Commentary

Adding Cannabis to the Curriculum

Without fanfare, Temple University School of Medicine introduced cannabis to the curriculum in 2011. All it took was a faculty member —Ronald Tuma, PhD, a professor of physiology— proposing to add a one-hour lecture on the endocannabinoid system to the material he taught first-year medical students as part of "Block 3."

Temple organizes the curriculum into "blocks" according to body or organ systems. Classes are led by faculty from various departments. The blocks replaced the traditional set of courses administered by separate academic departments. Perhaps the "integrated curriculum," adopted by Temple a decade ago, made it easier for the endocannabinoid system —which is involved in almost every physiological process in the body— to find a niche.

Temple's Block 3 —"Body Systems 1"— provides "the fundamental facts and concepts necessary to understand the microscopic structure, embryological development and function of the cardiovascular system, the pulmonary system, the gastrointestinal system, and the kidneys."

When Tuma told Block 3 Director James Heckman, PhD, that he intended to devote a lecture to the endocannabinoid system. Heckman, who is also a physiology professor, approved unhesitatingly.

Tuma says the endocannabinoid lecture is "always very well received" by the more than 200 first-year medical students who attend it each year.

RONALD TUMA, PHD

Tuma does not consider himself the Jackie Robinson of medical education. "It was something I wanted to do and it was time," he says matter-of-factly.

Temple University School of Medicine has long been supportive of cannabinoid research, with labs run by Mary Abood and Sara Jane Ward doing cutting-edge studies. Jahan Marcu worked in Abood's lab en route to geitting his PhD, then as a postdoc.

Tuma's lab, according to the med school website, is investigating "inflammatory reactions that contribute to central nervous system injury following stroke, trauma, and autoimmune disease, and how modulation of the activity of specific cannabinoid receptors influences the progress of these diseases."

Tuma and colleagues at Temple were "first to demonstrate that modulation of the activation of cannabinoid 2 receptors has a significant impact on the development of a model of multiple sclerosis, as well as on the magnitude of damage in mouse models of stroke and spinal cord injury."

Unfortunately, Temple University School of Medicine —and McGill in Montreal, where pain specialist Mark Ware, MD, started teaching a class on the endocannabinoid system five years ago— are the exceptions that prove the rule. Virtually all med school graduates enter practice with no understanding of how cannabis works as medicine. They are unprepared to treat cannabis-using patients and know nothing about a treatment option that could help cannabis-naive patients. They may miss out on research opportunities over the course of their careers.

We suspect that some of the very doctors and scientists who until now ignored or disrespected Cannabinoid Medicine, will be teaching courses about it —or shaping their content

We expect a surge of medical schools adding introductions to the endocannabinoid system in the next few years. Whereas professors Tuma and Ware have real experience and expertise, we suspect that some of the very doctors and scientists who until now ignored or disrespected Cannabinoid Medicine, will be teaching courses about it —or shaping their content. Count on them to instill disinformation such as "9% percent of all longterm users become addicted."

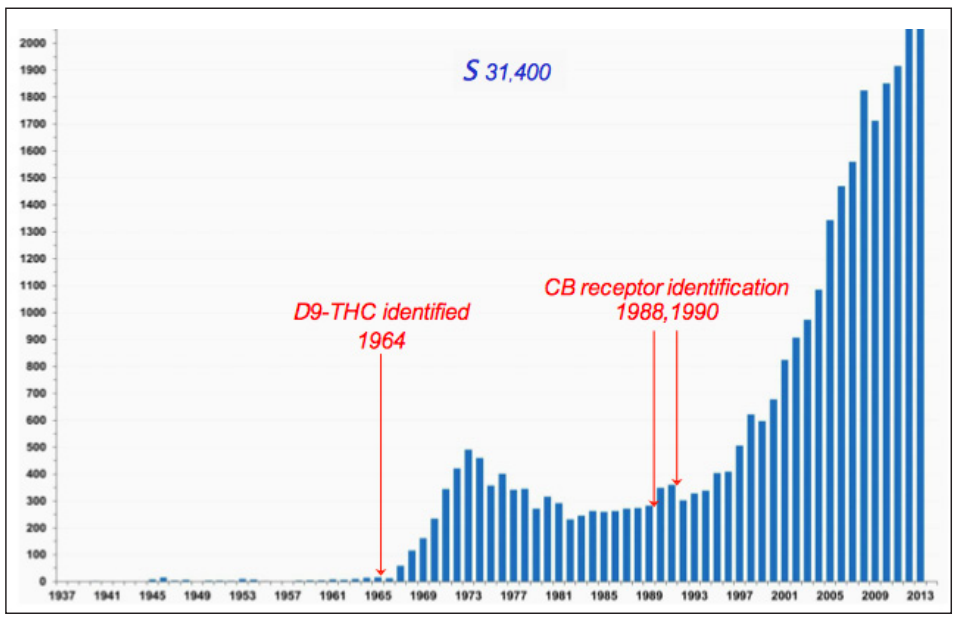
Continuing Medical Education

Licensed physicians and nurses are required by state licensing boards to take a certain number of Continuing Medical Education courses annually to stay abreast of advances.

CME courses introducing doctors and nurses to cannabinoid medicine have been slowly proliferating. The Canadian Consortium for the Investigation of Can-

continued on page 70

Fifty years of intensifying research



GRAPH PREPARED FROM PUBMED DATA by Istvan Ujvary shows that peer-reviewed studies on cannabis and cannabinoids have accelerated dramatically since 1964, when Y. Gaoni and Raphael Mechoulam notified the *Journal of the American Chemical Society* that they had worked out the chemical structure of delta-9 tetrahydrocannabinol and cannabidiol —THC and CBD, the principal compounds in hashish.

Is Cannabis-Based Medicine a viable —and valid— specialty?

A spectre is haunting California physicians who have been practicing Cannabis-based Medicine: the likelihood of "legalization" in 2016. The economic viability of their specialty may depend on how the new law is worded.

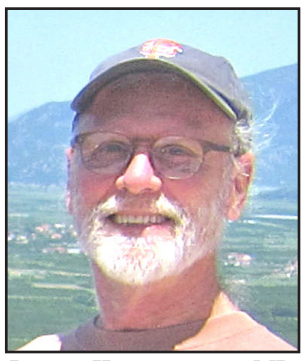
If legalization involves a steep tax on cannabis sold for recreational use, many people will continue visiting MDs to confirm that their use is medical. This is the situation in Colorado, where a doctor's authorization letter effectively confers a 25% price break from dispensaries, and cannabis-oriented medical practices are flourishing.

But what if the tax is not steep enough to induce cannabis users to get a doctor's approval? How many people using the herb to treat common conditions such as pain, depression and anxiety will feel the need to seek annual renewals?

We asked Jeffrey Hergenrather, MD, the president of the Society of Cannabis Clinicians (SCC), how he sees the future of the specialty.

Hergenrather's office is in Sebastopol, California, a small city some 60 miles north of San Francisco. His examinations are thorough —each new patient gets an hour and a half— and his expertise is exceptional. Hergenrather, 67, was in Emergency Medicine for 26 years and has never been in any kind of trouble with the medical board. He charges $250 for the initial visit, $120 for recheck visits.

Off the top, he estimates, "Fifty to 90 percent of my patients would not seek renewals if the legal and economic incentives were removed.



JEFFREY HERGENRATHER, MD

"The need for many patients to have a cannabis consultation is greater than ever."

"At the same time," he went on, "the need for many patients to have a cannabis consultation is greater than ever. Patients are presenting with cancers and a whole range of serious illnesses for which cannabis is capable of providing relief, but they need guidance in using it —how to optimize their treatment plan. They need doctors who stay informed about cannabis and cannabinoids and can share evidence-based information about strains, dosage, frequency of administration, methods of administration, and so forth."

Cannabis specialists also have an important role to play, Hergenrather says, countering "the constant stream of misinformation from the federal government" by collecting data conscientiously and publicizing their findings.

Hergenrather was a founding member of the SCC, which was launched 1999 by Tod Mikuriya, MD, the Berkeley-based psychiatrist who drafted the first sentence of the Compassionate Use Act of 1996 (Prop 215), allowing doctors to approve cannabis use by patients for "any... condition for which marijuana provides relief." Today the group has some 200 members nationwide.

"'Cannabis Clinician' is a valid specialty," Hergenrather asserts. "It doesn't fit in with the conventional categories such as Oncologist, Neurologist, Dermatologist, Rheumatologist, Gastroenterologist, Endocrinologist, Pediatrician, and so forth. It is a unique specialty that cuts across all the conventional divisions by virtue of the catholic nature of the endocannabinoid system. In the words of a recent paper by NIH researchers Pal Pacher and George Kunos, 'modulating endocannabinoid activity may have therapeutic potential in almost all diseases affecting humans.'

"Genetic variations in the endocannabinoid receptors are being revealed by the field of genomics, and shed light on the endocannabinoid deficiency diseases. Similarly, the 'natural' deterioration of the endocannabinoid system seems to give rise to diseases that we are resistant to in our youth. It isn't so-far fetched to imagine that the plant cannabinoids, like the essential fatty acids from which they are derived, are like essential nutrients in an increasingly poisonous world."

The treatment plan Hergenrather provides patients is individualized —"based on the person and their real-life situation —their age, diagnosis, condition, employment, aspirations, and obligations—like they'll be picking up the kids at 3 o'clock— everything needs to be considered. Tailoring the treatment plan to meet the needs of each patient can't be done with a 10 minute appointment and a prescription pad in your hand."

The availability of CBD-rich cannabis in recent years has been a boon to many in the workforce. "Typically people use CBD tincture in the morning or daytime to stop the anxiety and or reduce the pain without impairing their global ability to multi-task at work. With CBD and THC we're just scratching the surface of what cannabis-based

continued on page 68

O'Shaughnessy's

The Journal of Cannabis in Clinical Practice

Managing Editor: Fred Gardner
Associate Editor: Martin A. Lee
Guiding Spirit: Tod Mikuriya, MD

Contributors: Jeffrey Hergenrather, Bonni Goldstein, John McPartland, Ryan Lee, Giovanni Appendino, Michelle Sexton, Dave West, Zach Klein, Jahan Marcu, Dustin Costa, Stacey Kerr, Valerie Corral, Istvan Ujvary, Deborah Malka, Wade Laughter, Paul Meyer, Clint Werner, Frank Lucido, Dale Gieringer, Pebbles Trippet, Jerry Whiting, DJ Short, Christine Paoletti, Lester Grinspoon, Adrian Devitt-Lee, Michael Krawitz, Michael Aldrich, Ellen Komp, Chris Van Hook, Zara Axelrod, Jerlina Love, Samantha Miller, Joshua Ahn, Doug McVay, Michael Backes, Lincoln Godfrey

Special thanks to The Society of Cannabis Clinicians, Michael Gannon, Michael Hayes, Carlos Armenta, Alana Lee, Donald Abrams, Ethan Russo, Larry Brooke, Caroline Francese, Tim Anderson, Mark Ware, Greg Gerdeman, Diane Dickinson, Ned, Doug, Paige Figi, Heather Jackson, William Panzer, Eric Johnston, Sarah Smith, Jason Schechter, Jack McCue, MaryLynn Mathre, Michelle Aldrich, Jean Lang, Dress, Alec Dixon, **Lawrence Ringo**, Starr Hergenrather, Chris Larson, Susan Soares, Jahan Marcu, Anne Goebel, Anneliese Clark, Moriah Barnhart Seth Hyman, Steve Robinson, Anna Szostek, Christine Milentis, George Van Patten, Robert Raich, KJL, Patricia Smith, Steph Sherer, Goran Abrahamyan, Vivian McPeak, John Karapelou, Susan Schindler, Joe D. Goldstrich

WB O'SHAUGHNESSY "AT THE BENCH."

Send correspondence to p.o. box 490, Alameda CA 94501
phone: 415-305-4758 email: editor@beyondthc.com

Valid Specialty? *continued from page 2*

medicine can be. We've hardly touched those other cannabinoids and the terpenes."

A surprising, unpublicized role of the Cannabis Clinician is directing patients to conventional therapies. The government and the medical establishment have lied for so long about marijuana and so much else that millions of Americans no longer heed their dictates and guidelines —even the sensible ones.

"Ultimately, the individual, not the state or the 'health care industry' is the one to decide on the course of treatment," says Hergenrather. "I just try to offer the best information that I have available to me at this time to help the patient make the best choice.

"Many patients may need to go on to surgeries. There are people who come to me with cancers and want to treat it only with cannabis. I have to explain to them, 'This disease will kill you if you don't do more.' That conversation cannot be conducted in five or 10 minutes."

Philip A. Denney, MD, taking a history.

"If we just require our elected officials to appropriately reimburse the primary care doctors in this country! We keep getting undermined in terms of Medicare payments. It drives the doctors away from their practices and into corporate medicine models."

—Jeffrey Hergenrather, MD

Hergenrather has a suggestion that could induce people to consult cannabis specialists and make the specialty viable for sure: "a single-payer system that remunerates docs appropriately for the time that they need to spend with patients. We don't even have to go a single payer system. If we just require our elected officials to appropriately reimburse the primary care doctors in this country! We keep getting undermined in terms of Medicare payments. It drives the doctors away from their practices and into corporate medicine models.

"If we can get cannabis into Schedule Two —even though it will keep the drug war going— it would enable doctors who are not comfortable with it themselves to refer to cannabis specialists. And cannabis specialists should be able to get Medicare payments or other insurance payment for seeing patients. That can't happen until it's out of Schedule I... Cannabis really should not be a scheduled drug."

'Unscheduling'

SCC members at the June 9 meeting in San Francisco unanimously endorsed the principle that cannabis should not be a scheduled drug. "The SCC is calling for unscheduling of cannabis in California. Unscheduling shouldn't affect the development of tax-and-regulate laws for commercial producers.

"At the same time we defend the right for all to be allowed to cultivate cannabis for their own personal and family use. Surely, we need to define a threshold between the amount of cannabis that is considered personal and the amount that is considered commercial. Cannabis grown and provided for medical use should be regulated with respect to content. Safety should be ensured by laboratory analysis."