Marijuana Goes Main Street
A Booming Business • Your Brain on Pot • Legalization Marches On

By Bruce Barcott
A Popular Crusade for a Curious Tonic

Research into marijuana's medicinal properties has proved promising—when not being stifled or stonewalled

Suzanne Sisley was an assistant professor of psychiatry at the University of Arizona. For three years she'd been trying to get federal approval to study the effects of cannabis on veterans with PTSD.

Sisley's study had been authorized by the university's research ethics board and by the U.S. Food and Drug Administration. Now she had to get permission from the U.S. Public Health Service and the DEA.

"We have about 50 veterans with PTSD signed up as subjects," Sisley told me. "If we get approval, we'll break them up into three groups. Some will be administered a high-CBD strain with 12 percent THC, others a 6 percent THC strain, and a control group will get a placebo."

Veterans around the country kept a close eye on Sisley's progress. Among America's wounded warriors, there were few more pressing issues than PTSD and its treatment. By some estimates, at least 20 percent of the 2.3 million American veterans of the Afghanistan and Iraq wars suffered from PTSD. Half didn't seek treatment. Of those who did, only half received adequate
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treatment. For too many, the pain and depression became unbearable. The Department of Veterans Affairs (VA) reported that between 2005 and 2011, an average of 22 young veterans committed suicide every day—more than 8,000 a year.

Doctors at the nation’s VA clinics often sent PTSD patients home with a mixture of antidepressants, opioids and other drugs. That led to an alarming increase in opioid addiction. Veterans tend to keep in touch with one another, so when some found relief with cannabis, word spread. By 2013, thousands of PTSD veterans had ditched their opioid prescriptions in favor of medical marijuana. But those thousands of stories didn’t constitute the kind of scientific evidence that might allow VA doctors to talk openly and legally about cannabis with their PTSD patients. Or actually prescribe it.

“They’ve been stonewalling us for three years,” Sisley told me.

I looked into Suzanne Sisley’s complaints about the government’s blocking marijuana research. The government maintained strict rules for the study of Schedule I drugs. The rules for the scientific study of marijuana went above and beyond the strictures for heroin and cocaine, though.

Pharmaceutical companies like Pfizer and Bayer are licensed by the Drug Enforcement Administration to manufacture a tightly controlled supply of heroin, cocaine, methamphetamine, LSD and other Schedule I compounds for use in research. Federal law not only allows it, it demands it. The Controlled Substances Act calls on the head of the DEA to maintain “an adequate and uninterrupted supply of these substances under adequately competitive conditions.” The DEA administrator can register a Schedule I drug producer only if it’s deemed “in the public interest.”

That leaves the DEA with enormous wiggle room. What the agency has done with that power lends credence to Sisley’s complaint.

Pharmaceutical companies don’t grow pot. In fact, there’s only one legal source for research-grade cannabis: a greenhouse at the University of Mississippi that operates under contract to the National Institute on Drug Abuse (NIDA), an arm of the federal National Institutes of Health (NIH). There is no “competitive condition” for research-grade pot because the DEA has deemed it not in the public interest. To obtain research pot, a scientist must submit to extra reviews by NIDA and the U.S. Public Health Service in addition to the usual FDA and DEA scrutiny. The FDA and the DEA have to respond to research requests within 90 days, but NIDA and the Public Health Service have no response deadline. The upshot is that studies unlikely to show negative health effects from marijuana use are nearly always denied or delayed to death by NIDA and the Public Health Service.

There’s more. In 1996, California passed the nation’s first medical marijuana law. Bill Clinton’s drug czar, Barry McCaffrey, asked the Institute of Medicine, the medical research arm of the National Academy of Sciences, to undertake a comprehensive review of the science on medical marijuana. McCaffrey expected it to be exposed as bunk. That didn’t happen.
"Scientific data indicate the potential therapeutic value of cannabinoid drugs, primarily THC, for pain relief, control of nausea and vomiting, and appetite stimulation," the review's authors wrote. Marijuana also proved to be effective in some people for the relief of chronic pain, as an epileptic-seizure suppressant and as a drug to reduce intraocular pressure in glaucoma patients.

The Institute of Medicine report displeased McCaffrey. He and Attorney General Janet Reno vowed to prosecute medical marijuana patients and any doctors who prescribed the drug.

Meanwhile, at an NIH lab in Bethesda, Md., a team of federal researchers was studying the use of cannabinoids as neuroprotectants. The lead researcher was Aiden Hampson, guided by his mentor Julius Axelrod, a Nobel Prize-winning pharmacologist and neuroscientist. Axelrod founded the NIH's pharmacology department in the 1950s, and his work on neurotransmitters led to the development of antidepressants like Prozac. Cannabinoids, Hampson and Axelrod discovered, "are found to have particular application" for limiting neurological damage following stroke and trauma, or in the treatment of diseases like Alzheimer's, Parkinson's and HIV dementia.

NIH scientists found cannabidiol (CBD) to be "particularly advantageous" because it produced results without THC's psychotropic side effects. Their research was so promising, in fact, that the NIH applied for and was granted a patent on the medical use of CBD: U.S. Patent No. 6630507.

The Institute of Medicine report was the most rigorous review of medical marijuana ever conducted. And it changed nothing. Instead of adjusting federal guidelines to fit the scientific evidence, McCaffrey suppressed the science to fit the policy. He and other officials at the Department of Health and Human Services (HHS) quietly enacted a constraint unique to marijuana. They made it against HHS policy to conduct any research that could lead to the development of smoked marijuana as a licensed drug. The agency's "Guidance on Procedures for the Provision of Cannabis for Medical Research" was released on May 21, 1999. It remains in effect to this day.

So it's not merely difficult to obtain permission to study marijuana; it's federally illegal to engage in science that could, in theory, lead to the permissible use of smoked marijuana for any

PO T-DISPENSING RABBI Dr. Jeffrey Kahn provides medical marijuana in Takoma Park, D.C.
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It took away my anxiety. It took a while to figure out the right strain and dose. I use only indica-dominant strains, which are more relaxing, calming. If I smoke sativas it can actually make my symptoms flare up. If I smoke a sativa concentrate it’ll throw me into a full-blown PTSD episode. But eventually I figured out my body’s chemistry and how it interacts with this substance. And it let me be the normal person that I am now.”

WASHINGTON, D.C., was an early adopter of medical marijuana. The District legalized it in 1998, but Congress blocked its implementation for 15 years. In 2013, House Republicans finally relented. Two dispensaries opened that year. It wasn’t as easy to get a green card in Washington as it was in Denver or Seattle, though. There were an estimated 32,000 registered MMJ patients in Denver and at least 25,000 in Seattle. In Washington, there were 59.

Takoma Wellness Center, one of D.C.’s two dispensaries, operated one block south of the Takoma Metro Station. In addition to being D.C.’s first medical marijuana shop, Takoma Wellness was the nation’s only dispensary operated by a man of the cloth. Rabbi Jeffrey Kahn spent 30 years as a congregational rabbi prior to opening the shop with his wife, Stephanie, a nurse at a long-term acute care center.

The Kahns’ experience with medical marijuana stretched back to the 1970s, when Stephanie Kahn’s father used it to control spasms brought on by multiple sclerosis. “He’d gone from doctor to doctor trying to find relief, and nothing worked,” Kahn told me. Finally a physician suggested he try marijuana. “It helped him immediately,” she recalled. “You could see the difference in minutes.”

They considered the dispensary a continuation of their life’s work: caregiving. “The day I was ordained as a rabbi, June 5, 1981, was the day the CDC’s Morbidity and Mortality Weekly Report published the first AIDS cases,” Kahn said. “Through the mid-’90s, a good portion of my rabbinate was tied up in families and people who were living with AIDS.” Jeffrey offered emotional and spiritual support while Stephanie tended to their physical needs in her hospital career. “I lived through the time when physicians could offer just about nothing to people living with AIDS,” Rabbi Kahn said. “I saw firsthand how cannabis brought relief. In some cases not just relief but great benefits.”

Around this time, families with children suffering
from Dravet syndrome, a severe form of pediatric epilepsy, began moving to Colorado Springs to treat their kids with low-THC, high-CBD cannabis oil. Colorado Springs was the home of the Stanley brothers, a family of pot growers who had cultivated the low-THC, high-CBD strain Charlotte’s Web. By the spring of 2014, Dr. Margaret Gedde and her Clinicians' Institute for Cannabis Medicine in Colorado Springs were treating more than 200 children, many of whom had recently moved with their families to Colorado.

Officials at Children’s Hospital in Denver, which is associated with the University of Colorado’s School of Medicine, began fielding calls from out-of-state doctors and parents desperate for information about high-CBD cannabis. The staff at Children’s didn’t know much about marijuana and weren’t sure it was legal to even offer an opinion. Since 1944, when Harry Anslinger vowed to arrest any researcher who touched cannabis without his approval, the government had quashed almost all studies into marijuana as a healing agent. Now, at the moment when pediatricians needed hard data, none existed.

One weekday in June, the CU Medical School held a lunchtime discussion on cannabis and pediatrics. Kari Franson, the associate dean of CU’s Department of Clinical Pharmacy, presented a hypothetical case involving “Tommy,” a 14-year-old boy experiencing seizures. Tommy hadn’t responded well to conventional medications. The first drug failed. Now his doctor was trying a second drug, to little effect. “His parents have heard about the reputed effects of the high-CBD marijuana strain Charlotte’s Web,” Franson told her colleagues. “They think it might work, they want something more natural, and they’d like to try it. What are your thoughts?”

Wary silence. Finally a pharmacist raised her hand. “They want something ‘natural,’” she said. “But high-CBD cannabis is still a chemical. A chemical that hasn’t been tested.”

Across the room: “I have a child with Type 1 diabetes, and if that kind of drug was available, I would probably try it. I know about a case with a child suffering 300 grand mal seizures a week. If it was called anything other than marijuana, would we have such a problem giving it a try?”

If the doctor refuses to discuss marijuana, another person asked, are we simply sending the
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patient away to try it on their own, with no input from the physician? "We see this in dealing with stem cells. Patients become medical tourists, seeking a miracle cure in some other country, and then they return home, where the local physician has to deal with the fallout, good or bad."

"And what if we do engage?" asked a physician. "Are providers at fault if something goes awry? What if the marijuana has an unforeseen outcome, or a poor drug interaction?"

A Children's Hospital doctor spoke up. "My neurology colleagues get calls on this every week," she said. "Parents of these patients are desperate to know if this CBD phenomenon is real. And there are legal issues here. We're not allowed to prescribe marijuana. At Children's we have had patients admitted with drug interactions between marijuana and anti-epilepsy drugs."

The question "Are professional ethics and compassion mutually exclusive?" rankled a doctor. "The word compassionate gets thrown around too much in these discussions," he said. "There's not even an ICD code for high-CBD marijuana," he added, referring to the International Classification of Diseases codes used to record patient histories. "Without ICD codes we can't chart and document what's going on. And by the way, it's still federally illegal. So we're putting our DEA licenses at risk, and possibly the institution's license as well."

A woman raised her hand. "I'm a big fan of the movie Dallas Buyers Club," she said. "I can't help but compare that situation to the one we're talking about here. When we look back 30 years from now, I'd like to think that CU and Children's will be the heroes of that movie—that we had the courage to take the risk and push the research."

A man responded. "The thing about that movie was that the substances they used in the buyers club didn't work," he said. "Researchers and advocates working together: that's what brought about significant breakthroughs."

"I treat patients with HIV," he continued. "I see this kind of situation when a patient comes in with something he found at the local GNC store. We make up a protocol and keep a close watch. Because he's going to try it whether I approve or not."

One day later, Suzanne Sisley was in Colorado to meet with colleagues at CU-Boulder and the local VA hospital. "They're interested in collabo-
rating on the study,” she told me. “They’re not sure if it’s legally possible.”

“I got approval from the Public Health Service a couple months ago,” she said. But now there were problems with the university. Sisley couldn’t carry out the study without a secure lab in which to store and administer the pot. She’d been waiting two years for lab access.

That wasn’t the only hurdle.

“I heard back from Dr. ElSohly in Mississippi,” she said. “He doesn’t have the high-CBD strains I need for the study.”

The head of NIDA’s marijuana nursery was a biochemist named Mahmoud ElSohly. Over the past 30 years, as marijuana growers carried out a hybrid-and-hydroponic revolution, ElSohly and his University of Mississippi team continued to grow the same old low-THC brickweed. In 2014, dispensaries throughout the West offered high-CBD strains and hybrids with 22 percent THC. NIDA’s highest-THC strain topped out at 12 percent.

“The stuff they have is years old, dried up, and they have none of the high-CBD strains that are common out here in Colorado Springs,” Sisley told me. “The whole point of the study is to look at high-CBD strains, which we think might be better for the vets.”

NIDA’s research pot growers were so out of touch with the real-world marijuana market that they asked Sisley if she knew how to find any high-CBD clones. “The people in Mississippi say that if they plant now, they could have something ready for us in six months. You talk to the growers here in Colorado, they could have it done in six weeks.”

That would be federally illegal, though.

One week later, the University of Arizona “declined to renew” Sisley’s annual contract, which had been re-upped as a matter of formality over the past seven years. She was doing cutting-edge research that could have a profound impact on the lives of thousands of American war veterans. Campus officials gave no explanation for her firing. The university, a spokesperson said, remained committed to conducting research on marijuana. How that would happen without Suzanne Sisley, he did not say. And even when Sisley received a $2 million grant from the Colorado Board of Health for research in December 2014, she still did not have the strains she needed to carry it out.

“I served as a pilot for the 101st Airborne … I had nightmares. I’d be flying a helicopter and see a radio tower with guy wires up ahead. When you’re a helicopter pilot, wires scare the hell out of you. … Somebody told me that cannabis worked on PTSD. So I tried it. Now I use the bong two or three times a day … I’m healthy. I run 5K races. I use it in the mornings even before I go to church. Do you see me acting crazy? No. My wife and I are the perfect example of a Christian couple.”