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.

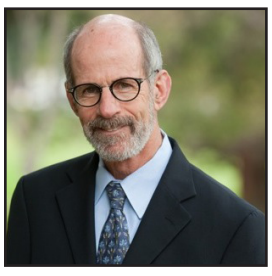
Sidney had looked at 10 years of mortality statistics for more than 65,000 men and women —including 14,000 marijuana users— who received health check-ups at Kaiser's Oakland and San Francisco hospitals between 1979 and 1985. People were given a questionnaire to fill out on a voluntary basis, "primarily 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."



Stephen Sidney, MD

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

To many doctors attending the CME 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-apopotic —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 Francsico 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

NEUROLOGY®

Volume 68, Number 7, February 13, 2007
www.neurology.org

AMERICAN ACADEMY OF NEUROLOGY
Official Journal of the American Academy of Neurology

In This Issue

477 February 13 Highlight and Commentary: Predictors of depression in patients referred to headache specialists
Linda S. Williams and Matthew J. Burr

478 February 13 Highlights

Editorials

480 Does benign multiple sclerosis today imply benign multiple sclerosis tomorrow? Implications for treatment
Sean J. Pittock

482 Testing a test for Alzheimer disease
Randall F. Bateman and David Eidelberg

Views & Reviews

484 Transcranial magnetic stimulation: Diagnostic, therapeutic, and research potential
Paolo M. Rossini and Simone Rossi

Articles

489 Factors associated with depression in patients referred to headache specialists
D. Hjalmarsson, L.B. Hagmeyer, and W.J. Becker, for the CHOMS Study Group

494 Longitudinal follow-up of "benign" multiple sclerosis at 20 years
A.-C. Sayao, V. Devonshire, and M. Traboulsee

501 Amyloid, hypometabolism, and cognition in Alzheimer disease: An [11C]PiB and [18F]FDG PET study
P. Edison, M.N. Archer, R. Hinz, A. Hammers, N. Pavese, Y.J. Tai, G. Hotton, D. Cutler, N. Fox, A. Kennedy, M. Rossor, and D.J. Brooks

509 Protective effects of beta-blockers in cerebrovascular disease
S. Lavonattana and S.M. Oppenheimer

515 Cannabis in painful HIV-associated sensory neuropathy: A randomized placebo-controlled trial
D.I. Abrams, C.A. Jay, S.B. Shade, H. Vizoso, H. Reda, S. Press, M.E. Kelly, M.C. Rowbotham, and K.L. Petersen

525 Neuropsychological abnormalities in patients with dementia in CPF 01_AE HIV-1 infection
V.G. Vallyat, P. Sithinamsuwan, S. Nidhinandana, et al., for the Southeast Asia Research Collaboration with the University of Hawaii (SEARCH) 001 Protocol Team

528 Right-to-left shunt and lacunar stroke in patients without hypertension and diabetes
Y. Uono, K. Kimura, Y. Iguchi, K. Shibazaki, T. Inoue, and T. Ueda

Clinical/Scientific Notes

532 Successful treatment of acquired idiopathic generalized anhidrosis
F. Palm, C. Lowe, W. Grenau, V. Voigtländer, and A.J. Grau

533 Occult celiac disease presenting as epilepsy and MRI changes that responded to gluten-free diet
E. Harper, H. Moses, and A. Lagrange

Correspondence

535 Predictors of hemorrhage in patients with untreated brain arteriovenous malformation
To the Editor: John F. Daube. Reply from the Authors: C. Stapf and J.P. Mohr

535 Diagnostic evaluation of clinically normal subjects with chronic hyperCKemia
To the Editors: R.H. Walker, J.J. Peters, H.H. Jung, and A. Danek. Reply from the Authors: C. Fernandez, D. Figueroa-Bonaparte, A. Mauro De Paula, and J.-F. Pellissier

536 Probable medication-overuse headache: The effect of a 2-month drug-free period
To the Editor: Marc Cathline. Reply from the Authors: P. Limberg, J. Olesen and K. Jensen

In The Next Issue

47A In The Next Issue

NeuroImages

531 Talarania with brain abscesses
D. van de Beek, J.M. Stockelberg, W.F. Marshall, M. Wijdicks

Section
ction presenting as acute flaccid infected patient
and C.K. Beck

Departments

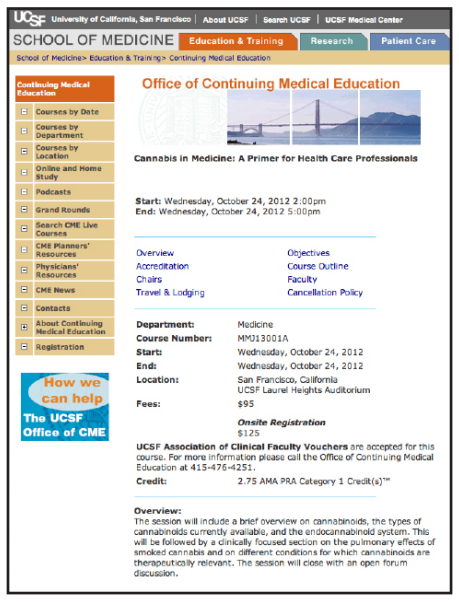
473 Calendar

49A Professional Notices

48A Index to Advertisers

Plan to attend the 59th Annual Meeting in Boston, April 28–May 5, 2007

PAPER BY ABRAMS *ET AL*, 'Cannabis in Painful HIV-associated Sensory Neuropathy: A randomized placebo-controlled trial,' was published in *Neurology 2007 68 515-521*. Prospective, randomized placebo-controlled trials are considered the "gold standard" in clinical research, and *Neurology* is a prestigious journal; yet government officials and law enforcement lobbyists continue to claim there is no published evidence that marijuana has medical use. Gore Vidal called this great nation "The United States of Amnesia" for good reason.



UCSF University of California, San Francisco | About UCSF | Search UCSF | UCSF Medical Center

SCHOOL OF MEDICINE | Education & Training | Research | Patient Care

School of Medicine> Education & Training> Continuing Medical Education

Continuing Medical Education

- Courses by Date
- Courses by Department
- Courses by Location
- Online and Home Study
- Podcasts
- Grand Rounds
- Search CME Live Courses
- CME Planners' Resources
- Physicians' Resources
- CME News
- Contacts
- About Continuing Medical Education
- Registration

How we can help
The UCSF Office of CME

Office of Continuing Medical Education

Cannabis in Medicine: A Primer for Health Care Professionals

Start: Wednesday, October 24, 2012 2:00pm
End: Wednesday, October 24, 2012 5:00pm

Overview | Objectives
Accreditation | Course Outline
Chairs | Faculty
Travel & Lodging | Cancellation Policy

Department: Medicine
Course Number: MMJ13001A
Start: Wednesday, October 24, 2012
End: Wednesday, October 24, 2012
Location: San Francisco, California, UCSF Laurel Heights Auditorium
Fees: $95
Onsite Registration $125

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.
Credit: 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 pulmonary 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 Professor of Medicine.

MARK WARE, MD

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

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."

With input from his patients Hergenrather developed a questionnaire which he shared with other SCC doctors so that their patients could be included in the study. In addition to demographic information and use patterns, patients are asked to report the level of certain signs and symptoms experienced when they are and when they are not using cannabis: pain, appetite, nausea, vomiting, fatigue, stools per day ("a real number," Hergenrather remarked), depression, activity level, and weight in pounds.

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 limition 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."

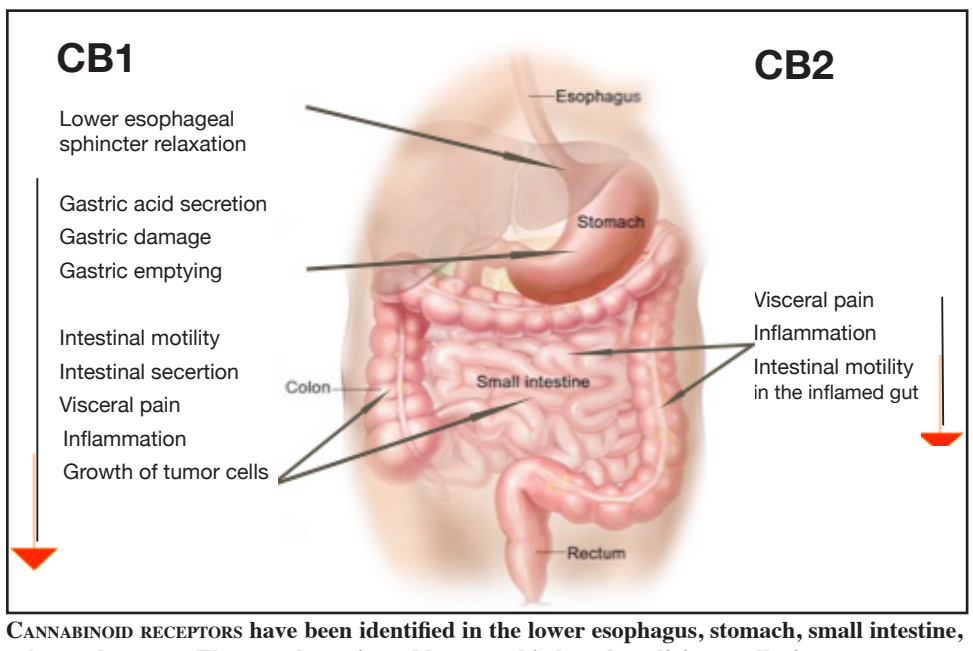
Issuing Cannabis Approvals

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



Cannabinoid receptors have been identified in the lower esophagus, stomach, small intestine, colon and rectum. They can be activated by cannabis-based medicine to alleviate many symptoms of Crohn's disease.

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 can-

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

nabnoids such as Nabilone are being prescribed with increasing frequency.

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

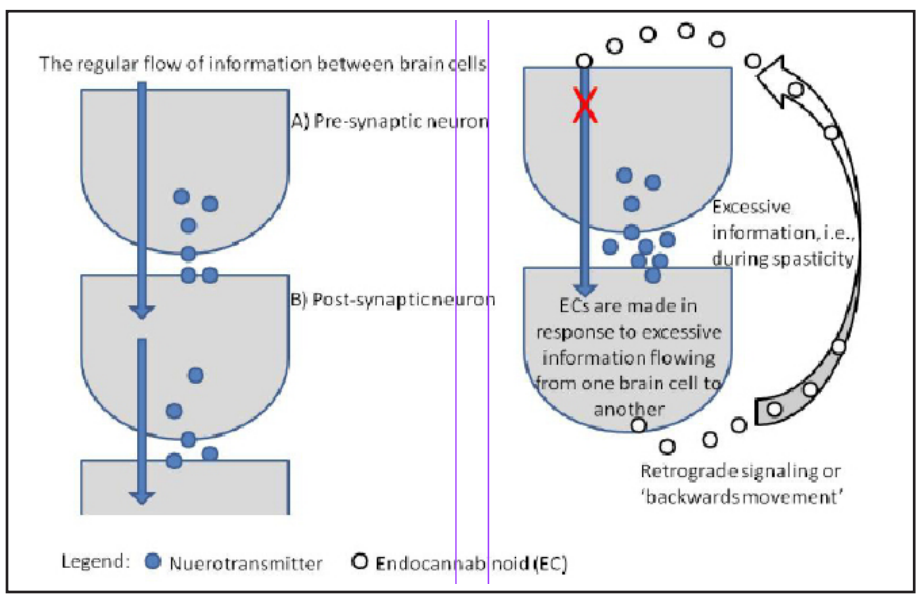
A Nursing Perspective

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 McMahon, 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 acknowledged.

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 observasions. 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 cannbis.

"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 cannbis.

"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.

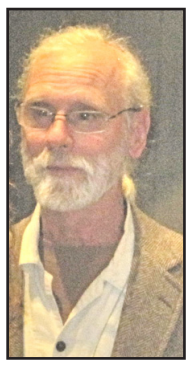
"We have to ask for a release of liability because patients are going to be out there driving. The release of liability spells out issues that the patient needs to sign and say 'Okay, this is on me and not on you.' Those forms are available at cannabisclinicians.org.

"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 cannibinoids in the treatment of cancer, Hergenrather concluded by extolling its potential.

Although the CME presentation was not planned to have a focus on cannibinoids 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.

MARYLYNN MATHRE

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

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.

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) Opthalmology, 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:

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.

"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

continued at bottom right