

## Respectable Reefer

*How a pulverized, liquefied, and doctor-prescribed form of marijuana could transform the drug-war landscape*

By [Gary Greenberg](#) | [November 2005 Issue](#)

IF IT WEREN'T FOR the little photo gallery on the wall, the office where Dr. William Notcutt's research assistants keep track of their patients would be just like any other cubicle at the James Paget Medical Center in England. As phones ring and stretchers wheel by and these three women go about their business, the snapshots—Cheryl Phillips, one of Notcutt's staffers, gently holding an emerald green bud of marijuana; a group of people in lab coats smiling for the camera, sinsemilla towering over their heads; a hangar-sized greenhouse stuffed to the gills with lush pot plants—are about the only evidence that this hospital in East Anglia is at the epicenter of one of the most extensive medical marijuana research projects in the world. In part, that's because there's no actual pot here; by the time it gets to Paget, GW Pharmaceuticals, the British startup that owns the greenhouses, has turned the plants into Sativex, a pure extract of pot that comes in a pharmacy-friendly bottle and is designed to be sprayed into the mouth. And in part it's because the frivolity is carefully confined to the photos, taken against company policy during a field trip to the secure, undisclosed location where GW grows its weed. After five years, Phillips and her colleagues have grown used to having cannabis—as the British call marijuana—in their workaday lives. Not only that, but their boss has been on a bit of a campaign to keep things sober. "To get to the perception that this is a medicine," Notcutt says, "we've had to move away from the funnies that relate to the pot world. So no pot jokes."

Over a beer at the end of his day, this rumpiled, 59-year-old anesthesiologist and contract researcher for GW is positively ebullient about the news that just today the Canadian government approved Sativex, a success he thinks is likely to be repeated soon in England and eventually in the United States. He'll gladly tell you how important earnestness has been in getting GW to this point, how Sativex owes its success not only to the rigorous science of its successful clinical trials but also to painstaking attention to matters of perception.

Take the spray concept. There are sound medical reasons for spraying cannabis under the tongue rather than smoking or eating it. The mucosa of the mouth will absorb the drug faster than the digestive system, indeed almost as fast as the lungs, but without irritating the respiratory system. And Sativex can be precisely metered—a single one-tenth milliliter spray contains 2.7 milligrams of tetrahydrocannabinol (THC), pot's main psychoactive chemical; 2.5 milligrams of cannabidiol, which doctors think reduces anxiety and muscle tension; and all of pot's active ingredients known as cannabinoids—so that it can be accurately studied. But it also has "the advantage of looking like a medicine to the outside world," Notcutt says. "It has been served up like a medicine, prepared like a medicine, researched like a medicine. It looks like a medicine, and it's prescribed like a medicine." Taking pot out of joints scored on the street and putting it into bottles found on pharmacy shelves shows that "we're not just being silly about the herb, even though in the end that's exactly what it is. It's as if you just squeezed the plant," he says, wringing an imaginary stalk in his hands.

Notcutt began trying to medicalize cannabis more than a decade ago, and has been working with GW and its founder and ex-ecutive chairman, Geoffrey Guy, since the company's inception in 1998. He credits Guy (who wouldn't be interviewed for this article) with hitting upon the spray, just one of the measures he's taken to distance Sativex from its unsavory origins. Guy has styled GW, which he started solely to develop cannabis medicines, as just another drug company seeking to develop just another drug. He raised money in the usual ways—first from private investors, then with a 2001 stock offering that garnered \$48 million, and finally, in 2003, with an estimated \$65 million licensing deal with German pharmaceutical giant Bayer—and used it to purchase the rights to pot varieties that a Dutch company had spent millions of dollars and more than a decade developing for their medicinal properties. Guy presents himself as neutral in the drug wars and gained the support of the British government by offering to institute extraordinary security measures at his grow facility to prevent "diversion." The British government, in turn, gave him permission to grow his pot and test it on human subjects and so exempted GW from an international treaty forbidding private production of outlawed drugs. Guy developed a way to blend the plants (a process he has likened to making blended burgundies) into precise mixtures whose chemical profiles can be standardized (which regulators like), patented (which investors like; cannabis itself can't be patented), and then described in company press releases as "a novel prescription pharmaceutical product derived from components of the cannabis plant."

Having successfully distilled pot's reputation as a medicine from its reputation as a way to get high, Notcutt says, "the powers that be at GW worked hard to maintain this myth. We start in that comfort area, we don't talk about anything outside this comfort area." This hard work has no doubt paid off in Canada and England, reassuring regulators that, as Notcutt put it, "we're talking about a serious medical subject here." The real audience for all this mythmaking, however, isn't Britain or Canada, which will ultimately account for only a small percentage of the cannabinoid drug market, estimated to be almost \$1 billion a year. It's the United States, where, Notcutt says, things are different. "Marijuanaphobia is much greater on your side of the pond," he told me. "We've never had the reefer madness."

SINCE POT was prohibited in 1937, there's been a virtual epidemic of this malady in the U.S., and GW's posturing seems designed to exploit its latest manifestation: the strange politics of the pitched battle over medical marijuana. The federal government lists cannabis in all its forms on Schedule I of the Controlled Substances Act, a designation reserved for drugs that it says are unsafe and have no known medical use. But medical marijuana activists, drawing on a growing body of evidence indicating that cannabis is a safe and effective medicine, especially for nausea and spasmodic pain, have clamored for its legalization for medical purposes. And they've gained support among the general public. Eleven states have passed medical marijuana laws; no state ballot initiative put before voters has ever failed to pass.

Some of the resulting controversy breaks down along predictable lines—chronically ill people accusing the government of withholding treatment while the government denounces medical marijuana as a "cruel hoax"; legalization advocates hoping to use medical marijuana as a wedge issue while drug warriors warn that it's a Trojan horse. But recently new political fissures have opened up. In *Gonzales v. Raich*, a case brought to the Supreme Court after the feds busted a medical marijuana patient over the objections of California sheriffs, the Court recently determined that this was "a valid exercise of federal power," but Justice John Paul Stevens' majority opinion was rife with regret about "the troubling facts of the case." Alabama, Louisiana, and Mississippi, three states not exactly known for their liberal traditions, filed briefs in support of

the patients, urging the justices to allow states to exercise their function as "laboratories for experimentation." And three justices—including Clarence Thomas and William Rehnquist—dissented on the grounds that medical marijuana should be an issue for individual states to decide, thus placing two of America's most prominent conservatives on the same side of the issue as George Soros and Barney Frank, another ideological divide gone up in smoke.

The significance of the medical marijuana skirmish goes well beyond its fractured politics or its implications for federalism. Even as the government ratchets up prohibition—it currently spends \$4 billion a year just arresting and prosecuting people for marijuana-related crimes—evidence of cannabis' safety and efficacy accumulates and the cornerstone of marijuana prohibition weakens. With stakes this high, it's no wonder that judges and politicians, and maybe the rest of us, are dazed and confused about medical marijuana. And it's also no wonder that GW is already garnering notice in the U.S. or that it has managed to attract prominent drug warriors, including the government's leading anti-medical-marijuana spokeswoman, to its cause. Sativex, the pot that dares not speak its name, may be exactly what the doctor ordered: a way for drug warriors to squeeze between the rock of prohibition and the hard place of patients clamoring for medicine. With a prescription version of cannabis available in pharmacies, the feds could regain their moral authority to raid your backyard garden, disrupt the delicate alliances the medical marijuana movement has spawned, and deprive legalizers of what may be their most powerful wedge issue. GW may end up, that is, with a shareholder's dream: a monopoly welcomed by policymakers and enforced by the police, leaving medical marijuana activists to wish they'd been more careful about what they'd asked for.

ENGLAND ISN'T the only place where clinical trials of cannabis are being conducted. In fact, on ward 5-B of San Francisco General Hospital—once the site of the world's first dedicated AIDS unit—there are two rooms with oversize exhaust fans where patients can smoke marijuana in the name of science. Sometimes the staff has to put towels under the doors to prevent the smoke and smell from permeating the hallway, but not today. Emily, the healthy volunteer sitting in a half-lotus on a bed in room 29, is only going to smoke half of a joint, while David, the AIDS-related-pain patient reading his Bible in the room next door, won't smoke until tomorrow. Emily, 26, is outfitted for her six-day stay at the research center—during which she will take pot each day at precisely 10 a.m., alternating between smoking and taking it through a high-tech vaporizer device called a Volcano—with a stack of books and videos, a suitcase filled with comfortable clothes, a boom box, and a cell phone. She's been relaxed and chatty and looking forward to the study—"a lounging, couch potato-y thing to do," she says—but that was before nurses Lorna Aquino and Hector Vizoso took her through the final preparations. Aquino has just finished listing the various exams—the blood draws, the breath test for carbon monoxide levels, the survey of her levels of intoxication, the computerized pattern-recognition test—that she will be taking each day, once before she gets high and five times after. Now Vizoso hands her the "Instructions to Smoke Marijuana"—a laminated card detailing the Fulton Puff Procedure. He goes over the method—5 seconds on the draw, hold it for 10, exhale, and wait for 45—and explains that Aquino will watch her from a window in the hallway to make sure she gets the timing right. Now Emily seems self-conscious and flustered. "You're really going to watch while I do this?" she asks.

It's a perfect moment for Dr. Donald Abrams to come in. Although he's wearing a crisp pin-striped shirt and shiny shoes instead of a cardigan and sneakers, he looks like Mister Rogers, and he introduces himself in a neighborly way that immediately puts Emily at ease. "I need to do

a little exam here," he says apologetically, fixing his stethoscope to his ears. "It's just that when you're stoned you don't want someone coming at you like this." His exam is brief. On the table in front of Emily, Aquino has arranged a blue plastic ashtray, a Bic lighter, and a shiny hemostat—for a roach clip. In the ashtray is precisely half of a marijuana cigarette, as everyone around here calls the government-issued, machine-rolled joint, which is bright white and perfectly round. Emily lights it up and draws deeply while Abrams coaches her through the Fulton procedure.

She starts to hack, and he assures her in his doctorly tones: "If you don't cough, you don't get off." Abrams, a professor of medicine at the University of California-San Francisco who was one of the first people to suggest that a virus causes AIDS, knows all about working with stoned people. He's one of the few American scientists allowed to study pot in human subjects. Since 1992, he's been trying to bring some scientific law and order to the medical marijuana frontier, where patients take pot for complaints ranging from chemotherapy-related nausea to menstrual cramps and where, in California anyway, dispensaries function without much regulation. But progress has been slow, in part because it has been difficult to fill his studies: He recently had to close down a cancer pain trial for lack of subjects, and patients don't always complete the studies. Half the subjects in the neuropathy study get pot that has been denuded of THC. "Nobody gets fooled for long," says Abrams, and he worries that David may go the way of a recent subject who said, "I don't want to be here for a week smoking a placebo when I can get real pot out on the street," and bailed.

But at least he's fretting about recruiting and retaining patients rather than whether he's going to be allowed to do the research in the first place. It took five years to get his first trial—initially a study to determine whether marijuana would help people with AIDS-wasting syndrome—under way. He had his FDA approval within a year, but acquiring the pot to actually run the study proved nearly impossible. He couldn't just buy it on the street or grow it in his back yard like everyone else. He needed a drug that the FDA would accept as pure and that was legally obtained. So he applied for a license from the Drug Enforcement Agency to import research-grade weed (from the same Dutch company that supplies GW). The DEA stone-walled him, as did the National Institutes on Drug Abuse, the nation's only legal supplier, when he asked for some of the pot grown for NIDA at the University of Mississippi. NIDA eventually denied his request, on the grounds that the FDA-approved study was not "scientific" enough. Abrams persisted, however, and NIDA finally relented in 1997, after Abrams overhauled his study so as to investigate marijuana's potential harms to people taking protease inhibitors—a strategy he says he adopted after Alan Leshner, then NIDA's director, reminded him that "we're the National Institutes on Drug Abuse, not the National Institutes for Drug Abuse." (Leshner declined to comment.)

Abrams says he can now get NIDA pot when he needs it. But the six studies he has run have enrolled only 161 people and are still in the preliminary stages of proving pot's efficacy and safety. Meanwhile, GW has tested Sativex on more than 1,000 subjects, and is well into the late stages of the kind of clinical testing required by the FDA. Abrams won't comment directly on Sativex. ("I'm just not a political person," he says repeatedly.) Nor will he speculate about the commercial implications of his research, about how, or even whether, pot ought to be brought to market (or back to market; Abrams points out that cannabis was used medically for thousands of years prior to its prohibition), or about GW's lead in the race to restore cannabis to legitimacy.

Rick Doblin, on the other hand, will. Doblin heads the Multidisciplinary Association for Psychedelic Studies, a nonprofit organization that first applied to develop marijuana as a treatment for AIDS wasting (Abrams' first study was originally intended for MAPS), and he has been trying unsuccessfully to launch medical marijuana research for nearly 15 years. MAPS, like

GW, wants to develop cannabis as a pharmaceutical drug, but, as Doblin puts it, "in the least refined, least expensive way possible—as plant material that people can get in pharmacies or as plants or seeds that they can grow and process themselves." Doblin envisions patients choosing among a number of methods of taking the drug, but he's especially keen on vaporizing, which he thinks may answer concerns about smoking. But he hasn't been able to investigate this hunch. "We can get the FDA to work with us, but we can't get pot from NIDA," says Doblin. "We've been waiting for two years just for a decision on whether they'll sell us 10 grams for our vaporizer study." Doblin thinks that NIDA is "scared of the research. If we prove that it's not true that pot pushes people into schizophrenia or causes lung cancer, if it's not doing the things the government says are the reasons it's bad, then we undercut their credibility."

But even if NIDA were a reliable supplier, Doblin says, "we don't want their weed." NIDA's brown, stems-and-seeds-laden, low-potency pot—what's known on the streets as "schwag"—cannot stack up against the dense green, aromatic, and powerful sinsemilla favored by most medical marijuana patients (and grown by GW). Doblin asked the University of Mississippi to grow the good stuff for him, but they refused, so he approached a botanist at the University of Massachusetts, who applied to the DEA to grow research-grade pot in a 200-square-foot room in the basement of a building in Amherst. This started a whole new kind of collegiate rivalry, the Rebels squaring off against the Minutemen over the quality of their pot. In a letter to the DEA, Mississippi's botanist—after pointing out that no one had ever officially complained about the "adequacy" of their product—trumpeted recently acquired "custom-manufactured deseeding equipment" and a new stock of seeds that had allowed Ole Miss to amass more than 50,000 joints' worth of a "special batch" of high-potency, smooth-smoking weed. Three and a half years after UMass kicked off the battle—and only after a judge ordered the feds to make their decision—the Rebels prevailed, its monopoly preserved when the DEA denied UMass the license necessary to grow pot legally.

MAPS is appealing the decision through the DEA's administrative law court. But while the bureaucratic process crawls along, the organization's attempt to bring pharmaceutical-grade, inexpensive pot to patients is at a standstill. "We can way outcompete GW in a legal market," Doblin says. (In Canada, a month's supply of Sativex will cost patients using nine sprays a day about \$500, comparable to other multiple sclerosis drugs and about the same as a month's supply of pot bought at California medical marijuana clubs.) "But if you're going to invest millions of dollars in drug development," he continues, "you have to have an uninterrupted supply. We don't even have a pilot study. We're nowhere." As a result, GW, with its government-sanctioned greenhouses yielding 60 tons of high-quality pot every year, is lightyears ahead of its nearest American competitor and, according to Doblin, it has drug warriors to thank for its lead. "They're going to let this whole market go to the Brits."

WILLY NOTCUTT thinks that one of Geoffrey Guy's shrewdest moves was his choice of multiple sclerosis patients as the first population on which to test Sativex. With its myriad symptoms and variable progression, Notcutt says, MS is a very difficult disease to study. "So why use it? Nothing to do with logic. It has everything to do with politics." MS patients were already "screaming and shouting and writing about it," Notcutt told me. Using them "was opportunistic. It could have been the hemophiliacs with pain from AIDS. It could have been the gay AIDS lobby. But the perception of the young mother struck down by MS was powerful. There was no taint of any recreational use nor any prejudice over sexuality."

Whatever the spin, John Ross is glad to have his Sativex. A 66-year-old former truck driver, Ross has had multiple sclerosis for 25 years, and he lost his driver's license to it 15 years ago. Since then, it's gotten bad enough to put him in a wheelchair some of the time (including this morning), racked with pain that he likens to being plugged into a wall socket and muscle spasticity that makes it hard for him to keep his balance. But he's chipper and ramrod straight in the chair and there's a glint in his blue eyes when he tells me that since he's been on Sativex—which he, like all Notcutt's cannabis patients, calls "The Spray"—he's even gotten back onto the golf course.

Ross' story is much like the accounts of the other MS patients I encountered at Paget: a nightmare descent, as the sheaths around their nerves unraveled, into a world of pain and debilitation, frustrating attempts to find relief through various drug cocktails, and finally the suggestion, made by a doctor in Ross' case, to "get your hands on cannabis." Ross was surprised, but he dutifully rounded up some pot, rolled it with tobacco into a cigarette (the usual method of recreational users in England), and got nearly instant relief. He avoided the black market by growing his own in the little greenhouse attached to his home, but the fear of being busted was never far away. (Nor was mishap, like the time he dried his plants in the oven and his wife came home to a house full of smoke and a too happy husband.) So when his doctor referred him to Notcutt's trials, Ross was pleased to discover that the spray was not only legal and cleaner than smoking, but also just as effective as his homegrown. "I was brilliant," he says, "on 28 sprays a day." (Notcutt estimates that five or six shots of Sativex is "very roughly speaking" the equivalent of one joint.) Now he generally takes six sprays before bed, usually drinking it mixed into milk because, he says, the spray gave him mouth ulcers and it "tastes vile."

Ross says that Sativex doesn't get him high, a claim repeated by most patients I spoke to at Paget—and by medical marijuana users generally. This isn't as far-fetched as it sounds, says GW spokesman Mark Rogerson, echoing the long-accepted principle that a drug's effects depend on the mindset and environment of the user as much as on chemistry. "In general the aim of the recreational user is to achieve intoxication, while the aim of the medicinal user is to avoid it—because they want to go on with their lives." The company uses this claim to further distinguish its product from pot—GW calls intoxication a "side effect"—but in fact it is nearly impossible to disentangle cannabis' medicinal effects from its side effects. According to Notcutt, Sativex users do not avoid euphoria so much as they become experts in finding the "borderland" between disabling pain and disabling intoxication, to learn how to "go up to the point where that was enough, thank you very much. If I go much further, I start to feel kind of funny and I don't want to be there." Notcutt thinks that Sativex patients can safely find their own dose, and points out that no one has ever died from an overdose of cannabis in any form. And he's sure this method will work, in part because it's been working for years: "A group of people [can be] passing a joint around, and one will take a puff and get a bit too high and the next time pass on it. Smoking a joint in a group is a patient-controlled analgesia device."

John Ross has found that borderland, and he is pleased to be allowed to be there. (His reward for participating in clinical trials is a free supply of Sativex by prescription.) "Yesterday, I fell in my garden," he told me. "I came straight indoors and took four sprays, and I knew it would keep me calm and in control, and out of pain. And even if I did have the pain, it's easier to contend with." Ross is a satisfied customer, and he wants me to spread the word. "Anyone in the States got the MS," he says as he wheels himself out of Notcutt's office, "you tell them to get on The Spray."

AT LEAST ONE PERSON in the States would like to do exactly that. Julie Falco, a Chicagoan who has had MS for half of her 40 years, bakes an ounce of pot into a pan of brownies ("I like a little chocolate with my cannabis," she says) every 10 days or so and eats a small square every morning for pain and spasticity. She sees Sativex as "another option in the arsenal," one that can provide quicker relief than eating pot and can be used in public. But getting Sativex from Canada is not as easy as hopping on a bus and buying Prilosec. Even if she could get a prescription, U.S. Customs and Border Protection would, according to a spokesman, seize and destroy Sativex on the grounds that cannabis is illegal in this country. So Falco has applied to the FDA for permission to obtain Sativex under the Compassionate Use program, which allows patients for whom there is no other treatment to obtain drugs still considered experimental by the U.S. government. (More than 40 medical marijuana patients once got pot directly from the government under this program, but in 1992 the FDA stopped considering Compassionate Use applications for the plant.)

Even if Falco is successful, most patients will have to wait for Sativex to run the FDA's gauntlet— notoriously difficult and unpredictable even for drugs without political baggage. But there is precedent for FDA approval of cannabinoids. In 1985, the agency approved Marinol, a synthetic form of THC, as a treatment for AIDS-related wasting and chemotherapy-induced nausea, but it has proved unpopular with patients, who complain that the drug takes too long to work, which makes the dosage hard to adjust, and that it is ineffective. (Some scientists believe that pot's medicinal effects depend on the interaction among all its chemicals, not just on THC.) Drug policymakers had hoped Marinol would be "a godsend," according to Mark Kleiman, director of the Drug Policy Analysis Program at UCLA's School of Public Affairs. "It wasn't any fun and made the user feel bad," Kleiman says, "so it could be approved without any fear that it would penetrate the recreational market, and then used as a club with which to beat back the advocates of whole cannabis as a medicine." Kleiman thinks that Sativex might succeed where Marinol failed, not only because evidence from GW's clinical trials might convince regulators that it works, but also because GW is poised to "persuade the drug warriors that getting Sativex approved fast is the best way to block the medical marijuana movement."

But this kind of maneuvering could have unintended consequences. "The approval of Sativex will show that the drug warriors have been lying all along about medical marijuana," says Rob Kampia, head of the Marijuana Policy Project, an organization that has spearheaded several state ballot initiatives. It will also, Kampia thinks, vastly complicate law enforcement efforts. "If Sativex is approved in the U.S., and a patient is arrested for whole marijuana and they go to court, they're now going to be able to say, 'Hey, we know that liquid marijuana has medical value as declared by the FDA, therefore I shouldn't go to prison for having nonliquid marijuana.'"

UCLA's Kleiman points out other complications for drug warriors: "If the word gets out that in fact it can be used to get high, then there might be a substantial demand for it among those who want to get stoned while remaining within the law, especially since it could be prescribed for relatively nonspecific indications such as pain and anxiety. And the one thing this is going to do for sure," he adds, "is wreck the drug-testing industry."

GW refuses to comment on these possibilities, calling drug policy "a matter for lawyers and governments." But drug-war politics matter to the company, if for no other reason than that prohibition would make Sativex the only legal cannabis in the marketplace. ("I wouldn't want to comment on that particular statement," says Rogerson.) Indeed without prohibition, GW might not have a market, which may be why, in addition to its larger population, the United States holds more appeal to the company than Canada and Europe, with their relatively lax laws.

A couple of GW hires indicate that the company is not nearly so apolitical as it claims: John Pastuovic, a campaign spokes- man for George W. Bush in 2000 who was part of an effort to derail medical marijuana legislation in Illinois earlier this year, and Andrea Barthwell, who, as a deputy drug czar from 2002 to 2004, led the campaign to brand medical marijuana as a hoax. Both can be expected to enforce message discipline. As soon as I told him I was writing about medical marijuana, Pastuovic interrupted. "Sativex is not medical marijuana," he said. "What you have out [in California], that's medical marijuana. Sativex is medi- cine." For her part, Barthwell has refused to publicly comment about her turnaround, except to say to the Los Angeles Times that "comparing crude marijuana to Sativex is like comparing a raging forest fire to the fire in your home's furnace. While both provide heat, one is out of control."

GW even offers a high-tech way to control the fire that is bound to appeal to drug warriors: the Advanced Dispensing System, a thumbprint-activated, computerized dispenser that limits the dosage to what a doctor (through a cell-phone link) authorizes, preventing Sativex from being overused for its "side effects." Rogerson says that GW can certainly make the device—originally designed for methadone users—available to the U.S. government. "We can say, 'Here is your motorcar, sir. Would you like the standard version or the armor-plated version?'" Either way, Kampia says, "Sativex fits the niche that the drug warriors have created." And they seem to agree. "It is entirely possible that there are elements of the cannabis plant that have medicinal value," says Tom Riley, spokesman for the drug czar's office, echoing an Institute of Medicine report that his office commissioned in 1999. "If such elements were developed into safe, effective medicines, they could theoretically be prescribed and distributed like all the other drugs that have dependency-producing side effects."

Sativex also fits a niche that Kampia's movement has created, if inadvertently, by seeking to legitimize pot as a medicine even as it remains otherwise illegal. In a society that relies on a profit-driven, science-based industry to supply drugs and on government regulators to approve them, a raw herb that grows like a weed and has been vilified for nearly 70 years is a tough sell as a medicine. A patented liquid that you can pick up at Walgreens along with your Prozac, on the other hand, may be precisely the formula for bringing cannabis in out of the cold, especially if it has a carefully crafted reputation as something other than pot.

It is, of course, way too early to tell, but within two days of the Canadian approval, U.S. newspapers were already reporting that Sativex consisted of a "type of cannabinoids that have been isolated and purified [to] work specifically at the targeted pain receptors," and that the drug "does not intoxicate users." That, according to Willy Notcutt, "is a load of bollocks. But why," he asked me, "correct such misapprehensions at the current time?"

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