

# O'Shaughnessy's

The Journal of Cannabis in Clinical Practice

BeyondTHC.com

Winter/Spring 2013

Anecdotal reports of benefit abound

## Doctors stress need to document anti-cancer effects of Cannabis 'oil'

By Fred Gardner

Increasing numbers of people have been using Cannabis "oil" — plant extracts consisting of 50% or more THC and/or CBD — to treat conditions ranging from mild rashes to potentially fatal cancers.

Reports of success are circulating among medical Cannabis users and on the internet. They gain plausibility from a parallel stream of papers published in scientific journals establishing that cannabinoids have anti-tumor effects on the cellular level and in animals. (See "The Anti-Cancer Potential of Cannabinoids," page 4.)

The anti-cancer properties of cannabinoids were a recurring theme at this year's meeting of the International Cannabinoid Research Society, and also in a course for physicians presented Oct. 24 at the University of California San Francisco. One speaker, Jeffrey Hergenrather, MD, described a particularly dramatic case seen by a San Diego colleague: a 90% reduction in the size of an infant's brain tumor achieved over the course of a year by parents applying hemp oil to the baby's pacifier before naptime and bedtime. (The illustration at right includes a more recent scan showing continued tumor regression.)

Aptly dubbed "MMJ13001A" on the UCSF website, the half-day course on cannabinoid medicine included talks by three researchers whose findings about cannabis and cancer have been under-reported, to put it mildly: Stephen Sidney, MD, director of research for Kaiser-Permanente in Northern California; UCLA pulmonologist Donald Tashkin, MD; and Donald Abrams, MD, Chief of Hematology-Oncology at San Francisco General Hospital. (Additional coverage starts on page 12.)

Some 60 doctors received continuing medical education credits for attending the half-day course at UCSF's Laurel Heights auditorium, which was organized by the Canadian Consortium for the Investigation of Cannabinoids, with help from Abrams and the Society of Cannabis Clinicians, and reprised the next day in Santa Monica (MMJ13001B).

A very interested auditor at the UCSF session, Michelle Aldrich, had used cannabis oil as a treatment for lung cancer. Her first-person account of the experience starts on page 18 of this issue. Donald Abrams, who consulted on Aldrich's case, says, "The fact that Michelle didn't have cancer that could be located [after using the oil] is a bit unusual in someone who started treatment with an advanced stage. I don't usually see that in my patients. Did the cannabis oil make a difference? We don't know because we don't have a controlled study."

Abrams has met with a UCSF neurooncologist "to discuss whether or not we should do a clinical trial adding oil to chemo for patients with glioblastoma [a brain tumor that is usually fast-moving and fatal]. Manuel Guzman's studies have shown that cannabinoids have great potential in treating brain tumors."

Undoubtedly Dr. Mahmoud ElSohly, who grows marijuana for the National Institute on Drug Abuse, can produce a uniform, highly concentrated extract for research purposes. But whether or not NIDA will let Abrams have some is uncertain.

Abrams has jumped through bureaucratic hoops before. He has obtained all the necessary approvals and funding to

conduct clinical trials involving cannabis, and published his findings in peer-reviewed journals. Because chemotherapy has a measurable benefit, he says, "There's no way we could get approval for a study that evaluates cannabis oil as a cure for brain tumors without giving patients temolozide [the standard treatment for glioma]."

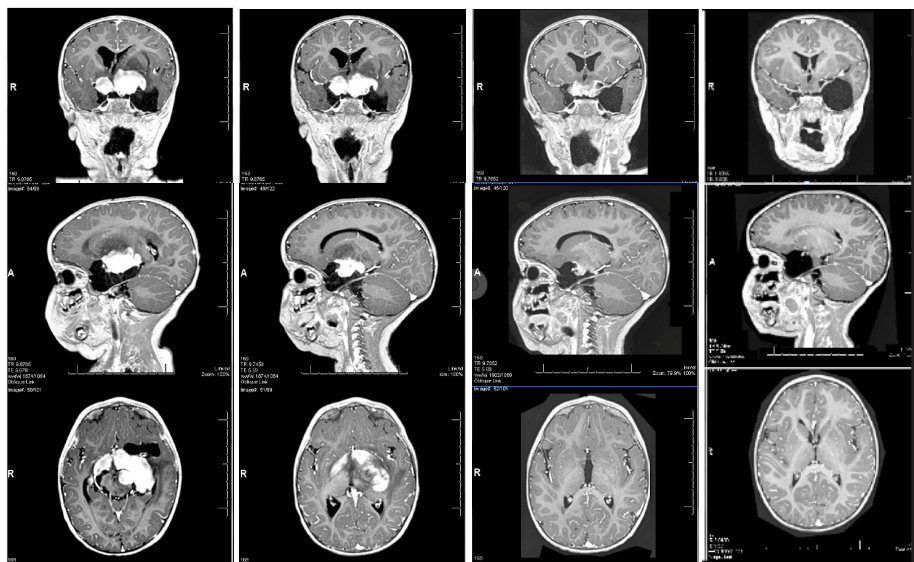
*"A 'cure' in cancer means five years of disease-free survival," Abrams reminds us.*

So what Abrams has in mind is "a study of the pharmacokinetic interaction between cannabis oil and temolozide." Participants would be patients undergoing treatment for glioblastoma. Researchers would measure the level of temolozide in their blood before and after adding cannabis oil to their regimen. The primary objective would be to establish safety — to confirm that large cannabinoid infusions do not interfere with the body's ability

to process temolozide.

Another objective would be to document examples of cannabis oil expediting or promoting tumor reduction. Such a 'signal' might justify a trial of cannabis oil on its own.

*continued on page 15*



MAGNETIC RESONANCE IMAGING SCANS display coronal (top row), sagittal (middle row) and axial (bottom row) views that document the regression of an optic pathway glioma (white area near center of the brain) by more than 95% over the course of 16 months. Column of three images at left are from initial MRIs taken in August 2011. Most recent scans (column at right) were made in December 2012. Gliomas are known to be sensitive to cannabinoids. Jeffrey Hergenrather, MD, reported that the sole treatment used to achieve these results was cannabis oil applied to the child's pacifier twice daily before nap and bedtime.

### The year of the concentrate

## Use of 'Dabs' Gaining Popularity

By Jeffrey Hergenrather, MD

No one listening to the radio or watching TV in the '50s and '60s can ever forget the jingle, "Brylcreem, a little dab'll do ya..." Brylcreem was a formulation of lanolin and grease that enabled men to comb their hair and have it stay in place. Hippie influence on the culture dramatically curtailed the demand for Brylcreem. Perhaps some entrepreneur in the cannabis industry should now buy the rights to the jingle, because "dabs" have become the latest rage in the administration of cannabis.

*A single deep inhalation has a stronger and faster psychoactive effect than any other delivery method can provide.*

The popularity of high-THC "dabs" — also known as "waxes" — is largely a youthful and recreational phenomenon. The user inhales a small amount of vaporized and/or burned cannabis concentrate — a dab — that has been placed on a hot "nail" with a tiny spatula or needle. A single deep inhalation has a stronger and faster psychoactive effect than any other delivery method can provide. In other words, the user gets more stoned and the dabs provide a mild "rush."

Some regular recreational users say that smoking the herb could no longer get them high — tolerance had built up — but the use of dabs restored their ability.

Pipes are now being designed with appendages for positioning the nail next to the waterpipe bowl so that the pipe is ready for a dab as the user inhales. The nail is heated with a torch. When the dab is placed on the nail it vaporizes immediately in one brief puff.

*Chronic exposure to low-grade butane extracts should be considered poisonous. If it smells like lighter fluid, don't use it.*

Recently I was on a panel devoted to dabs at a "Cannabis Cup" organized by *High Times Medical Marijuana* magazine in Richmond, California, and I learned about the technology from the experts.

Dab concentrates are made from oil extracted from cannabis plants by a solvent. The most widely used solvent is butane — better known, although not entirely accurately, as lighter fluid.

Butane is a petroleum product with a very high vapor pressure — it evaporates very quickly into the air once released from the can. When cannabis plant material is drenched in butane, its oils dissolve and can be captured in a container. Instantaneously, the butane evaporates leaving only the oil behind.

### Spoiler Alert

There are real problems with this seemingly simple procedure.

Butane extraction is against the law. People are serving

*continued on page 20*

### Dosing Instructions



MICHELLE ALDRICH (LEFT) AS VALERIE CORRAL of WAMM writes out a dosing regimen for using cannabis oil as a treatment for lung cancer. Aldrich's remarkable first-person story starts on page 18.

photo by Michael Aldrich



THE "DABS" PANEL AT THE HIGH TIMES CANNABIS CUP (from left): Doug Fresh of Hitman Glass, Vernon Phillips of Phillips Rx, Jeffrey Hergenrather, MD, of the Society of Cannabis Clinicians, Selecta Nikka T of Esssential Extracts, and Bobby Black of High Times, the moderator. The discussion was part of a trade show held in Richmond, CA in June.

Photo by Dan Skye



UCSF hosts CME course for doctors

# Sidney, Tashkin review results of their studies: Smoking marijuana does not cause lung cancer

**By Fred Gardner**  
In order to renew their licenses, physicians and nurses are required to take “Continuing Medical Education” accredited by reputable institutions. The first cannabis-oriented CME course for healthcare professionals was put on by Patients Out of Time, a reform group, in 2000 and accredited by the University of Iowa School of Nursing.

The CME course at UCSF on Oct. 24 was organized by the Canadian Consortium for the Investigation of the Cannabinoids. In addition to some 60 physicians, the audience included many people who had come for the information, not the credit.

Everyone got more than their money’s worth (\$95 if you pre-registered). This was no superficial overview of a field disguising a pitch for a new drug. MMJ13001 featured cutting-edge researchers discussing extremely important findings which — although published in peer-reviewed journals — have not penetrated the consciousness of the medical profession.

Epidemiologist Stephen Sidney, MD, the associate director of clinical research for Kaiser Permanente in Northern California, was the lead author on a paper published in *American Journal of Public Health* in April 1997 that marijuana smokers don’t die sooner than non-smokers.

Sidney had looked at 10 years of mortality statistics for more than 65,000 men and women —including 14,000 marijuana users— who received health check-ups at Kaiser’s Oakland and San Francisco hospitals between 1979 and 1985. People were given a questionnaire to fill out on a voluntary basis, “primarily about tobacco use,” Sidney said, “but there were a few good questions about marijuana and alcohol use that enabled us to do our study.”

*The sheer number of participants in the Kaiser study bolstered the credibility of Sidney’s conclusion.*

Sidney analyzed mortality statistics through 1991 and controlled for the use of tobacco and alcohol so that deaths from marijuana smoking could be clearly defined. He found no increase in deaths among the more than 14,000 marijuana users compared to the non-users.

The sheer number of participants in the Kaiser study bolstered the credibility of Sidney’s conclusion, which seemed startling and newsworthy but was ignored by the corporate media.

Sidney has not done further research of his own on marijuana use, but he commented as an epidemiologist about an area of controversy: “What I’d like you to take home is a reminder about the association with auto accidents.”

It’s a shame that Kaiser doesn’t collect information on patients’ marijuana use. If so, their database could answer some simple but big questions, like “Do marijuana users come down with Alzheimer’s at the same rate as non-users?” How about testicular cancer? etc. etc.

These are big, looming questions that seem answerable. Maybe it’s time for Kaiser to reinstitute those free multiphasic check-up days —with a voluntary survey and a few good questions about alcohol and marijuana use.

Sidney says there are ways to mine the Kaiser database for information about marijuana use. “If anybody had the time and energy there’s a lot more they could do,” he told your correspondent in an interview.

Sidney said he had once proposed a study to find out “what happens to people who come into the [Kaiser] ER reporting marijuana use. Do you get referred to a chemical dependency program? Just what on earth happens?”

A colleague recently told him he ought to resubmit it, given the growing interest in marijuana.

I told Sidney I’d gotten mixed messages from medical marijuana users about Kaiser’s policy regarding doctors issuing recommendations. “I’m sure it’s quite mixed, if it exists,” he said. “Somebody would have to be tracking it in some data base and I don’t know of any.”

**The greatest story never told, cont.**

Sidney was followed by UCLA pulmonologist Donald Tashkin, a man whose career had been altered by Sidney’s otherwise-widely-ignored finding that marijuana users didn’t get lung cancer more frequently than non-users.

*It was Tashkin’s lab that identified the compounds in marijuana smoke that are toxic.*

Tashkin had been in the good graces of the National Institute on Drug Abuse for decades. It was Tashkin’s lab that identified the compounds in marijuana smoke that are toxic; that found benzpyrene, a component of cigarette smoke that plays a role in most lung cancers, especially prevalent in marijuana smoke; that published photomicrographs showing how grotesquely marijuana smoke damages cells lining the upper airways; that proved marijuana smokers are more likely than non-smokers to cough, wheeze, and produce sputum.

But Tashkin recognized that in comparison to Sidney’s study of Kaiser patients, the various studies concluding that marijuana smoking *causes* lung cancer were tiny and methodologically flawed. So in 2002 he got a grant from NIDA to conduct a large, population-based, case-controlled study that, he and his colleagues expected, would prove definitively that heavy, long-term marijuana use increases the risk of lung and upper-airways cancers.

What Tashkin and his colleagues found, however, disproved their hypothesis. They interviewed 1,212 cancer patients from the Los Angeles County Cancer Surveillance program, matched for age, gender, and neighborhood with 1,040 cancer-free controls. Marijuana use was measured in “joint years” (number of years smoked times number of joints per day).

It turned out that increased marijuana use did not result in higher rates of lung and pharyngeal cancer, whereas tobacco smokers were at greater risk the more they smoked. Tobacco smokers who also smoked marijuana were at slightly *lower* risk of getting lung cancer than tobacco-only smokers.

Tashkin presented his findings at the 2005 meeting of the International Cannabinoid Research Society (as reported in *O’Shaughnessy’s* at the time) and published them in the October 2006 issue of *Cancer Epidemiology Biomarkers & Prevention*. NIDA, which had funded Tashkin’s study, did nothing to publicize his conclusions and the media has generally ignored them.

To many doctors attending the CME

*To many doctors attending the CME course in 2012, the content of Tashkin’s talk was breaking news.*

course in 2012, the content of Tashkin’s talk was breaking news.

“There is an anti-tumoral effect of THC,” NIDA’s erstwhile hero concluded. “In animal models and cell cultures, a variety of cancers —lung, brain, thyroid, skin, prostate... THC inhibits protein synthesis, it’s anti-proliferative anti-mitogenic, pro-apoptotic —it promotes programmed cell death— anti-angiogenesis so you don’t sprout blood vessels that can lead to metastases!”

Tashkin also touched on his research showing that marijuana smoking does not cause Chronic Obstructive Pulmonary Disease (COPD, which is prevalent among cigarette smokers).

Donald Abrams, MD, chief of Hematology-Oncology at San Francisco General Hospital, reiterated the underpublicized reality that cannabinoids are anti-cancer agents. He described several studies that he had led, including one involving smoked cannabis as a treatment for neuropathic pain that was published in *Neurology* in February 2007 (and which should have laid to rest the oft-stated Prohibition myth that there have been *no* published, peer-reviewed studies showing that smoked cannabis is medically effective).

Neuropathic pain (an intense tingling or burning sensation, usually occurring in the feet, for which no FDA-approved treatments exist) affects about one in three HIV patients. It can also result from diabetes, trauma, and other causes.

Abrams supervised a study at San Francisco General Hospital with 50 patients whose neuropathy was HIV-related. A second type of pain was induced by applying capsaicin to a patch of each patient’s skin (while the patient’s eyes were averted, so they were uninfluenced by expectations).

The study participants were randomly divided into two groups —one that smoked

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Cannabis in Medicine: A Primer for Health Care Professionals

Start: Wednesday, October 24, 2012 2:00pm

End: Wednesday, October 24, 2012 5:00pm

Overview

Accreditation

Chairs

Travel & Lodging

Objectives

Course Outline

Faculty

Cancellation Policy

Department:

Course Numbers:

Start:

End:

Locations:

Fees:

Medicine

MMJ13001A

Wednesday, October 24, 2012

Wednesday, October 24, 2012

San Francisco, California  
UCSF Laurel Heights Auditorium

\$95

Onsite Registration

UCSF Association of Clinical Faculty Vouchers are accepted for this course. For more information please call the Office of Continuing Medical Education at 415-476-4251.

2.75 AMA PRA Category 1 Credit(s)™

Overview:

The session will include a brief overview on cannabinoids, the types of cannabinoids currently available, and the endocannabinoid system. This will be followed by a clinically focused section on the putative effects of smoked cannabis and on different conditions for which cannabinoids are therapeutically relevant. The session will close with an open forum discussion.

**REGISTRATION INFORMATION FOR MMJ13001A on the UCSF website. The three-hour course, organized by the Canadian Consortium for the Investigation of Cannabinoids with support from the Society of Cannabis Clinicians, was presented at UCSF’s Laurel Heights auditorium on Oct. 24 and reprised the next day in Santa Monica.**

cannabis (3.5% THC, provided by the National Institute on Drug Abuse), and one that smoked placebo joints from which the cannabinoids had been extracted (also from NIDA). Patients smoked three times a day for five days.

*Abrams’s study provided “evidence that there is a measurable medical benefit to smoking cannabis for these patients.”*

Those getting the real thing reported a 34 percent reduction in pain whereas the placebo smokers reported a 17 percent reduction. Capsaicin-induced inflammation was reduced, too. In addition, smoked cannabis was shown to shrink the area of painfully sensitive skin created by the model, a response Abrams called “comparable to strong pain relievers such as morphine.” The results provided “evidence that there is a measurable medical benefit to smoking cannabis for these patients.”

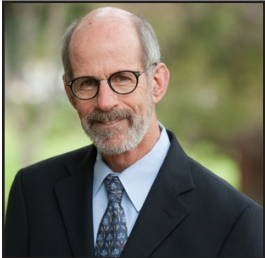
Abrams’ smoked cannabis study was underwritten by the University of California’s Center for Medicinal Cannabis Research, which was created by the state legislature after Prop 215 passed (but funded for only three years).

There is no overstating Donald Abrams’ leadership role in establishing the safety and efficacy of herbal cannabis. He is the principal liaison between the medical establishment and the grassroots movement that has burgeoned into an industry. In addition to speaking at the Oct. 24-25 CME event, Abrams helped plan it (with Mark Ware and Marc Wayne of the CCIC, the prime movers, and Jeffrey Hergenrather of the SCC), and made the indispensable arrangements with UCSF, where he is Pro-

fessor of Medicine.

Ware was an efficient, affable moderator and gave a talk at the outset reviewing what scientists have learned about how cannabinoids work. He reminded his

*continued at right*



Stephen Sidney, MD

NEUROLOGY

Official Journal of the American Academy of Neurology

Volume 57, Number 7, February 13, 2007

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D.J. Abrams, C.A. Jay, S.B. Sh



Hergenrather’s presentation at MMJ13001A

# SCC study of Crohn’s patients: a template for clinical research?

“Cannabis in Primary Care” was the title of Dr. Jeffrey Hergenrather’s presentation at the CME course accredited by UCSF, MMJ13001A and B. The subtitle was “Issues for the Practicing Physician: IBD, patient screening and monitoring.”

IBD — Irritable Bowel Disorders, which include Crohn’s and Ulcerative Colitis— might seem relatively esoteric to include in an introductory talk about cannabis medicine. Hergenrather focused on it because his own study of IBD patients provides a model by which the effectiveness of the herb can be evaluated as a treatment for any given disorder. Cannabis medicine is an emerging field, and it provides an unprecedented opportunity for doctors to conduct meaningful research.

An efficient introduction to the body’s cannabinoid signaling system had been provided by Mark Ware, MD, of

the Alan Edwards Pain Management Unit, McGill University, so Hergenrather didn’t have to define his terms as he discussed slides showing cannabinoid receptors throughout the bowel wall. Activating the CB1 receptor, he explained, down-regulates intestinal motility and intestinal secretions while decreasing inflammation, pain and the risk of tumors.

Activating the CB2 receptor decreases visceral pain and inflammation, and also down-regulates intestinal motility. “This has a huge effect on patients with Crohn’s disease,” said Hergenrather.

He traced the idea for his study to the initial meeting, called by Tod Mikuriya, MD in April 2000 of the group now known as the Society of Cannabis Clinicians. As the assembled handful of MDs compared notes, Hergenrather recalled, “We noticed right off that people were saying cannabis was working for Crohn’s Disease.”

Hergenrather is now tracking 38 patients —28 with Crohn’s and 10 with ulcerative colitis. Twenty-two are employed full or part-time. Seventeen (43%) have had surgical interventions. “This will be an interesting number to follow over time.” Hergenrather said, noting that 75% of Crohn’s patients have surgery during their lifetimes, according to the Centers for Disease Control.

*Hergenrather’s results strongly suggest that herbal cannabis is beneficial in the treatment of Irritable Bowel Disorders.*

Half of the patients in the SCC study had stopped the daily use of conventional pharmaceuticals to treat their IBD, except during flare-ups. The main limitation on cannabis use were “social issues,” including risk of discovery by an employer. Others limited use because it made them too sleepy or too spacey. Cost was another limitation.

Hergenrather’s results strongly suggest that herbal cannabis is beneficial in the treatment of Irritable Bowel Disorders. Stools per days were reduced by a third, pain reduced by half, vomiting was down, appetite up. Overall, Hergenrather said, “patients’ quality of life is improved significantly.”

**Issuing Cannabis Approvals**

Hergenrather addressed various questions likely to concern MDs who had been taught nothing about cannabis in medical school but want to know what’s really known about its safety and efficacy, and what kinds of interactions to expect when discussing cannabis use with patients.

“You’re going to get asked a lot of questions about strains,” Hergenrather advised, but there is no rigor to the nomenclature.

Sativas are said to provide a “head high.” Users report feeling more “energetic, focused, alert, creative... Indica-dominant strains tend to promote sedation and ‘couch

*continued on next page, top*

CME Course from previous page

*Ware called the cannabinoids “synaptic circuit-breakers.” The process by which they work is “retrograde signaling.”*

California audience that the era of cannabinoid therapeutics “isn’t going to just be about medical cannabis.”

Unlike neurotransmitters sent from Cell A across a synapse to impart a signal to Cell B, cannabinoids are made on the membranes of Cell B (the post-synaptic cell) and released across the synapse in the opposite direction to quell the firing of Cell A. Ware called the cannabinoids “synaptic circuit-breakers.” The process by which they work is “retrograde signaling.” (See illustration at right).

The body’s own cannabinoid receptors, CB1 and CB2, were cloned in the late 1980s and ‘90s. CB1 and CB2 are G-protein coupled receptors. The expression of the CB1 receptor in numerous parts of the brain explains its wide-ranging effects. Although more prevalent than opioid receptors, CB1 is not present in the parts of the brain that control breathing —which is why overdosing isn’t fatal.

The CB2 receptor is prevalent in the immune system and involved in modulating inflammation. Microglia and astrocytes —immune cells in the central nervous system— modulate neurological processes.

Ware described pain modulation as “a dynamic fluid process with input from the brain coming down the spinal cord.” Endogenous cannabinoids diffuse back to the presynaptic neurons and suppress the firing of the (pain) signal. Two endogenous cannabinoids have been identified: anandamide (AEA) and 2-arachidonoyl glycerol (2-AG)

Exogenous cannabinoids receptors can augment the suppressive effect. Seizure disorders, Ware said, exemplify a condition in which the goal is to suppress the rate at which neurons are firing.

The cannabis plant is only one source of exogenous cannabinoids. Synthetic cannabinoids such as Nabilone are being prescribed with increasing frequency.

*Cannabinoids activate receptors other than CB1 and CB2, including serotonin receptors, and are viewed, increasingly, as part of a larger family of lipid compounds.*

Nor is providing exogenous cannabinoids the only way to augment cannabinoid tone. Compounds have been developed that block production of the enzymes that break down anandamide and 2-AG — FAAH (Fatty Acid Amide Hydrolase) and MAGL (glycerol lipase) respectively

“Studies are going on all the time,” Ware said, with drug companies pursuing various strategies. Cannabinoids activate receptors other than CB1 and CB2, including serotonin receptors, and are viewed, increasingly, as part of a larger family of lipid compounds.

Ware described palmitoethanolamide (PEA) as “an endocannabinoid with potential CB1 activity” that is on the market in Italy as a dietary supplement. But developing pills that act like anandamide or 2-AG presents a daunting challenge to pharmacologists, he said. “These compounds are designed to be made locally [by cell membranes], to be active locally, and to disappear very quickly and be recycled.”

*continued on next page*

**A Nursing Perspective**

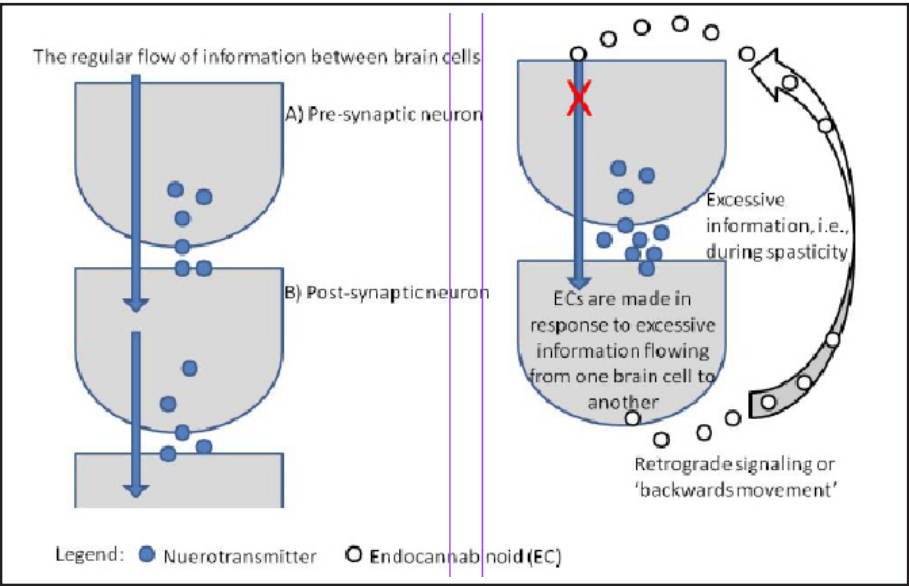
MaryLynn Mathre, RN, the final speaker, is co-founder with her husband, Al Byrne, of the reform group Patients Out of Time. Mathre and Byrne served as officers in the Navy during the Vietnam war, and have devoted themselves to helping veterans ever since. They had been active in NORML but split off in the mid-1990s to form their own group. Its core members included Irvin Rosenfeld, Elvy Musikka, George McMa-

hon, and several other surviving patients from the “Compassionate” Investigational New Drug program established under Jimmy Carter and canceled by George H.W. Bush in 1992, just as AIDS patients who needed marijuana to counter wasting syndrome had begun applying in large numbers.

In addition to publicizing the existence of the federal IND program —which

*continued on next page, bottom*

Retrograde Signaling (going against the flow)



Regular flow of information between brain cells involves neurotransmitters (serotonin, dopamine, et al), as illustrated above at left. Generally, a neurotransmitter travels from neuron A to neuron B or “presynaptic” to “postsynaptic.” Neurotransmission by endocannabinoids, on the other hand, involves travel from B to A, or postsynaptic to presynaptic. This type of movement is called “retrograde signaling” to describe its “backward” direction —against the transmitter flow. In recent years the neurotransmitter nitric oxide (aptly abbreviated NO) has been found to have a similar “retrograde” method of signaling.

Research has shown that the activation of cannabinoid receptors can temporarily reduce the amount of a neurotransmitter released, or reduce the flow of information between neurons. This can be a helpful way to treat patients who have a disease or injury in which neurons are approaching excitotoxicity, a toxic state arising from overactivity that often results in the death of the brain cell. The mechanics of “going against the flow” underlies the protective effects of cannabinoids on brain cells. —Jahan Marcu, PhD



*Hergenrather’s Presentation from previous page*

lock...’ Names with ‘Kush’ or ‘Afghan’ tend to be Indica-dominant. Also those with colors in their names, purples, blues, grapes, blacks... ‘Hazes’ and ‘Diesels’ tend to be Sativas. There’s so much crossing and hybridization that these generalizations fall apart,” Hergenrather acknowl-edged.

**Introducing CBD**

Hergenrather described cannabidiol-rich cannabis as “the real star of the show.” He explained that cannabis used recreationally might have a THC-to-CBD ratio of 50- or 100-to-1, but now strains were being used by patients that contain various cannabinoid ratios, including some that are predominantly CBD “so that you don’t get stoned.”

“CBD antagonizes THC and reduces tachycardia [rapid heartbeat],” Hergenrather said, allaying two fears in one sentence. It would be interesting to know how many of the doctors in attendance were hearing about THC’s non-psychoactive cousin for the first time.

**Acid and neutral cannabinoids**

“In the green plant, THC is in the acid form, which is not psychoactive,” Hergenrather explained. “When it’s burned, vaporized, dried over a long period of time, or baked, you decarboxylate it. In the neutral form THC is psychoactive. But if you use the molecule in the green form you’re going to be able to go way up on dose without going up on psychoactivity.

“Eventually terpenes will impart effect, but in general patients can go way up on dose when using green medicine. A patient can take a bud that would take a week to smoke and put it in a smoothie and do that two or three a times a day and not have any ‘high’ effect.

*“You’ve got to do a hands-on evaluation. You’ve got to take the vital signs and write it down.”*

**Nuts and Bolts for the Clinician**

Hergenrather shared the SCC practice standards. “You’ve got to do a hands-on evaluation,” he said for openers. “You’ve got to take the vital signs and write it down.”

Patients should be advised about their needs. “Many people today do not have medical care. You’ve got to sit down and talk with them about their health —diabetes, hypertension, obesity. You need to make appropriate referrals.

“If you have a referral from another doctor, make a point of communicating with that doctor about your findings and observations. On the other side, if your patient says

‘I don’t want my primary doctor to know about this, I’ll take care of that on my own,’ I think your responsibility is to your patient and not to the medical board or the treating physician.”

“Let the patient know when you want to see them back and what you expect of them.

*“Ask for lab work and imaging reports. And for anybody youthful, I want to see their grade cards. In general they do much better when they’re using cannabis.*

“Ask for lab work and imaging reports. And for anybody youthful, I want to see their grade cards. In general they do much better when they’re using cannabis.

“Be willing to testify. This has everything to do with proper record keeping.

“I would have documentation supporting the diagnosis that I’m treating in advance of seeing the patient for the first time.

“I like to quantify the use of cannabis and method of administration at every visit. It changes over time. After patients use it as vapor or topical forms, they’re going to use a lot more cannabis.

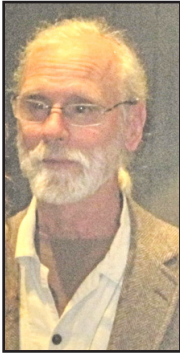
“We have to ask for a release of liability because patients are going to be out there driving. The release of liability spells out issues that the patient needs to sign and say ‘Okay, this is on me and not on you.’ Those forms are available at cannabisclinicians.org.

“The federal courts support the physician’s right to have this relationship with the patient, including making a recommendation... This is not a permit to grow for profit. This is an approval to use cannabis for your own personal medical needs. It’s important to make that clear to the patient. This is the extent of it: you can grow what you need for your own use.”

**Precautions**

Hergenrather described cannabis use as “habit forming but not addictive.”

Smoking can cause bronchitis, he said, echoing Tashkin.



HERGENRATHER

Hergenrather said he had seen five cases of cyclical vomiting syndrome caused by marijuana use.

He noted that ingestion of cannabinoids has not been found to adversely affect the liver’s ability to metabolize clinically useful drugs —but the advent of megadoses via concentrated oils and raw buds and leaf might result in a different side-effect profile.

Hergenrather characterized the association of cannabis use with schizophrenia as “controversial,” adding, “I found that the Keele study in England a few years ago really exonerated cannabis considerably. They followed 2.3% of the English population in clinics for 10 years; and over that period of time there was an 18-fold increase in cannabis use by their youth, while there was no increase in schizophrenia and psychosis in Great Britain.”

In the audience were two midwives and another MD whom Hergenrather had worked with at the Farm, a large “intentional community” in Tennessee, where marijuana was used “with reverence” by almost everyone. Over the course of several years, Hergenrather said, “we, collectively, did not see any significant adverse effects associated with cannabis through gestation and nursing.” Also, “It works better than anything for morning sickness.” Nevertheless, he advised the doctors to “advise judicious use during pregnancy.”

*Although the CME presentation was not planned to have a focus on cannabinoids in the treatment of cancer, Hergenrather concluded by extolling its potential.*

Although the CME presentation was not planned to have a focus on cannabinoids in the treatment of cancer, Hergenrather concluded by extolling its potential.

“I’ve been encouraging patients to make the oil and put it directly on skin lesions,” he said. “If I thought someone had a melanoma I would hustle them to the surgeon. But for just about any other kind of skin lesion, ‘Put the cannabis oil on it and watch the results.’”

Hergenrather showed before and after slides of a patient with a keratosis on his cheek that had been there for 10 years. “A band-aid with cannabis oil for a month and it fell off,” he reported. The growth has been gone for a year with no signs of recurrence, he said.

To treat skin lesions, Hergenrather recommended “the more concentrated the oil the better. An occlusive dressing works best, even a spot bandaid.”

*CME Course from previous page*

comes as news to most Americans, and exposes federal hypocrisy on the subject of marijuana as medicine— Patients Out of Time organizes conferences every two years to update doctors, nurses and other healthcare providers about recent research and clinical findings. Since 2000 CME credits have been available to practitioners attending POT conferences.

The Oct. 24-25 presentations in San Francisco and Santa Monica were right in sync with the Patients Out of Time mission,



MARYLYNN MATHRE

which Mathre summarized as “educating healthcare professionals and the public about therapeutic cannabis.”

In Santa Monica on Oct. 25, UC San Diego psychiatrist Igor Grant replaced Stephen Sidney and spoke on “The Neuropsychiatric Effects of Cannabis.” Grant directs the University of California’s Center for Medical Cannabis Research. The CMCR was created by state legislators led by John Vasconcellos in response to the passage of Prop 215. Annual allocations to the CMCR of \$3 million for three years paid for nine studies involving cannabinoids, including Donald Abrams’ pain study using herbal cannabis (described above).

Mark Ware had the air of a Broadway producer evaluating his show in Philadelphia. He knows he’s got a blockbuster but is still tinkering with aspects of the production. Future bookings include Washington, D.C. February, 22, 2013, at the invitation of Americans for Safe Access.

For MaryLynn Mathre, participating in MMJ13001A and B was an extension of educational work she has been doing for decades. For Jeff Hergenrather and me it felt like fulfilling a last promise to Tod Mikuriya, MD, our friend, who founded the SCC with an eye towards enlightening the whole medical profession. (“Patients know much more about marijuana than doctors,” he had observed.)

By coincidence, two of the speakers —

Abrams and Sidney—showed pictures of old cannabis tincture bottles that Tod had emailed along with his congratulations after their studies were published.

MMJ1300 attendees were asked to fill out evaluation forms. They revealed that doctors from a wide range of specialties are interested in incorporating cannabis-based medicine in their practices:

“Emerg and Occ Med, ER (2), Family Practice (10), Family/Peds, Family/Tropical Medicine, General, Geriatrics, Geriatrics/GP, GP and Cannabis Consultant, HIV Medicine (2), Hospice & Palliative Care, Addiction medicine, Hospitalist, Infectious Diseases, Internal Medicine (6), Internal medicine/Anesthesia (pain), Neurology (2), Oncology (2) Ophthalmology, Pain/PRM (2), Perinatal, Preventive Medicine, Psychiatry, Psychoanalysis, Public Health, Rheumatology, Addiction medicine, Alternative medicine (2), General practice/Emergency, Herbal medicine, Medical cannabis (2) Pain Management, Plastic Surgery.”

Among those evaluating MMJ1300 were six nurses, two pharmacists, nine “allied health professionals,” and 10 “industry representatives.”

The course drew as many people from outside the medical field as it did from

within. The organizers considered and rejected a suggestion that one dispensary and one tincture maker have booths at the event. Their goal is to reach MDs seeking an introduction to cannabis medicine from experts in the field —a mission of the utmost importance, nationally and internationally. They do not want to be perceived as Dr. Ware’s Marching Pot Club Band.

The evaluation form asked the practitioners to list “three or more specific changes in patient care that you intend to make as a result of participating in this CME activity.”

**Evaluation comments:**

“Better advice to patients. Make caution in Cardiovascular patients. Better choice of appropriate patients. Better knowledge of pharmacology of cannabis.

“Increased understanding of novel formulations.

“Consider cannabis as adjunct to opioids.

“Consider more cannabis with anxiety and sleep. Consider for detox or withdrawal. Encourage use of oil for skin lesions.

“Reassure regarding use of cannabis with MS with other opioids.

“Stress the legitimacy of cannabis as medicine.

“I will encourage my patients suffering from poorly controlled Crohn’s disease, chronic pain and some other conditions to see



TOD MIKURIYA, MD, with a Cannabis tincture manufactured by Parke, Davis. Drs. Sidney and Abrams showed slides of once-legal tinctures Mikuriya had sent them along with congratulations on the publication of their studies.



LARRY BROOKE (LEFT), the founder of General Hydro, chats with Alan Levinstone, MD, who came from Centreville, Virginia to attend the course at UCSF. A grant from Brooke enabled the Society of Cannabis Clinicians to underwrite the event.

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Evaluating Cannabis Oil from page 1

Abrams does not want to promote false hope. “I do integrative oncology,” he says, “so I hear about ‘miracle cures’ all the time. I hear about about noni juice and



DONALD ABRAMS, MD

survival and people have not been using cannabis oil for five years.

“I think it does a disservice to the cannabis community to make claims that are not supportable. I may be seen as a nay-sayer but I’m not. I say ‘Let’s study it.’”

Doctors and Dispensaries

Doctors who see cannabis-using patients and dispensaries that provide their medicine are well positioned to advance research by collecting “observational data” that could justify clinical trials, says Abrams.

To do this properly, he advises, “You can’t collect data on only the patients who respond well. You have to collect data from everyone who undergoes the intervention. And data collection has to be sequential. If everyone who got a cannabis-oil product filled out a standardized case-report file at set time points during their treatment, and provided information from their conventional therapist showing the effect on their cancer, then we would have very useful data.”

If the data contained “a ‘signal’ suggesting that the intervention may have value and should be pursued further, the National Cancer Institute Office of Cancer and Complementary and Alternative Medicine (OCCAM)’s Best Case Series Program should be notified.” The program evaluates therapies for which there is evidence of benefit.

“Nothing can be ‘complementary’ and ‘alternative’ at the same time,” Abrams points out.

Unfortunately, the Best Case Series Program will not accept information on patients who, in addition to using cannabis oil, undergo conventional treatments (radiation and/or chemotherapy). Abrams, who is on the editorial board of OCCAM’s webpage, regrets the requirement that alternative therapies reviewed by the Best Case Series Program be evaluated as solo acts. “Nothing can be ‘complementary’ and ‘alternative’ at the same time,” he points out. “What we’re really trying to do is integrate complementary interventions into alternative care.”

As for patients who are having beneficial responses using cannabis oil without conventional therapy, Abrams hopes that data on their cases will be submitted to NCI OCCAM’s Best Case Series Program to provide a ‘signal’ that clinical trials are called for.

“Anyone who is saying that they’re seeing people cured of cancer with cannabis oil alone,” says Abrams, “has a responsibility to report those cases to the NCI’s Office of Cancer and Complementary Medicine. That would be ‘putting your money where your mouth is.’”

The Controversial Mr. Simpson

The medical benefits of hemp oil (AKA cannabis oil and hash oil) were extolled in a video called *Run From the Cure*, made in 2008 by Rick Simpson, a retired hospital worker from Maccan, Nova Scotia.

On the 58-minute video, which has been widely viewed on YouTube, Simpson described having been diagnosed with three skin cancers. One lesion, close to his right eye, had been surgically removed but appeared to be coming back.

Simpson knew that cannabis was medically useful because he used it to cope with a terrible ringing in his ear (tinnitus) brought on by a head injury. Recalling that

a suppressed U.S. government study had ascribed anti-cancer effects to THC, Simpson decided to make a highly concentrated cannabis extract and apply it to the three spots on his face. It wiped out the two lesions that had yet to be removed surgically, as well as the one that had reappeared.

When Simpson reported his good news to his doctor’s receptionist (who was also the doctor’s wife), instead of being pleased, she seemed frightened —a harbinger of how the medical and political establishments would respond to his assertion that hemp oil has anti-cancer effects. Simpson tried and failed, he says, to interest the Canadian Cancer Society in his results.

Simpson gave his oil to several residents of Maccan who also reported great benefit. When officers of the Royal Canadian Legion’s local chapter made public statements praising Simpson’s product, they were removed from their posts and denied use of the meeting hall.

“We have supplied it to dozens of people,” Simpson says about hemp oil in the video. “Medical miracles are a common occurrence... It has brought many people right off their deathbeds.” He avows that the oil can be used to treat “any condition involving mutating cells.”

*Epstein explains that the medical establishment’s approach — screening, diagnosis and damage control— is profitable.*

The video includes brief references to scientific papers showing that cannabinoids have anti-cancer effects, including studies by Guzman and McAllister. There is strong



RICK SIMPSON demonstrating the not-recommended way to make hemp oil.

footage of Samuel Epstein, MD, author (with Harvey Wasserman) of *The Politics of Cancer*. Epstein explains that the medical establishment’s approach —screening, diagnosis and damage control— is profitable. “You wait till they get the cancer and then you try and treat it. The more disease there is, the greater the profit.”

*Run From the Cure* shows Simpson making hemp oil, preceded by a jarring disclaimer: “Making your own oil is extremely dangerous and we do not approve of this method.” Then he shows and tells you how, and vouches for its efficacy.

The recipe goes like this: “Place Good bud in a plastic container. Dampen with solvent. Crush bud material. After crushing add more solvent till it’s completely covered. I use pure naphtha but 99% isopropyl alcohol also works as a solvent. Let the THC dissolve into the solvent. Drain and pour through a coffee filter. Make sure the area is well ventilated where you’re going to boil off the solvent... A pound of good bud yields about two ounces. Ingesting this amount over a two-three month period is enough to cure most serious cancers.”

Simpson’s critics wince over his use of naphtha, a petroleum product that could leave residue in the extracted oil. They cringe over his claim that hemp oil is “enough to cure most serious cancers.” And they fear that the implication in the title “*Run From The Cure*,” plus disparaging remarks made in the video about radiation

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a physician with good knowledge of cannabis use and consider cannabis use under his guidance. Improve patient education.

“Better assist patients with cessation. More CBD info. More education re: chronic bronchitis and smoking cannabis. More vaporization education.

“Increase frequency of discussion. More understanding of effects between THC/ Cannabis and opioids. Large pain practice with possible use. Look into using cannabidiol. Look into using vaporization.

“I’m comfortable using with opiates.

“Recommend to patients with GI disorders. Recommend to patients with anxiety/sleep disorders. Recommend to patients with certain cancer.

“I will refer to medical marijuana as cannabis.

“Screen patients. Be more openminded about the uses/benefits of cannabis in medical treatment of patients.

“I plan to prescribe it more often as indicated. Time spent on eCB function. Referrals for specialty care. Topical use.

“Try to get more oil med. I will get copy of medical liability insurance form and use it.

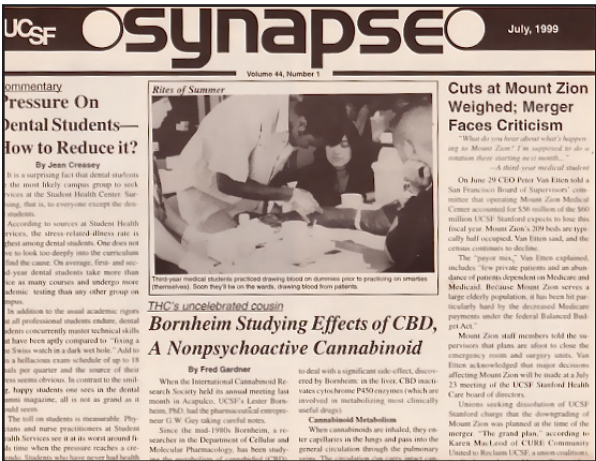
“I will be able to advise patients regarding lung is-

sues (increase use, no increase risk COPD, cancer).

“Will offer THC Rx to use in Crohn’s patients. Broaden indications (beyond pain) for cannabis. CBD/THC. Better able to answer questions or concerns that might come up.

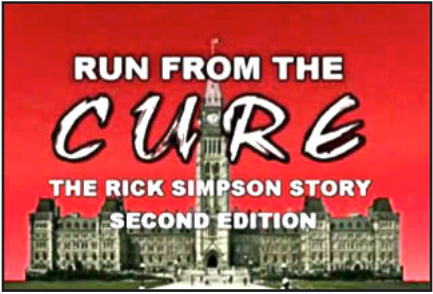
“Confirms my existing practice.

“More effectively argue with my colleagues that there is some role of some patients to use medical cannabis in chronic pain mgmt.”



UC SAN FRANCISCO NEWSPAPER carried an article about CBD in July 1999, focused on a study of its effects in the liver by pharmacologist Lester Bornheim, PhD. Some stories take a long time to break through. Prohibition requires censorship, blacklisting, marginalizing, etc.

O'Shaughnessy's is going online at BeyondTHC.com



The NCI Website Brouhaha

PDQ, Physician Data Query) the National Cancer Institute’s “comprehensive cancer database,” contains updates on a wide range of topics and a registry of some 27,000 clinical trials from around the world. It has a page devoted to “Complementary and Alternative Medicine (CAM)” treatments for cancer.

NCI’s PDQ CAM webpage lists 19 complementary and alternative cancer therapies, from Acupuncture to Spirituality. The section on “Cannabinoids and Cancer” was written by Donald Abrams, MD, with input from the entire NCI PDQ CAM editorial board. It went online in March 2011. It included such bold assertions of fact as “The potential benefits of medicinal Cannabis for people living with cancer include antiemetic effects, appetite stimulation, pain relief, and improved sleep.”

Drug policy reform advocates publicized the newly added material as recognition by a federal agency that marijuana is not medically useless and therefore does not belong on Schedule I. The National Institute on Drug Abuse requested some wording changes that were made, and the NCI distanced itself from “Cannabinoids and Cancer,” disclaiming that it “does not represent a policy statement of NCI or NIH.”

*Every month Abrams is asked to review new articles showing that “cannabis works against cancer in various in vitro models and sometimes animal systems.”*

But the body of evidence that cannabis has anti-cancer activity keeps growing and is duly noted on the NCI PDQ CAM website. Every month Abrams is asked to review new articles showing that “cannabis works against cancer in various in vitro models and sometimes animal systems.”

In a very thorough report on the NCI PDQ CAM website brouhaha for the American Herbal Council’s *Herbalgram*, Lindsay Stafford quoted an assessment of the situation from ethnobotanist Dennis McKenna. “McKenna said he thinks the NCI review will probably, and ‘unfortunately,’ have very little impact on the scheduling of cannabis. ‘These decisions are made by politicians, who as a rule are not scientists or clinicians and are quite happy to ignore scientific evidence when it’s inconvenient,’ he said, noting mounting scientific concerns about climate change as an example. ‘Only when this information becomes widespread enough in the public domain, and is understood by sufficient numbers of people, who then demand changes in the scheduling, will this information make a difference. What will or may also make a difference is when a politician, or a close relative of one, receives significant benefits from cannabis as an adjunct treatment in cancer therapy. Then, and only then, will you see a change.’”