agencies with multiple independent reviews—any one of which could jettison the proposal—could research proceed. 

This entire process is laid out on NIDA’s website, which makes no bones about its primary and overarching commitment to pursuing “the science of drug abuse and addiction.” In a list of the types of cannabis research it funds as part of its mandate, only one of nine items alludes to “potential therapeutic uses of THC and other cannabinoids in treatment of pain, HIV and addiction.” All the others relate to the study of some aspect of addiction, whether it be the effects of marijuana use on the developing brain, patterns of use in adolescents, screening for abuse, treating abuse or exploring the public health implications of medical marijuana-related legislation. 

Although one brief paragraph acknowledges potential applications of CBD in schizophrenia treatment, the website mainly supports the case for why medical marijuana is not legislatively medical and paints a grim picture of THC “artificially disrupting function of natural cannabinoids.” Couple all of this with the reality that there is little financial incentive for pharmaceutical companies to launch multimillion-dollar studies on a ubiquitous plant rather than a proprietary agent—if it were even legal to do so—and it becomes clear that a would-be investigator would have to make (ahem) a federal case to get a study launched.

Legal yet illegal

The states that have legalized medical marijuana have essentially gone rogue in defiance of federal constraints. As Seamon explains, both federal and state governments have implemented laws to regulate marijuana use. In the United States, when federal and state laws are in disagreement, the federal statute trumps the state statute. With the federal government having declared cannabis illegal, no matter what protocols and safeguards individual states implement to govern the practices of the physicians they license, practitioners who prescribe medical marijuana violate federal law and run the risk of losing their DEA license or facing criminal prosecution. Federal facilities such as those run by the Veterans Administration do not permit medical marijuana use, and state proposals to make hospitals that receive federal funding into medical marijuana dispensaries are fraught with risk for the hospitals.

Although a federal appeals court did rule in 2000 that forbidding physicians from recommending medical marijuana violated their right to free speech, the federal courts have otherwise “not directly addressed the conflict between the CSA and state medical marijuana laws.” With states proceeding as if their laws are legitimate and the federal government erratically enforcing its own statutes outlawing cannabis use for any purpose, patients and health care providers are left with no clear guidance.

A way out of the debacle

With the federal government essentially disregarding decades of bench research begging for clinical application and with states ignoring their obligations to the orderly rule of law, there is no readily apparent way out of the current medical marijuana debacle. Even though as recently as June 2011 the DEA refused to reschedule marijuana, reiterating its decades-long position that scientific or medical evidence is lacking to justify such a move, the only logical exit is a rescheduling of cannabis to Schedule II. If this were to happen, precedent would not be set. Heroin, an opiate, is on Schedule I; opiates routinely used in medical treatment of pain and arguably more dangerous than medical marijuana are Schedule II and III. Methamphetamine is Schedule I, while amphetamines—a mainstay of ADHD treatment—are Schedule II. Indeed, precedent would not even be set by having legal cannabinoid-based substances. Dronabinol (Marinol), oral synthetic THC, and nabulbine (Cesamet), an oral synthetic THC analog, have been FDA-approved since 1985 and are used for treating cancer pain and anorexia induced by chronic illness.

By rescheduling cannabis, the past and the future could be reconciled. Schedule II status would facilitate development of additional cannabinoid-derived medications with novel formulations and delivery strategies to improve efficacy and minimize side effects. Research could go forward with the goal of deriving cannabis-based pharmaceuticals that would in all likelihood render medical marijuana in its current crude, smoked-form obsolete.

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