The Judiciary, State of Hawai'i

Testimony to the
House Committee on Public Safety
Representative Gregg Takayama, Chair
Representative Matthew S. LoPresti, Vice Chair

Thursday, February 9, 2017, 10:00 AM
State Capitol, Conference Room 312

WRITTEN TESTIMONY ONLY

By
Calvin Ching
Deputy Chief Court Administrator, First Circuit

Bill No. and Title: House Bill No. 1501, Relating to Drug Paraphernalia.

Purpose: Changes drug paraphernalia possession and delivery offenses from felonies to civil violations.

Judiciary's Position:

The Judiciary takes no position on the merits of House Bill No. 1501, however the Judiciary is concerned about how it will process a new and distinct case type called a "civil violation." Currently, the District Court processes certain traffic cases as civil in nature, and these "civil infractions" are adjudicated pursuant to Hawai'i Revised Statutes (HRS), Chapter 291D. There is no similar court procedure for processing a criminal case as civil in nature. However, the purpose of this bill may be achieved without the necessity of creating a "civil violation." There is already a category of offense for which no jail can be imposed. HRS Section 701-107 (5) provides that:

> (5) An offense defined by this Code or by any other statute of this State constitutes a violation if it is so designated in this Code or in the law defining the offense or if no other sentence than a fine, or fine and forfeiture or other civil penalty, is authorized upon conviction or if it is defined by a statute other than this Code, which provides that the offense shall not constitute a crime. **A violation does not constitute a crime, and conviction of a violation shall not give rise to any civil disability based on conviction of a criminal offense.** (Emphasis added)

Although a violation does not constitute a crime, it constitutes a penal offense. These cases would be processed through the courts in the same manner as a crime. A defendant would be required to appear in court, be arraigned, enter a plea, and if found guilty, be sentenced. The District Courts would prefer to process these cases as violations within its current procedures.

If the Legislature decides to create a "civil violation"-- as opposed to a violation under the Hawai‘i Penal Code -- and envisions that it be processed in the same manner as a civil traffic infraction under Hawaii Revised Statutes Chapter 291D, it will be necessary to enact a statutory framework for the processing of such cases. As it did when Chapter 291D was implemented, the District Courts would be required to create new forms, schedule civil violation calendar sessions and train staff to process these cases. The Judiciary would also need to create a new case type, change codes in the Judiciary Information Management System (JIMS) and create new processing requirements. It is estimated that this undertaking would take approximately 6-7 months for design, development and testing at a cost of about $850,000. Considering all these things, the Judiciary requests that the effective date be changed to no earlier than January 1, 2019 to accommodate the need for these changes.

Thank you for the opportunity to testify on House Bill No. 1501.

MITCHELL D. ROTH
PROSECUTING ATTORNEY

DALE A. ROSS
FIRST DEPUTY
PROSECUTING ATTORNEY

655 KĪLAUEA AVENUE
HILO, HAWAI'I 96720
PH: (808) 961-0466
FAX: (808) 961-8908
(808) 934-3403
(808) 934-3503

WEST HAWAI'I UNIT
81-980 HALEKI'I ST, SUITE 150
KEALAKEKUA , HAWAI'I 96750
PH: (808) 322-2552
FAX: (808) 322-6584

OFFICE OF THE PROSECUTING ATTORNEY

LATE

TESTIMONY IN OPPOSITION OF HOUSE BILL 1501

A BILL FOR AN ACT RELATING TO DRUG PARAPHERNALIA

COMMITTEE ON PUBLIC SAFETY
Rep. Gregg Takayama, Chair
Rep. Matthew S. LoPresti, Vice Chair

Thursday, February 9, 2017, 10:00 A.M.
State Capitol, Conference Room 312

Honorable Chair Takayama, Vice-Chair LoPresti, and Members of the Committee on Public Safety, the Office of the Prosecuting Attorney, County of Hawai‘i submits the following testimony in opposition of House Bill No. 1501.

This measure changes drug paraphernalia possession and delivery offenses from felonies to civil violations.

HB No. 1501 is a bad bill based on a flawed premise and a seriously flawed Civil Beat Article suggesting this bill would save the State millions of dollars. Nothing could be further from the truth. And, this bill, if enacted will cost the State millions of dollars. Frankly, this bill misses the boat and the ocean of flawed logic it is floating on.

When Section 329-43.5 was enacted in 1988, Senator Hee recognized: “This bill will also allow the law enforcement community to act swiftly, decisively, in moving to now cease and secure machinery such as dryers and other kinds of processing equipment in the absence of drugs that may have been flushed away, and will allow the law enforcement community with the ability to prove beyond a reasonable doubt that the equipment would now be considered paraphernalia and would be a felony.”(1988 Senate Journal at p.441).

In 1988, the House Judiciary Committee made it clear that prosecutors were not to separate the marijuana from the crutch and thereby make what was petty misdemeanor activity into a felony paraphernalia offense:

“The bill, as received from the Senate, modifies several provisions of the model act. Your Committee, however, does not intend that the provisions of this bill, as amended, be construed as allowing felony prosecution of offenses which would otherwise be misdemeanors under existing law.” (1988 House Journal SCRep. 4-88 at p.850).

Even the most rudimentary investigation behind the alleged 167 persons sitting in jail because of a Prohibited Acts Related to Drug Paraphernalia conviction, would show that virtually no one is charged only with a drug paraphernalia charge. Almost always there is a felony drug charge such as promoting a dangerous drug or other felony offenses. Prior to 2016, when promoting a dangerous drug in the third degree was removed from Section 706-606.5, a conviction under 712-1243 would trigger a mandatory minimum prison sentence whereas a section 329-43.5 conviction would not trigger a minimum mandatory prison sentence and Defendants if given a choice by the prosecution would opt to plead to the latter, and hope for a probation sentence.

Since there is now no special benefit to pleading to a drug paraphernalia charge as opposed to a promoting a dangerous drug charge, from a mandatory prison sentence under state law point of view, it is likely that felony drug paraphernalia convictions are likely to decline, although astute defense attorneys, eyeing federal sentencing guidelines, would still prefer the drug paraphernalia charge if given the option by the prosecuting attorney.

The past interaction between Section 706-606.5, HRS and Section 329-43.5 convictions not being an enumerated felony in Section 706-606.5, and the "bad" criminal histories of the 167 alleged prisoners sitting in prison, is the real cause of their sitting in prison. Decriminalizing drug paraphernalia offenses will result in more expensive trials, more drug offenses, and more crime of all kinds and thus more expense and more threat to community safety than this bill hopes, without any scientific study whatsoever, to save.

The Office of the Prosecuting Attorney, County of Hawai‘i opposes the passage of House Bill No. 1501. Thank you for the opportunity to testify on this matter.

DEPARTMENT OF THE PROSECUTING ATTORNEY
CITY AND COUNTY OF HONOLULU

ALII PLACE
1060 RICHARDS STREET • HONOLULU, HAWAII 96813
PHONE: (808) 547-7400 • FAX: (808) 547-7515

KEITH M. KANESHIRO
PROSECUTING ATTORNEY

CHRISTOPHER D.W. YOUNG
FIRST DEPUTY PROSECUTING ATTORNEY

THE HONORABLE GREGG TAKAYAMA, CHAIR
HOUSE COMMITTEE ON PUBLIC SAFETY
Twenty-Ninth State Legislature
Regular Session of 2017
State of Hawai`i

February 9, 2017

RE: H.B. 1501; RELATING TO DRUG PARAPHERNALIA.

Chair Takayama, Vice-Chair Lo Presti, and members of the House Committee on Public Safety, the Department of the Prosecuting Attorney of the City and County of Honolulu (Department) submits the following testimony in opposition to H.B. 1501.

The purpose of S.B. 1501 is to reduce the prison population and re-divert state funds to community-based programs by reducing the penalty of §329-43.5, H.R.S., Prohibited Acts Related to Drug Paraphernalia from a class C felony offense to a violation. This offense encompasses any item which would be used to plant, propagate, cultivate, grow, harvest, manufacture, compound, convert, produce, process, prepare, test, analyze, pack, repack, store, contain, conceal, inject, ingest, inhale, or otherwise introduce in to the human body a controlled substance. For at least the past three (3) years, our Department, has not come across an instance where we have charged §329-43.5, H.R.S. as the sole offense without a concurrent drug type offense. Most frequently §329-43.5, H.R.S will be charged concurrently with §712-1243, H.R.S., Promoting a Dangerous Drug in the Third Degree but not exclusively. For this reason, the implementation of this bill would have little or no positive effect on the prison population, and a reduction to a violation for §329-43.5, H.R.S offenses would be ineffective.

"Isn't it the definition of insanity – you try the same solution and expect a different result." This commentary published in the article on the Civil Beat website on November 5, 2015 attempts to imply that a sentence of incarceration creates or perpetuates the problem of substance abuse. However, this bill fails to take into account the fact that defendants charged with drug paraphernalia in conjunction with other drug type offenses have already been given numerous chances and opportunities to participate in and seek community-based help.

Although relapse is a common occurrence for drug offenders, defendants are routinely partnered with a probation officer who understands the intricacies of drug use and makes continuous attempts to steer defendants to programs that will help in their rehabilitation process. Courts also understand that relapse is part of the rehabilitation process, and thus, defendants are given many opportunities to seek the help that is required. Early on, a defendant will generally take advantage of first time drug offender provisions and plea deferrals. If that fails, a revocation of a defendant's deferral and a term of probation may be imposed. If a defendant consistently has difficulties complying with probation, courts will often turn to HOPE probation as a last ditch attempt to provide more oversight of the defendant's actions while on probation. It is only when all of these tools have been thoroughly exhausted that a court has no choice but to impose incarceration. Therefore, incarceration is not and has never been the go-to solution for low-level drug offenders but rather it is the last resort for repeat offenders who have not been accountable for their actions.

For these reasons, the Department of the Prosecuting Attorney opposes H.B. 1501. Thank you for this opportunity to testify.

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 10:29 PM
To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM
Attachments: VETERANS-WHO-USE-CANNABIS-FOR-PTSD.jpg

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Roger Martin	Grow for Vets	Support	No

Comments: The following are testimonies from various Veterans that are using cannabis openly for their PTSD. BARBARA TAYLOR – ARMY I entered the Army in 1991 to support my two children after going through a divorce. Although I had a degree in Accounting/Business Administration, I joined the Army specifically for medical training and was a 91 Delta – Certified Surgical Tech, 16th MASH. Although I was ready to go, I was never deployed. When I arrived at my new unit in Ft. Riley, KS, they had just returned from supporting an engineering mission in Bolivia. Our equipment had to go to the paint shop and didn't return in time to make it onto the planes, so we stayed behind. I was active duty from 1991-1994, and was on inactive duty from 1994-1999. Unfortunately, I had to get out early because I came down on orders for Germany, however, my son had just been born eight weeks premature and was in an NICU. He wouldn't have survived the flight, so I was honorably released on family hardship. I had used cannabis recreationally in college years before joining the military and smoked from time to time, but did not become a regular user again until I needed cannabis for medical reasons in 2009. I was involved in a major auto accident in 1998 while sitting at a stop light on my way home from work. I was working as a CST at a major hospital in Idaho then. My sons had a little league game, so I was on my way to pick them up from daycare when I was rear ended and pushed three feet forward into another car. The results of this accident have been five back surgeries, including a spinal fusion in my lower back. My son was actually the one who convinced me to try cannabis instead of the many pain pills that did not seem to work. I began using cannabis regularly in 2009. Due to my injuries, I have MRI's at least every three years. In 2009, while being on opiates and just starting cannabis, doctors continued to see degeneration. In 2012, while I used mainly cannabis and low amounts of opiates, they saw no further degeneration. Now in 2015, I only using marijuana and no opiates, doctors are seeing improvement for the first time in 17 years. I planned to open my own edibles company called Ohana Mama's Confections, but up until recently I lived in Eastern Oregon where they have implemented bans on in industrial growing, processing, testing and selling. I have since moved to Eugene where I can lend a helping hand to the cannabis community. Cannabis has changed quite literally saved my life and if I can get through to one person who is in a place I used to be in and help them, then it's all been worth it. TYLER D - VETERANS THAT USE CANNABIS FOR PTSD TYLER D. – MARINE CORPS I was in the U.S. Marine Corps for four years beginning in 2008 and then honorably discharging in 2012. Becoming a Marine seemed like an incredible challenge that offered experiences I couldn't find elsewhere. I was an Assaultman; my occupational expertise focused on high explosives, rocket launchers, and breaching obstacles. While in the Marines, I went on two tours, both to the Helmand Province in Afghanistan. I went to the Nawa

District in 2010 and the Garmsir District in 2011. Prior to the military, I was a recreational cannabis user. Now, I am heavily involved in the industry. I am a security operator tasked with the security of the product, personnel, and patrons of marijuana establishments. I just consider cannabis a superior alternative to alcohol. It allows me to unwind without heavy impairment, or being too hung-over to function the next day. I am fortunate enough to live in Colorado where it is extremely easy to obtain cannabis and I completely avoid the VA entirely. I wish those who opposed cannabis would do their research. It's helping millions of people with their ailments with little to no side effects. You can't overdose on it, nor is there the propensity towards violence like alcohol. Give it a try! ZACHARY - VETERANS THAT USE CANNABIS FOR PTSD ZACHARY T. – MARINE CORPS I joined the military because I needed to serve our country after the attacks on the World Trade Center. At the time, I was a sophomore in high school and the war was really heating up. I believed it was my responsibility to defend our nation to the best of my abilities to hopefully thwart any kind of attack on American soil again. I did two combat tours; one to the Kandahar province in Afghanistan and one to the Haditha Triad in Iraq. I was in a little city affectionately known as the Haq. While serving from June 2004 – June 2008, I was an infantryman 0311 (the military designation for my job). I had never used cannabis before joining the Marines. In fact, I did not use cannabis for a year or so after getting out. I use cannabis to help calm my PTSD and mood stabilization. Cannabis helps me withhold reactions in situations where anger tends to be the response. It also has been a blessing for injuries I have from being in a grenade explosion. I have nerve damage in my left foot and leg it helps significantly when the pain from the injuries gets aggravated. The biggest problem I have faced as a Vet is that cannabis is still frowned on by the VA and government. Getting a medical card could result in losing benefits. Right now, in our country, we have 22 Veteran suicides a day. If Vets were allowed to combat their PTSD with cannabis I believe this number would be different. Vets are fighters if you give them the tools and the means they always come out on top. TOM MORTON - VETERANS THAT USE CANNABIS FOR PTSD TOM MORTON – MARINE CORPS "All that is necessary for the triumph of evil is for good men to do nothing." -Edmund Burke That quote always resonated very heavily with me and played off of my lifelong urge to serve and protect my country. I enlisted in the U.S. Marine Corps in January 2009. I was an Infantry Squad Leader. It was my job to plan, lead, and debrief combat patrols in southern Afghanistan in order to locate Improvised Explosive Devices (IED's), pursue the Taliban, conduct marketplace security patrols, and aid local nationals with assessing and scheduling public works projects such as building bridges and schools. I went on two combat deployments to Afghanistan and a Jungle Warfare training deployment to Okinawa, Japan. All were seven months long, and I would have much rather gone back to Afghanistan than to Okinawa. Everything in the jungle wants to kill you, even the plants. At least in Afghanistan it's mostly only people that are deadly. I was honorably discharged in January 2014. Pre-Marine Corps, I used cannabis recreationally. Cannabis helps greatly with things like joint pain, sleep issues, and public anxiety (especially in crowds). All of which are major issues for a lot of Vets, especially those with combat experience. I currently work for a security company that works heavily in the cannabis industry, protecting employees and customers from potential robberies or any other threat that may walk through the door of a dispensary or grow house. As a security guard, unfortunately having cannabis in my system is too high of a liability in the event of something like a shooting occurring, so I can no longer partake in it. A message to those who oppose cannabis: Stop standing on outdated misconceptions of what a gateway drug it is or how harmful it could be. Instead, look at the factual data of overdose decreases and the decline of prescription drug abuse in the states that have legalized it. Also, simply look at the behavior of a drunken person versus someone under the influence of marijuana. The drunk person will be far more erratic, emotionally unpredictable and more prone to violence. A person who is high on marijuana will be far more likely to simply be spacey, giggly, and a bit lethargic. Aside from the massively greater negative physical side effects of alcohol, the behavioral effects are also clearly more detrimental. That's just alcohol, which is legal, but doesn't even come close to how harmful most street drugs like meth, crack, heroin or cocaine are. THOMAS A CASHMAN - VETERANS THAT USE CANNABIS FOR PTSD THOMAS A. CASHMAN –

ARMY/NATIONAL GAURD I enlisted twice, once in 1989 and again in 2004. When I enlisted the first time, in 1989, it was a combination of things. Both of my parents are Vets, and my older brother also served. I felt like everyone should do something to serve his or her country. I went back in in 2004, because of the Global War On Terror (GWOT). Not because of the war, precisely, but I felt like with my experience, age and outlook I could affect some positive outcomes in my fellow soldiers. I did four overseas combat tours: Desert Storm, Southern Watch and then two GWOT Tours. Both of those were in Iraq. Prior to Desert Storm I was stationed in Germany and my unit (1st Battalion, 7th Infantry, 3rd Infantry Division) got called up to go just after thanksgiving 1991, and by New Years were in Saudi Arabia. After returning to Germany, I was reassigned to 1st Cavalry Division at Ft Hood, Texas. Ironically, I arrived my new unit just in time to go to Kuwait in support of Operation Southern Watch where were tasked with providing interim security and helping to train the Kuwaiti Army. I chose not to re-enlist. My break in service years, 1993-2004, was tough. I drank a lot. I went through a lot of jobs, and I got a DUI in 1998 that snowballed into other legal troubles because of missed court dates, inability to pay fines, etc. In October of 2004, after a bit of a paperwork fight, I enlisted into the Oregon Army National Guard and volunteered to go to Baghdad as a 'replacement'. In 2008, I was when I was diagnosed with PTSD and got pulled off the deployment roster. I have a total of 17 years in the military. Ten of those years were spent as 'active duty', the rest as some form or other of 'reservist'. I was honorably discharged in December 2013 at the rank of Staff Sergeant (E-6). Sleep is probably the biggest way that cannabis helps me. It's really nice that if I only need a little help getting to sleep, I use just a little and I sleep. If I need a lot of help sleeping, I use some concentrate, or edibles and a higher dose. The best part of that is that it has never failed me. I've been known to be prone to thrill-seeking behavior that can be destructive, and cannabis certainly curtails that. I volunteer for Grow for Vets whenever I get the chance and I am a full time, 3rd year student at the Art Institute of Portland, where I study industrial design. Recently, my colleague and classmate Jeni Lee and I started www.cannabuzzmedia.com, which we hope to grow into a content manager and provider of consultancy for the cannabis industry. I live in Oregon where both medical and recreational cannabis are legal, so my biggest problem is paying for it. It's not that expensive, really. I spend more every month on coffee than I do on cannabis. For those that want to hold onto that canna-bigotry – eventually, hopefully, they will catch on and take notice of what a versatile and useful thing cannabis can be. AARON NEWSOM - VETERANS THAT USE CANNABIS FOR PTSD AARON NEWSOM – MARINE CORPS I enlisted in the military after 9/11 in 2002, and was in the U.S. Marine Corps until I was honorably discharged in 2008. I went on one deployment to Afghanistan in 2004-2005. I specialized in Expeditionary Aircraft Recovery and mostly I worked with attack helicopters on forward operating bases. I used cannabis recreationally before entering the military. When I was diagnosed with PTSD in 2006, along with stress, anxiety, and migraine headaches I began using marijuana for medical purposes. Cannabis helps calm my anxiety and stress. It allows me to focus and be more present. I also believe that cannabis helps me to be a more compassionate person, and a better husband and father. I am the Co-Founder and COO of the Santa Cruz Veterans Alliance. I am also a patient and advocate for Veterans and cannabis. We provide qualified California Military Veterans with top quality lab tested medical cannabis grown by fellow United States Military Veterans. We honor our veterans with our Veteran Compassion Program. Thankfully I haven't experienced problems accessing cannabis since I grow it and have safe access to it; however, that is more that I can say some! We live in the land of the free, that is why we love this country and why we choose to fight for this country and the freedoms it represents. We believe that we should have the rights to medicate with cannabis as a safer alternative to opiates, SSRI's and other pharmaceuticals that are handed out like candy by the VA. We want to convey to the community that we are good, responsible, and active members of society. CORY LARIVEE - VETERANS THAT USE CANNABIS FOR PTSD CORI LARIVEE – ARMY/NATIONAL GAURD I enlisted in 1999, when I was 17 years old. I wanted to go to college and knew it was the only way to pay for it. So my mom signed a waiver and away I went. I am currently still enlisted. I have gone to Iraq and Afghanistan on multiple deployments and have an been a Track Vehicle Mechanic, Recovery Vehicle Operator, Personal Security for VIP,

Combat Engineer, Operations Command and Control and Financial Management. I was a recreational user of cannabis before entering in the military and use cannabis for PTSD, sleep aid, chronic joint & body pain and anxiety. I currently am involved with Grow for Vets in Oregon. I think having the option to treat holistically and naturally should be afforded to everyone. I would rather treat with cannabis than with all the various narcotic pain killers or PTSD drugs they have treated me with in the past. I have inquired about cannabis with the VA on multiple occasions and have been told that they do not endorse it and will not talk about it as a viable treatment option. This came from both my primary care physician and my psychiatrist. I wish the naysayers would not pay attention to the negative stigma surrounding the medicine. They should try it on their own and then make an informed and enlightened decision. Allow those whose ailments it helps to use the medicine. It's natural and holistic. Pharmaceutical companies make millions a year off the VA and injured Veterans. Why not give a naturally occurring plant a shot for the love of god modern medicine stems from the scientific study of naturalistic medicines (healing that has been practiced for thousands of years) from all over the world. We've examined and synthesized Aloe Vera plants to treat sunburns. I still have an actual plant that sits in my windowsill. I personally prefer the natural medicine and like knowing and seeing the plant grow and produce its healing aloe and use it myself when I need it. This is just me though, in my time in the military I have done enough destroying and destruction, it's time for me to embrace and enjoy the life of it. JASON SWEATT - VETERANS THAT USE CANNABIS FOR PTSD JASON SWEATT – ARMY I enlisted in the military in 1996, because I looking for a new adventure and a way out of Alabama. I was a Staff Sergeant and did mostly Convoy Operations in Operation Iraqi Freedom (OIF 2) from '04-'05 in Baghdad, Iraq. When I was honorably discharged in 2006, I was living in Hawaii. I started using cannabis again for some combat related issues soon after being released. I obtained my Hawaii state medical marijuana card though there was nowhere to get it except off the black market. I moved to California in 2008, and it was like I won the lottery. I was a recreational pre-military I now use it for pain management and anxiety. I am heavily involved in the cannabis movement. I am the Director of Santa Cruz Veterans Alliance, a cannabis gardener and advocate. I was open with my primary care physician at the VA. I disclosed to them why I used cannabis and never had any repercussions in doing so. The same cannot be said for Veterans living in a state that does not recognize medical cannabis. A Veteran could lose their VA benefits if they disclose to their doctor that they use medical cannabis. That is precisely why we are trying to spread awareness through the Veteran community. There is a big suicide epidemic involving Veterans in our country and we feel that its directly caused by the prescription medicine (SSRIs, benzodiazepine, psychotropics, etc.) that the VA prescribes. They will not prescribe cannabis. I plead to the naysayers: Get educated before you make a decision about medical cannabis! KORI WARD - VETERANS THAT USE CANNABIS FOR PTSD KORI WARD – ARMY I enlisted in the Army in 2000, to get out of a small town and to get away from my mother's strict rules – oh, the irony, I went into something with even stricter rules and regulations. I medically retired after 14 years in September of 2015. I have been on two tours. I first went to Uzbekistan in November of 2002, and then before the Iraqi war began, we were moved to the border of Jordan and Iraq in February 2003. My second tour was to Qatar. When I first enlisted I was in Mortuary Affairs, which means I bagged and tagged soldiers. I had no problem dealing with the handling or care of our fallen Soldiers until about two years ago when I started to show signs of PTSD from my past military work experience. Before entering the Army, I probably smoked once or twice with some friends recreationally. It wasn't until the PTSD symptoms began that I turned to cannabis. I left the military due to PTSD, Anxiety, Major Depression Disorder and alcohol abuse. I recently moved to Colorado at the beginning of October, so that I could find a more natural way to control my disorders. Since I have lived in Colorado, I began smoking and noticed that I do not have to rely on my medication as much as I used too. My nightmares are less frequent and my anxiety has decreased as well. Now, I have my MMOC and am looking to begin working in the industry. The military pumps us full of medication. I take depression medication and it causes my anxiety to worsen, so I have take benzodiazepine on top of sleep medication at night. I'm still nervous to completely get off the depression pills; however, I have began to slowly ween myself off them. I

have yet to deal with the VA just yet, but I have heard horror stories from some fellow Vets. I have heard that once they mark your file as a cannabis user you can not get your regular medication from the VA since they are unsure of the reaction between pharmaceuticals and marijuana when taken together. People need to educate themselves about cannabis; I'm still trying to educate my mother who called me a "junkie weeder". People still don't see it as a medicine. If you do the research you will see that cannabis has helped people live a functioning life and they aren't "junkie weeders." ROGER B MARTIN - VETERANS THAT USE CANNABIS FOR PTSD ROGER B. MARTIN – ARMY My family has an extensive military history, so I enlisted in the United States Army in 1973, and was honorably discharged in 1976. I was never a cannabis user prior to being in the military. Now I use edibles at night to deal with chronic pain in order to be able to sleep. I am blessed to live in a state where cannabis is legal and that I am able to afford and obtain it. I have been very open with the VA about my involvement with cannabis. Two years ago, I launched Grow for Vets, and for the first few months that followed, every VA health care provider that I gave a business card to quickly handed it back to me. Over that past six months, every healthcare provider I have dealt with has accepted my card and most actually engaged me in conversation about cannabis and its use in treatment of medical conditions. Grow for Vets is an organization aiming to help reduce the staggering number of Veterans who die each day from suicide and prescription drug overdose. We provide Veterans with the knowledge and resources necessary to obtain or grow their own cannabis for treatment of their medical conditions. Here's a question for cannabis naysayers: Why are you okay with more than 50 Veterans a day dying from deadly prescription drugs when cannabis is a safe alternative? CORWIN B - VETERANS THAT USE CANNABIS FOR PTSD CORWIN B. – ARMY I come from a long line of military Veterans, both American and German. I enlisted after graduating from Oregon State University in 1998 and was honorably discharged in 2012. I felt it was my duty to volunteer and serve my country. I started my career in the Infantry, then volunteered for Special Operations soon after. Lastly, I was placed behind a desk; as I chose a field in computers. I had never even considered cannabis before or after the military. My wife introduced me to her friend's family, who are growers, and I began educating myself on cannabis before partaking. Once I decided to try cannabis, I didn't look back. It has changed my life for the better. Prior to consuming my first medible, I had sleep issues that dated back well over a decade. I had a bad parachute accident while in Special Operations, which damaged my lower back, and have had poor sleep since then – add in other injuries, sleep deprivation, etc., it takes a toll on your body. Cannabis Oil was the most effective for me personally, but now I eat cannabis paste or as I call it, cannabis caviar. I can accurately measure my dosage, and it is in my system fast, effectively, and lasts up to 12 hours. I do not smoke cannabis because you only receive 1% of the medicine. I cannot imagine my life without cannabis. Hence, why I share my experiences openly with other Veterans who suffer with day-to-day pain. I initially got involved with Grow for Vets because I have a friend who is slowly dying in Denver. Once I started conversing with Roger Martin, Founder and Executive Director of Grow for Vets, I decided that Oregon Veterans needed that form of help as an option. Being involved in Grow for Vets gives me the opportunity to help other Veterans. Our Grow for Vets events allow Veterans to come in, receive a gift bag with a mix of edible cannabis products, giving them an alternative to the toxic cocktails of prescription drugs. Hearing their stories, how cannabis has helped them, is my inspiration to continue down this path as the Grow for Vets Oregon Chapter President. I am very fortunate. My grower friends are very knowledgeable about cannabis. They steered me in the right direction to obtain my medical card. My challenge now is continuing education about the positive effects of cannabis, how to obtain a medical card, or simply how to grow their own medicine. Those of us, who have the knowledge and access to this information about cannabis, have an obligation to ensure others have the same knowledge and access. My mother was a nurse for years, so growing up she always warned me about "marijuana." Once I became more educated about cannabis and was using the medicine, it was time to persuade my mother to learn more about it. Sanjay Gupta's "Why I changed my mind on Weed," "Weed 2" and "Weed 3" series specials on CNN were helpful in enlightening her. I know it will take time to fight the stigma surrounding cannabis; there is 75 plus years of anti-

cannabis propaganda brainwashing the world. The war on drugs was an utter failure on all levels. The $17 trillion dollars spent fighting the war on drugs, quite literally could have paid off our national debt! TANGY - VETERANS THAT USE CANNABIS FOR PTSD TANGY – MARINE CORPS I enlisted in the military in 2003, because I was honestly just trying to pay for school. I was a cheerleader who had no idea what life in the military was like, but when I got accepted to all these schools my dad told me to at least think about it. Since he's a Air Force Veteran, and because I'm the ultimate daddy's girl I said "ok". I was fortunate enough to survive two tours in Iraq during my enlistment. I was stationed in Tal Afar, and I did convoys to Fallujah, Blue Diamond, and Ramadi back in 2005. I was honorably discharged in 2007. In the military my official title was Warehouse Clerk, which is basically Logistics in the regular world. I was in charge of tracking, shipping, and receiving all military supplies to and from Iraq and Afghanistan. Getting the right gear to the right unit can literally be the difference between life and death for some of those service members. While in Iraq, I dispersed gear throughout country and because I was Hazardous Material certified those shipments require special labeling, so that became my responsibility too. I have shipped and controlled not only millions of dollars worth of assets, but I also worked for base Air Traffic Control so that definitely included military personnel as well. Prior to the military, I was NOT a cannabis consumer and was actually scared of it because I listened to D.A.R.E, so I thought it was a drug like Heroin. When I tried it at 16 I choked really bad, so I didn't try it again until I was about 23. I was actually that person that would make my friends go in another room away from me if they wanted to smoke. Post-military, I use cannabis for insomnia because at one point my nightmares used to make me afraid to fall asleep. I also use it to treat my PTSD, chronic neck and back pain and anxiety. Honestly, I also just enjoy life more after using it as for as conversation, laughter, sex, food, music, etc. is concerned. I am 100% involved in the industry first and foremost as a patient, but most importantly I'm the CEO/Founder of the cannabis brand Jayn Grene. I'm also a cannabis activist, model, and vlogger. I do daily Periscopes as the "Cannabis Industry Insider", and I travel as a cannabis speaker all over the country. The problems I have faced while trying to obtain cannabis as a Vet are trying to find consistent quality medicine and finding ways to financially obtain it. Cannabis can be an expensive addition to an already tight budget, but this is my medicine and it truly helps me so I have to find a way to make sure I continually have it. I am very honest with my VA caretakers about my cannabis use, and it helps that I'm protected as a medical patient under Prop 215. I tell them that the medication that they prescribe is too strong and that I prefer the happiness from cannabis as opposed to the zombie-like comatose behavior on heavy narcotics. I still use the prescribed medicine on really dark days, but for the most part my relief comes from cannabis. I would challenge cannabis naysayers to honestly do their own research on the cannabis plant to learn the truth themselves. I recognize that we have been fed years and years of lies, so we won't wake people up over night, but I would tell them to solely focus on truth and facts. I would ask them if consuming cannabis saved the life of ONE of the 22 veterans that committed suicide a day is it not worth the effort to give it a chance? It helps me sleep at night knowing without a shadow of doubt that I'm on the right side, so I think they are going to come around in the next few years anyway. MR MARY JANE - USING CANNABIS FOR PTSD MR. MARY JANE – PRIVATE MILITARY CONTRACTOR I am not a Veteran, I was a Private Military Contractor for 14 years, but I do experience the same symptoms as Vets when ending our careers. We are hired by government agencies like the CIA or Department of Defense to perform a broad range of duties including patrol, personal protection detail (PPD) of VIPs, corporate security and escort operations. We are often hired by the government to supplement and/or train the military personnel overseas. I have spent time in Iraq, Afghanistan, Pakistan, Libya, Syria and Israel. I was recruited by a family member who had retired from a government agency and started a private military company. I attended boot camp style training, much like military training and was given my first assignment overseas. It was an honor to serve alongside the brave men and women of the U.S. military. As a private contractor, I had much more flexibility than my friends who were enlisted. I had the ability to choose my assignments and my team. My assignments could be as short as 90 days while most soldiers are deployed for 6-12 months. Unfortunately, there is a common misconception about Private Contractors being a bunch of

cowboys who do not have to adhere to any rules of engagement. The fact is, that we are highly trained and have to be accountable for our actions. The guidelines are clear, we are only authorized to use force if attacked. I use cannabis to help ease symptoms of PTSD, anxiety and insomnia. Prior to my career as a Private Contractor, I was a recreational user of cannabis in high school and college, but I was required to abstain from cannabis use due to regular drug testing. Now, I am a patient and co-founder of Miss Mary Jane's Edibles in Southern California. Medicinal cannabis saved my life and has enabled me to have a normal life. Cannabis is widely accepted among former Private Contractors like myself. I talk to many of my former colleagues that use cannabis to treat the issues that many of us bring home after working overseas. For anyone who is vehemently opposed to cannabis, I would ask them to look at cannabis as a medicine rather than a "drug". Prescription drug abuse has reached epidemic proportions in our country and cannabis is helping to combat that problem.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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Committee:	Committee on Public Safety
Hearing Date/Time:	Thursday, February 9 2017, 10:00a.m.
Place:	Conference Room 312
Re:	*Testimony of the ACLU of Hawaii in **Support** H.B. 1501, Relating to Drug Paraphernalia*

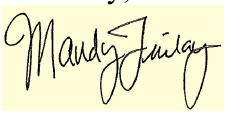
Dear Chair Takayama, Vice Chair LoPresti, and Members of the Committee on Public Safety:

The American Civil Liberties Union of Hawaii ("ACLU of Hawaii") writes in support of H.B. 1501, which would change drug paraphernalia possession and delivery offenses from felonies to civil violations.

Decriminalization of drug paraphernalia possession and delivery is a safe and smart alternative approach to address the use of drugs in Hawaii. Hawaii's drug laws, especially Hawaii's marijuana laws, have damaged civil liberties in many ways – eroding protections against searches and seizures, putting large numbers of nonviolent individuals behind bars, and targeting people of color. Eliminating criminal penalties for low-level drug-related offenses will prevent nonviolent individuals from becoming entangled needlessly in the criminal justice system, eliminate many collateral consequences that flow from drug paraphernalia arrests and allow Hawaii to reinvest the money it saves for important community needs.

Thank you for the opportunity to testify.

Sincerely,



Mandy Finlay
Advocacy Coordinator
ACLU of Hawaii

The mission of the ACLU of Hawaii is to protect the fundamental freedoms enshrined in the U.S. and State Constitutions. The ACLU of Hawaii fulfills this through legislative, litigation, and public education programs statewide. The ACLU of Hawaii is a non-partisan and private non-profit organization that provides its services at no cost to the public and does not accept government funds. The ACLU of Hawaii has been serving Hawaii for 50 years.

American Civil Liberties Union of Hawai'i
P.O. Box 3410
Honolulu, Hawai'i 96801
T: 808.522-5900
F: 808.522-5909
E: office@acluhawaii.org
www.acluhawaii.org

COMMUNITY ALLIANCE ON PRISONS

P.O. Box 37158, Honolulu, HI 96837-0158

Phone/E-Mail: (808) 927-1214 / kat.caphi@gmail.com

COMMITTEE ON PUBLIC SAFETY
Rep. Gregg Takayama, Chair
Rep. Matt LoPresti, Vice Chair
Thursday, February 2, 2017
11:00 am
Room 312

HB 1501 SUPPORT – CIVIL VIOLATION FOR DRUG PARAPHERNALIA

Aloha Chair Takayama, Vice Chair LoPresti and Members of the Committee!

My name is Kat Brady and I am the Coordinator of Community Alliance on Prisons, a community initiative promoting smart justice policies in Hawai`i for two decades. This testimony is respectfully offered on behalf of the approximately 6,000 Hawai`i individuals living behind bars or under the "care and custody" of the Department of Public Safety on any given day. We are always mindful that approximately 1,400 of Hawai`i's imprisoned people are serving their sentences abroad thousands of miles away from their loved ones, their homes and, for the disproportionate number of incarcerated Native Hawaiians, far from their ancestral lands.

Community Alliance on Prisons supports HB 1501 that changes drug paraphernalia possession and delivery offenses from felonies to civil violations.

This is common sense legislation. I have attended national conferences with judges and prosecutors and I always make it my business to ask them how they charge drug offenses in their jurisdiction. I illustrate my question with a story of a person who had 2 arrests for drugs that resulted in 15 convictions – all non-violent (residue in a pipe, residue in a baggie, rolling papers, a small amount of cannabis, etc.). Even prosecutors from the most conservative states have told me that in their jurisdictions these offenses would count as one because they are all related to drugs. Not so in Honolulu. This is why our facilities are bursting at the seams.

The research we have done recommends that decriminalization of offenses such as drug paraphernalia is a better approach to substance mis-use in our community.

The prevailing wisdom has shown that prison beds should be reserved for those we are afraid of, not those we are mad at. We need to be more prudent with our precious resources and we need to stop feeding the very hungry and unsustainable criminal processing system.

Mahalo for this opportunity to testify.

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 3:20 AM
To: pbstestimony
Cc: blawaiianlvr@icloud.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/6/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
De MONT R. D. CONNER	Ho'omana Pono, LLC.	Support	Yes

Comments: We FULLY SUPPORT this bill. It's about time that Hawaii seeks ways to lessen our self-created over crowding in our prisons. This bill will help.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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ON THE FOLLOWING MEASURE:
HB1501, RELATING TO DRUG PARAPHERNALIA

BEFORE THE: HOUSE COMMITTEE ON PUBLIC SAFETY

DATE: Thursday, February 9, 2017 TIME: 10:00 A.M.

LOCATION: State Capitol, Conference Room 312

TESTIFIER: Christopher Garth, Executive Director

Honorable Chair Takayama and Members of the Committee:

The Hawai'i Dispensary Alliance submits the following testimony in STRONG **SUPPORT of HB1501 RELATING TO MEDICAL MARIJUANA**, which changes drug paraphernalia possession and delivery offenses from felonies to civil violations.

The Hawaii Dispensary Alliance is a patient centric organization that aims to appropriately introduce a legitimate cannabis industry to the state of Hawaii. Our membership is drawn from patients and caregivers, ancillary businesses related to and involved in the physical and intellectual cannabis space, and those who generally support the value of a legal right to cannabis-based medicine. The Alliance has established itself as a consistent voice in the conversation for greater patient access to safe and quality cannabis resources; it is from this perspective that we provide STRONG **SUPPORT** for **HB1501**.

The amendments proposed in HB1501 again make important strides towards the normalization of the use of cannabis as a scientifically recognized, legally sanctioned, safely administered form of medicine that is garnering greater social acceptance and participation in Hawaii. The legislative approach of recognizing cannabis as medicine has introduced qualified patients and primary caregivers to an effective alternative solution for their debilitating conditions. The next step in advancing these practices is to repeal certain felony charges that are applied to circumstances surrounding this medicine and to convert the penalties to appropriate civil violations.

By simply reducing the punishment for activities related to the possession and use of medical cannabis, HB1501 aligns the industry with the regulations of similar industries such as alcohol and tobacco. This will help to normalize medical cannabis as the medicine that it is, instead of the boogeyman. The stigma of medical cannabis is largely rooted in the criminality that is continually associated with the qualifying patients, primary caregivers, and their suppliers. Any efforts to legislatively erode the criminality of this medicine, such as those suggested in HB1501, will directly contribute to the growth of the industry and the health of patients across the state as more people become willing to at least consider medical cannabis for their qualifying ailments.

For the foregoing reasons, the Hawai'i Dispensary Alliance strongly **SUPPORTS HB1501**. Thank you very much for the opportunity to provide testimony on this measure.

the Drug Policy Forum of hawai'i

Dedicated to safe, responsible, humane and effective drug policies since 1993

TO: House Committee on Public Safety
FROM: Carl Bergquist, Executive Director
HEARING DATE: 9 February 2017, 10AM
RE: HB1501, Relating to Drug Paraphernalia, **STRONG SUPPORT**

Dear Chair Takayama, Vice Chair LoPresti, Committee Members:

The Drug Policy Forum of Hawai'i (DPFHI) **strongly supports** this measure to help turn the tide of the War on Drugs' criminalization and incarceration regime. Across the country and at the federal level, we are seeing the beginnings of a humane drug policy that does not lock up non-violent offenders for years on end. Hawaii's drug laws in general, and its drug paraphernalia laws, in particular, are harsh, punitive and costly. Reducing the sentences for use or possession of drug paraphernalia from a class C felony to a civil violation would help hundreds of people, save the state millions of dollars and showcase Hawaii's sense of fair justice for the nation.

As the Office of Hawaiian Affairs (OHA) has demonstrated, native Hawaiians are the community of color, like other minority groups on the mainland, who are most disparately impacted by these laws. Yet, their drug use is not drastically different than that of other groups. The effects of incarceration on families and the community are well-documented, and as a society, we need to ask if the use of a pipe or possession of a spoon justifies a multi-year sentence with such consequences. We submit that it does not. As then President Obama said in 2016 upon ordering the release of hundreds of non-violent drug offenders, "their punishments did not fit the crime".

Another disparately impacted community are immigrants, who face the double jeopardy of dealing with both the broken immigration system and the anachronistic War on Drugs. Recently the Supreme Court ruled in Mellouli v. Lynch (2015) that an immigrant was wrongly deported for a Kansas drug paraphernalia offense involving prescription pills stored in a sock. Unfortunately, it was too late for this immigrant, and the federal government continues to be able to ignore the spirit of this type of ruling due to the existence and enforcement of drug laws like Hawaii's paraphernalia law. Children are just as traumatized by the deportation as by the incarceration of a parent. Changing this law can also keep those families together.

Mahalo for the opportunity to testify.

P.O. Box 83, Honolulu, HI 96810-0083 Phone: 808-853-3231 Email: info@dpfhi.org
Website: www.dpfhi.org

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 10:12 PM
To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM
Attachments: war_on_drugs_kiling_our_children_4.jpg

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dahlia Barnhart	CannaMoms	Support	No

Comments: The following is a success story of cannabis and a toddler with a rare form of brain cancer. Dahlia Barnhart is only three, but has seen more hospital visits than most adults. She was diagnosed with a rare and aggressive form of brain cancer last year, and her mother, Moriah, has moved the family of two from Florida to Colorado to allow Dahlia to receive CBD treatments for the disease. An accumulation of symptoms that didn't add up alerted a mother's instincts that something was wrong with Dahlia. She never slept more than 2-3 hours her entire life, doctors tried to diagnose her with ADHD, she was unstable which they attributed to growth spurts, she had headaches and tremors (extremely abnormal for a baby), and was vomiting for a day and a half before she took her in to the ER. It was there she told the hospital she thought Dahlia had a seizure, knowing that she would get a CAT scan immediately, and sure enough the scan showed a huge mass in her brain. The War on Drugs is Killing our Children Upon the initial CAT scan, the pressure was such that it was enough to cause permanent brain damage, so an external drain was done at the time of the biopsy. Because of the size of the tumor a partial tumor resection was performed immediately to release the pressure in Dahlia's brain. Diagnosed by six different hospitals, in June 2013 they went to St. Jude's Hospital in Memphis, Tenn., which had given the most aggressive diagnosis. There were obvious developmental delays from the surgery itself. Dahlia was prescribed drugs to treat the side effects of other drugs. "When you see your child being prescribed these very dangerous and deadly medications, you become very desensitized to the initial stigmas associated with any medication. And you get to a point where you're reaching out for anything that's safe and effective." In this most heart breaking story, our hero ends up being the vigilante hemp plant in which "CBD" (Cannabidiol) is found. There are at least 85 known cannabinoids in the cannabis plant, CBD being the second major constituent next to THC (tetrahydrocannabinol); however CBD is non-psychoactive and is shown to have a wider array of medical applications than THC. Containing less than 1 percent THC, the CBD oil made by HempMeds Px being used to treat Dahlia, can legally be shipped across state and international borders. "Morphine comes from the opium plant, it's a dangerous and deadly medication. Tons of medications in our society are made from plants that are toxic plant extracts. I've always believed, and as the Bible says, plants are made to nourish and heal." Moriah conducted hundreds to thousands of hours worth of research on her own, going as far as contacting scientists and researchers on the government payroll. She discovered trustworthy information from many extremely educated sources before she really decided that this was something that would ease Dahlia's quality of life but also something that could give her [her] life back. She herself does not use cannabis, she says she's the one in a million that adversely gets affected by it in a negative way that is anxious and

not enjoyable for her at all. When asked if she uses marijuana, she says, “I also don’t use her morphine, her chemotherapy, or any other drugs that she needs.” Moriah says, “The saying, ’The weight of the world is on your shoulders,’ is brought to an entire new level. The idea that the life of your children is in your hands, is more real to me now than I think it could be in any other time of your life. My baby’s life is my only priority today.” Moriah recently relocated from her hometown in Tampa, Florida to Colorado Springs, Color., for safe access and consequence-free options for Dahlia’s treatment. “It seems criminal that we have no rights in the care of our children.” Family and friends have been extremely supportive of her move and her decision to use CBD oil as treatment for Dahlia. There isn’t a person who cares about her who doesn’t want her quality of life to improve. When asked what Dahlia’s doctors say regarding the use of CBD oil, she says they all say “It’s federally illegal. No surgeon or doctor with any government hospital affiliation is going to discuss the issue.” She reached out to HempMeds Px when she found out that CBD had been patented by the United States government as a neuro-protectant. Chemotherapy poses the risk of brain damage, but Moriah was most worried about radiation, which causes severe brain damage. “Knowing that CBD is non-psychoactive I knew there was a way I could get my hands on it. It’s shown to repair brain damage, and help with neuropathy.” Dahlia’s CBD oil intake consists of a gram a day split up between 2-3 doses. The very first day she took CBD oil she slept through the night for the first time in her life. She woke up the next day hungry and rested. It was like the medicine she was so desperate to get her hands on was working like a miracle drug overnight. “I noticed she was thirsty, which along with nutrition is so important for getting through the chemotherapy. I was convinced it was something she needed. It seems she transformed into a normal 3–year old overnight. Eating, drinking, playing, and sleeping.” She’s no longer on morphine, but still on chemotherapy. Moriah has chosen to use the CBD oil as a supplement to Dahlia’s mandated medications, rather than relying on it as a miracle cure. Moriah petitioned the Obama Administration early on to make access available to the medicine, shocked to find she had very little options. During the government shutdown it was taken down twice. If Florida’s Supreme Court puts a medical marijuana measure on the ballot it will be voted on by the people later this year, November 2014. “It’s a plant that grows out of the ground, and it’s safer than most other drugs. Its benefits have been known for thousands of years, and I thank God every day for the opportunity for my daughter to have quality of life,” she says. It’s a supplement that she potentially plans to give Dahlia for the rest of her life, only time will tell. In five years she hopes that the Federal prohibition on cannabis gets lifted. “The war on drugs is seen for what it is, which is: it’s killing our children. Absolutely trust your gut and instinct, and what you know is right for your child. Politicians are not physicians. We have a right to provide happiness and health to our children. Any parent than can understand that to watch your child get sick, and then watch them continuously suffer every day, understands that there are no words for that.” Moriah feels betrayed by her own government, telling her what she can and cannot do. Even if she didn’t need the medicine or chose to utilize those resources, it is very important to have the options. “I didn’t fully understand this plant prior to being forced to turn to it with no other options.” “Please don’t judge until you’ve done your own research. Look hard into the other medications to the elderly or sick; it’s much safer and more effective than any other medication we have out there today. Anyone that believes FDA approved medications, or psychotropic psychiatric medication that causes 7-year-old to hang themselves is beneficial, should be open to the scientific facts that CBD oil helps repair brain damage.” So in this battle,we salute Cheryl Shuman, HempMeds Px, and the State of Colorado with the support and access made available to Dahlia to improve her life. To donate or find out more how you can help go to: ww.DahliaStrong.org to donate www.youcaring.com/other/dahlia-s-life-fund-/117047 www.facebook.com/dahliaslaw/ www.fundrazr.com/campaigns/4VRu9 This article originally ran in Edibles List Magazine.

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February 7, 2017

Public Health & Safety Committee
Hawaii State Capitol
415 South Beretania St.
Honolulu, HI 96813

Re: HB 1501 - Changes to the Hawaii Dispensary Laws

Dear Committee,

I'm writing on behalf of the company that I co-founded, Medically Correct LLC., DBA ("incredibles"). Formed in 2010, Medically Correct LLC. is Colorado's highest-volume and most trusted infused edibles company. A hometown favorite since its founding because of its promise to deliver consumer safety and food production best-practices to every element of its operation. The result is truly consistent products, reliably dosed and child-resistant packaging.

The company provides a necessary and critical link between dispensaries, their patients and customers, and has gained national attention for forward-thinking in the industry. Founded by Bob Eschino and Rick Scarpello, incredibles was created with the intension to bring safety and accountability to the cannabis industry. With a full line of proprietary infused THC and cannabinoid-rich products, incredibles brand is among the most recognized Brands in the industry. incredibles product line, which includes a wide variety of chocolate bars, gum-e bites, and e-pens for both medical and adult-use customers and are carried by more than 760 Colorado dispensaries.

The founders of incredibles are dedicated to seeking responsible industry growth and are actively involved in education, legislation, safety groups and advocacy. Members of incredibles' leadership team proudly serve on many reputable industry boards and understand the importance of producing the highest quality products possible. As a result of the rigorous testing process that our products undergo through certified labs, incredibles infused products, including edibles and extracts exceed state regulations and are of unmatched quality and consistency. Furthermore, educational information is included on our website, in marketing collateral, and product catalogues.

This commitment to high quality handcrafted products is why incredibles is among the most trusted brands in the industry…

Our Manufacturing Quality Promise

- incredibles independently lab tests each batch of concentrates adhering to strict safety and quality standards.
- Developing best-practices focused on raising the standards around consumer protection, consumer health and rule-of-law.

Proprietary processes ensure accurate dosing.

- Every edible consists of precisely measured e-portions ensuring dose accuracy and effectiveness.
- Potent, whole-plant extracts with native terpene profiles insure patients receive the precisely-dosed product they need to ensure relief.

Our Product Quality Promise

- CR resistant package comes standard with all incredibles products.
- Class 1, Division 1 fire-resistant rooms are used for all hydrocarbon extracts.
- All products are gluten free and made with all organic ingredients.
- Our proven decarboxylation method is used to fully activate the cannabinoids in every product.
- incredibles oversees the entire production process from start to finish assuring consistency and uniformity in edibles manufacturing.

For more information please visit our website, iloveincredibles.com
Follow up questions? Contact Lily@MedicallyCorrect.com (516) 672 9849

The company is in the process of expanding into California, Washington, Arizona, Nevada, and Oregon. incredibles is building momentum to expand nationally, providing new jobs and economic benefits across multiple states along with millions of dollars of new tax revenue.

Our team has over 30 years of experience in baking, packaging, R&D, extraction methods, operations, and business development. We hope you are encouraged the national cannabis industry to lead by example and to invest in consumer safety and quality in every aspect of their business. Specifically, in public education about edible safety best- practices. Remember, 'start low and go slow', for beginning, the recommended first dose is 5mgs of THC. Please wait at least 2 hours for the product to take effect.

Thank you for your time and consideration,

Bob Eschino
Co-founder of incedibles
www.iLoveincredibles.com

Bob Eschino, incredibles co-founder
1150 West Custer Place
Denver, Colorado 80223

February 7, 2017

Public Health & Safety Committee
Hawaii State Capitol
415 South Beretania St.
Honolulu, HI 96813

Re: HB 1501 - Changes to the Hawaii Dispensary Laws

Dear Councilmen and women,

I am writing you to let you know that cannabis has not only helped save the life and vision of my own daughter who was diagnosed with a brain tumor at 8 1/2 months old, but has also helped to save the lives of many of our patients that we've treated over the last couple of years. With over 700 patients served, and thousands consulted, the miracles we continue to see on a daily basis using our CannaKids cannabis oils is staggering! Slated to begin taking patients inside one of the biggest hospitals in Los Angeles this coming year, we plan to study hundreds of children in clinical trials using cannabis oil for a variety of pain disorders, and as an adjunct to chemotherapy. Doctors, nurses, and scientist from all over the world are getting in line to study the incredible benefits of this plant.

As a cancer mom and advocate for people all over the world, I implore you to open your minds and hearts, and realize this isn't just a stoner drug. This is a true medicine that can help save millions of lives around the world. People depend on this medicine to survive, to help ease their pain, to bring them back their non-existing appetite, and in many cases to save their lives! It saddens those of us in the community to see patients be starved of this medicine. Just for one moment pretend that it is your child that's sick. Your husband or wife, father or mother. If you knew this plant could help them, would you change your mind then?

Don't be afraid of cannabis. It has never killed anyone in the history of the world, and is less addictive than caffeine and sugar. It won't make people go insane, or cause the homeless population to increase. In fact, many hardcore addicts use cannabis to help them get off of drugs. Please, do your research and allow cannabis for those who so desperately need it.

Tracy Ryan
CEO
CannaKids
www.CannaKids.com
www.SavingSophie.org

|c| 310.974.2125
|o| 323.654.6270
|f| 888.310.2650

CannaKids
Advocating the Use of Cannabis for Pediatric Illness

February 7, 2017

Public Health & Safety Committee
Hawaii State Capitol
415 South Beretania St.
Honolulu, HI 96813

Re: HB 1501 - Changes to the Hawaii Dispensary Laws

Dear Committee,

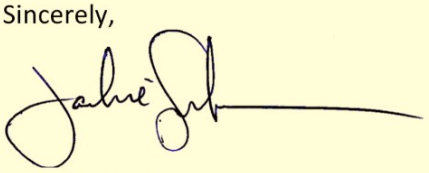
It has come to my attention that you are conducting a meeting regarding the possibility of opening up medical marijuana dispensaries and other cannabis businesses in your community. Unfortunately, I am unable to attend the meeting, but wanted to share a few of my thoughts here.

I have always understood a city's hesitation when it comes to opening up licenses and permits for cannabis businesses in their community. I feel that it's important for the city council to do their due diligence so they have the best possible understanding on what, if any, the implications might be. Having been in the cannabis industry for quite a while now, I have come to learn that there is a clear difference between good businesses owners and bad business owners, and that none of it has anything to do with being a cannabis business owner.

Well-run cannabis businesses can be extremely positive and empowering to the community. There are plenty of upstanding citizens who are drawn to this industry and, if given the opportunity, will create jobs, give aid to patients and pay their fare share of taxes. I have personally visited countless dispensaries around the Greater Los Angeles area and have found a great deal of them to be fantastic business owners who both create giving back programs like cleaning up the beaches, donating to soldiers and vets and working with troubled teens to helping keep the streets safe by providing heightened security.

Every city needs to collect taxes and cannabis businesses are more than prepared to pay their fare share, however it is imperative they not be over-taxed. If cannabis businesses receive the same treatment, city benefits and community opportunites that every other non-cannabis business receives, cities will quickly discover that they will be a welcome part of the community. As long as cities take the time to learn and understand, it is absolutely possible and probable to open up to safe, well-regulated and tax-paying medical marijuana businesses in your community.

Sincerely,



Jackie Subeck
CEO, Hey Jackpot LLC
Vice Chair, Women Grow Los Angeles
Founder, Cannabis Business Trade Association

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 3:27 PM
To: pbstestimony
Cc: naacphawaii@gmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Honolulu Hawaii NAACP	NAACP	Support	No

Comments:

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Community Health Outreach Work

677 Ala Moana Blvd., Suite 226
Honolulu, HI 96813
Phone (808) 853-3292 • Fax (808) 853-3274

TESTIMONY IN SUPPORT OF HB 1501: RELATING TO DRUG PARAPHERNALIA

TO: Representative Gregg Takayama, Chair, Representative Matthew S. LoPresti, Vice Chair; and members of the Committee on Public Safety

FROM: Heather Lusk, Executive Director, CHOW Project

Hearing: Thursday, February 9, 2017 at 10:00 AM in Room 312

Dear Chair Takayama, Vice Chair LoPresti, and members of the committee:

Thank you for the opportunity to provide testimony **in strong support** of HB 1501, changing drug paraphernalia possession and delivery offenses from felonies to civil violations.

74% of all people in Hawaii's correctional system are Class C felons, misdemeanants, petty misdemeanants, technical parole and probation violators. As outlined in the bill, the State of Hawaii is estimated to have spent over $20 million to incarcerate 167 low level, non-violent drug offenders. Removing the felony charge for drug paraphernalia offenses and not imprisoning people for non-serious offenses could save the State millions of dollars. The money saved could then be redirected to rehabilitation programs and community programs focused on addressing public health and social challenges that many of our people face. Furthermore, research has shown that criminal records are a huge barrier to employment and upward mobility. Reducing this class C felony to a civil violation will address this barrier and prevent further harm towards people affected by drug use.

The Community Health Outreach Work (CHOW) Project is dedicated to serving individuals, families and communities adversely affected by drug use, especially people who inject drugs, through a participant-centered harm reduction approach. CHOW works to reduce drug-related harms such as but not limited to HIV, hepatitis B/C and overdose. CHOW supports the optimal health and well-being of people affected by drug use throughout the State of Hawaii. CHOW has operated the statewide syringe exchange program for the past twenty years. CHOW supports the harm reduction model to addressing drug use and further supports the decriminalization of drug paraphernalia offenses.

Thank you for taking the time to read my testimony and please support HB 1501.

Sincerely,

Heather Lusk
Executive Director
CHOW Project

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 11:31 AM
To: pbstestimony
Cc: NuWayveUnl@gmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
James Terrell Trice	NuWayve Unlimited	Support	No

Comments:

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African American Lawyers Association
1188 Bishop St. #1908
Honolulu, HI 96813

February 8, 2017

Committee on Public Safety
Representative Greg Takayama, Chair
Representative Matt LoPresti, Vice Chair

Hearing: HB1501
February 9, 2017 at 10:00 AM
Public Safety Committee, Room 312

RE: African American Lawyers Association In Support of HB1501

Dear Public Safety Chair Takayama and Vic Chair LoPresti and Committee Members:

The African American Lawyers Association strongly supports of HB1501. HB1501 changes drug paraphernalia possession from a felony to civil violation. This bill decriminalizes possession of items which may be considered drug paraphernalia and will assist in alleviating the over crowded prison system in Hawaii. Items such as pipes, smoking papers and scales should not be considered a felony especially given that there are legal medical marijuana users who use these items and people who are not drug users may use the same items such as smoking a pipe of tobacco. Please pass this Bill.

By Daphne E. Barbee Wooten
President
African American Lawyers Association

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 4, 2017 5:40 PM
To: pbstestimony
Cc: kalawaiag@hotmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/4/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Kalawai'a Goo	Individual	Support	No

Comments: I support this bill's intent. I am a social work inter who has been following the broad social impact of cannabis. There is a long history of monumental failure on prohibitions regulating human nature. Regarding the war on drugs, cannabis is in a unique category. It is the only illicit substance known to have positive social and medical benefits. I support this bill's in its intent, but I also support further intent to put the failed war on drugs to rest so that resources can be freed up and directed towards more worthy and harmonious programs. Thank you for your time.

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 5, 2017 4:33 PM
To: pbstestimony
Cc: maukalani78@hotmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/5/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
E. Ileina Funakoshi	Individual	Support	No

Comments:

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 5, 2017 5:46 PM
To: pbstestimony
Cc: drjoeka@gmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/5/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
joe kassel	Individual	Support	No

Comments: Dear Representatives: Thank you for sponsoring and considering this rational legislation. As a healthcare provider caring for people with chemical dependency problems for 30 years, I welcome this bill. Societies that have reduced or eliminated criminal penalties for chemical dependency while improving and mandating access to quality comprehensive health care and treatment have seen improved outcomes for the affected population and society at large. we have a long way to go to improve our approach to this problem, but this is one step, I hope that you pass this bill. Thank you, Dr, Joseph Kassel N.D. L.Ac.

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 5, 2017 11:53 PM
To: pbstestimony
Cc: j.bobich@tcu.edu
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/5/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph A. Bobich	Individual	Support	No

Comments:

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 5:24 PM
To: pbstestimony
Cc: naturadoc@gmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/6/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Bonnie Marsh	Individual	Support	No

Comments: Please legalize and decriminalize drug paraphernalia in Hawaii for adults. Mahalo

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From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 5:59 PM
To: pbstestimony
Cc: mark.gordon333@gmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/6/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Gordon	Individual	Support	No

Comments: ALOHA I SUPPORT HB1501 which would decriminalize Marijuana and make possession of small amounts of marijuana punishable by civil fines and community service. Having violation of this currently as a Class C Felony is Absurd and detrimental to the individual. The archaic War on Drugs which includes criminalization of offenders as most will agree has been a failure on limiting and stopping marijuana use. In fact, as we know now, marijuana has definitely helped many with chronic diseases and pain. In addition, More and More States each day are legalizing the use of marijuana, realizing it has no detrimental short or long term effects not only on the users, but NO Detrimental effect on the public. The National Research Council Committee has found that incarceration shows little evidence of its effectiveness on stopping marijuana use. Illegal use of any drug should be a treatment and education issue, not a law enforcement issue. Locking offenders up not only adds to our already overcrowded Hawaii jails, but adds very significantly to high public costs. The majority of people arrested for possession of marijuana are non-violent offenders. Please SUPPORT HB1501. Respectfully Mark GorDON Waikoloa, HI.

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 6, 2017 8:08 PM
To: pbstestimony
Cc: barbarapolk@hawaiiantel.net
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/6/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Polk	Individual	Support	No

Comments: I strongly support HB1501 which decriminalizes possession of drug paraphernalia. At present we are spending millions of dollars to incarcerate people for what is a relatively minor offense. Moreover, by treating minor offenses harshly, we are incurring an enormous future cost to the public of building new jails or prisons to house large numbers of people. This bill is an important first step in reconsidering the classification of offenses and applying more reasonable penalties. Incarceration, far from reducing crime, becomes a crime school, while limitations on the opportunities for jobs and schooling of a felon make more serious crime more probable after release. I urge you to pass this humane bill.

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lopresti1 - Randy

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 9:18 AM
To: pbstestimony
Cc: fu_dog_5@yahoo.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
robert	Individual	Oppose	No

Comments:

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lopresti1 - Randy

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 6:53 AM
To: pbstestimony
Cc: rachel@kuleanamicrolending.org
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Rachel James	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 8:31 AM
To: pbstestimony
Cc: adamsiehr@gmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
adam	Individual	Support	No

Comments: ON THE FOLLOWING MEASURE: H.B. NO. 1501, RELATING TO DRUG PARAPHERNALIA BEFORE THE: HOUSE COMMITTEE ON PUBLIC SAFETY DATE: Thursday, February 9, 2017 TIME: 10:00 A.M. LOCATION: State Capitol, Conference Room 312 Honorable Chair Takayama and Members of the Committee: As a stakeholder in the medical marijuana industry I am writing in STRONG SUPPORT of HB1501 RELATING TO MEDICAL MARIJUANA, which changes drug paraphernalia possession and delivery offenses from felonies to civil violations. I support this bill because it offers common sense changes to Hawai‘i’s current statutes that will directly benefit the well-being of Hawai‘i’s most vulnerable patient populations. The removal of the felony penalty for paraphernalia will aid in removing the burden of an unnecessary stigma from the participants in a legal and legitimate industry that the lawmakers of Hawai‘i established some 16 years ago. By reducing the punishment for activities related to medical cannabis, HB1501 helps to normalize medical cannabis as a medicine. The stigma of medical cannabis is largely rooted in the criminality attributed by state laws to the use of the medicine and those tools necessary for safe ingestion of the medicine. Your efforts in HB1501 to reverse the perception of criminality surrounding this medicine will directly contribute to the health of patients across the state as more people become willing to at least consider medical cannabis for their qualifying ailments and doctors become unafraid to talk with their patients about effective, alternative treatment options. It is my opinion that your thoughtful approach to ensure safer access to better medicine and safe methods of ingesting that medicine through HB 1501 will not only help patients, but will boost the local economy with career opportunities and new jobs in a part of the industry that will no longer be forced to operate in the shadows or under the guise of the tobacco industry. This is a triple win for your constituency and the legacy that you leave. For these reasons, I stand in SUPPORT of HB 1501 I would like to recommend that this bill be moved forward for further discussion. Thank you very much for the opportunity to provide testimony on this measure. Respectfully, Adam Siehr

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 12:33 AM
To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Sara Gottfried	Individual	Support	No

Comments: Twenty-four states and the District of Columbia have legalized marijuana. Ever since, I have been asked repeatedly how marijuana impacts hormone levels. To be honest, this isn't a topic I learned about in medical school, so I had to research it. In this article you will learn how your brain and hormone levels are affected by marijuana (Cannabis sativa), and how certain hormones can alter the effect marijuana has on your body. Cannabis: The Backstory Cannabis was listed as a medicinal plant until 1942.[1] Half of the United States population has tried it, about 4 percent smoke pot at least once per year, and 1 percent abuse it. Statistics show 1 in every 300 people are addicted, and among teenagers, this number climbs to 30 %. There are approximately 200 known medical conditions reported to be improved by cannabis. A few such conditions are: glaucoma, cancer, and multiple sclerosis. Most people smoke the dried pot leaves, stems, flowers, and seeds, but it can also be mixed into food, brewed as a tea, vaporized, or concentrated as hash. Entheogen? Recently on my podcast with Dr. Pedram Shojai, we talked about entheogens, the drug class that's ingested to produce an altered state of consciousness, designed for religious or spiritual goals. Full disclosure: I'm more of a square than most people. Nearly all of my friends have tried pot. Even President Obama says that he's smoked pot (and unlike President Clinton, he inhaled and liked it), but I've never personally been stoned. Still, I find the topic of entheogens fascinating and wanted to share the latest neurohormonal science with you – that is, the effect of cannabis on the brain and hormones. Your Brain on Cannabis The active ingredient in cannabis is THC, which stands for delta-9-tetrahydrocannabinol. To kick things off, below you'll find the latest brain effects of cannabis followed by the hormonal effects: Pleasure centers: marijuana stimulates the same pleasure centers as heroin, crack, and alcohol. [2] Executive functioning and learning are impaired in a dose-dependent manner,including perception, judgment, and event-based memory.[3] In fact, memory and attention are impaired for up to 24 hours after use, and may last a few days.[4] Operating a car is dangerous because of dream-like states, impaired motor control, distorted perception of time, paranoia, magical thinking, altered peripheral vision, and decreased reaction time. [5] Increased appetite, also known as "the munchies."[6] Amotivational syndrome: in heavy users, one finds reduced ambition and drive, increased distractibility, decreased communication skills, and less effectiveness in relationships.[7] It's not completely clear whether these brain effects stem from the marijuana itself or from the withdrawal. Many adults who use marijuana claim it helps them in relationships, enhances behavior, and expands their sense of awareness. Yet the research I found doesn't align with this. Researchers report users to be more willing to tolerate problems.This indicates the drug causes individuals to avoid confrontation rather than make changes that might increase their satisfaction with life. Often, folks use marijuana to avoid dealing with difficulties often making their problems worse.[8] Although

users believe the drug enhances their understanding of themselves, research shows it is actually a barrier of self-awareness. In other words, marijuana may not be the spiritual awakening it is often perceived it to be. (If you disagree, I'd love to hear from you – see below for specific questions.) Your Hormones on Cannabis Heavy cannabis use can affect hormones in both males and females: Cortisol: THC raises cortisol.[9] This means you may not feel as chillax'ed as you might expect – you may even feel paranoid if you have an issue with big stress. Prolactin: THC lowers prolactin.[10] Since prolactin provides the body with sexual gratification, this may not be something you want. Ovulation: Among women, regular marijuana use can disrupt the normal monthly menstrual cycle and inhibit the discharge of eggs from the ovaries. [11] Puberty: Onset of puberty may be delayed in young men. [12] Sperm: Marijuana also can have adverse effects on sperm production. [13] Pregnenolone as Buzzkill New data shows that pregnenolone can block cannabis receptors while also reversing the effects of cannabis, or it can block its effects from the start.[14] Pregnenolone is the mother sex hormone in your body—it's made from cholesterol and converted into progesterone, cortisol, or DHEA. (I describe pregnenolone in detail in my New York Times bestselling book, The Hormone Cure, which you can purchase right here.) In the United States, pregnenolone is available over the counter. DR. SARA GOTTFRIED CONTRIBUTOR [1] The University of California at Berkeley Wellness Letter, May 2014. [2] Tanda G, Pontieri FE, Di Chiara G. "Cannabinoid and heroin activation of mesolimbic dopamine transmission by a common mu1 opioid receptor mechanism." Science 276 (5321) (1997): 2048-50 [3] National Institute on Drug Abuse. "Marijuana Facts: Parents Need to Know." Accessed May 27, 2014. http://www.drugabuse.gov/publications/marijuana-facts-parents-need-to-know [4] Pope HG Jr, Yurgelun-Todd D. "The residual cognitive effects of heavy marijuana use in college students." Journal of the American Medical Association 275 (7) (1996): 521-7. [5] Adams, I. B. & Martin, B. R. Cannabis: pharmacology and toxicology in animals and humans. Addiction, 91 (11) (1996), 1585 -1614; Fehr KO, Kalant H, eds. Cannabis and health hazards. Toronto: Addiction Research Foundation, 1983; Hollister LE. "Cannabis-1988." Acta Psychiatrica Scandinavica Supplementum, 345 (1988): 108-18; IOM (Institute of Medicine). Marijuana and Health. Washington, DC: National Academy Press, 1982; Charles Tart, On Being Stoned: A Psychological Study of Marijuana Intoxication. Palo Alto, California: Science and Behavior Books, 1971. [6] Kirkham TC. "Cannabinoids and appetite: food craving and food pleasure." International Review of Psychiatry 21(2) (2009):163-71. doi: 10.1080/09540260902782810. [7] National Institute on Drug Abuse. Background: Marijuana." Accessed May 28, 2014.http://www.drugabuse.gov/publications/brain-power/grades-6-9/weeding-out-grass-module-4/background; Schmits E, Quertemont E. "So called "soft" drugs: cannabis and the amotivational syndrome" Revue Medicale de Liege 68 (5-6) (2013): 281-6. [8] Hendin H, Pollinger A, Ulman R, Carr A. "Adolescent marijuana abusers and their families." National Institute on Drug Abuse (1981). [9] Klumpers LE, Cole DM, Khalili-Mahani N, Soeter RP, Te Beek ET, Rombouts SA, van Gerven JM. "Manipulating brain connectivity with δ^9-tetrahydrocannabinol: a pharmacological resting state FMRI study." Neuroimage 63 (3) (2012): 1701-11. doi: 10.1016/j.neuroimage.2012.07.051. [10] Klumpers LE, Cole DM, Khalili-Mahani N, Soeter RP, Te Beek ET, Rombouts SA, van Gerven JM. "Manipulating brain connectivity with δ^9-tetrahydrocannabinol: a pharmacological resting state FMRI study." Neuroimage 63 (3) (2012): 1701-11. doi: 10.1016/j.neuroimage.2012.07.051. [11] National Institute on Drug Abuse. "Marijuana Facts: Parents Need to Know." Accessed May 27, 2014. http://www.drugabuse.gov/publications/marijuana-facts-parents-need-to-know [12] "A Fact Sheet on the Effects of Marijuana." PBS.org, accessed May 28, 2014.http://www.pbs.org/wgbh/pages/frontline/shows/dope/body/effects.html [13] "A Fact Sheet on the Effects of Marijuana." PBS.org, accessed May 28, 2014.http://www.pbs.org/wgbh/pages/frontline/shows/dope/body/effects.html; Nudell DM, Monoski MM, Lipshultz LI. "Common medications and drugs: how they affect male fertility." Urologic Clinics of North America 29 (4) (2002): 965-73. [14] Vallée M, Vitiello S, Bellocchio L, Hébert-Chatelain E, Monlezun S, Martin-Garcia E,Kasanetz F, Baillie GL, Panin F, Cathala A, Roullot-Lacarrière V, Fabre S, Hurst DP,Lynch DL, Shore DM, Deroche-Gamonet V, Spampinato U, Revest JM, Maldonado R,Reggio PH, Ross RA, Marsicano G, Piazza PV. "Pregnenolone can protect the brain from cannabis

intoxication." Science 343 (6166) (2014): 94-8. doi: 10.1126/science.1243985.

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To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dan Capener	Individual	Support	No

Comments: For the novice, the following factual discoveries may not be known. Science and discovery has come a long way in the past few years. And it seems the more we learn about natural herbs, the better understanding of their medicinal use becomes apparent. We don't have to invent, cook, splice, or blend chemicals to remedy many of our maladies, sometimes what is natural and organic works best. Marijuana has been misunderstood and perhaps misused but here are the benefits, and Pro's that we have discovered about the plant over the past few years. THE INGREDIENTS IN THE PLANT, THC AND CBD ARE "CANCER KILLERS" KEEPING HEALTHY CELLS Recent research recorded from Spain and San Francisco believe to show THC, Marijuana's pscyoactive ingredient kills cancer cells in the brain while leaving healthy cells alone, according to Study co-author Guillermo Velasco. A study of CBDs at the California Pacific Medical Center in San Francisco demonstrated the cannabinoid's ability to stop the process of metastasis in many kinds of aggressive cancer. THE USE OF MARIJUANA LEADS TO BRAIN CELL GROWTH (NEUROGENESIS) That sounds like it is just the opposite of what we have believed, however in 2005, a study showed cannabinoids' ability to promote neurogenesis in the adult area of the brain called, hippocampus, the region responsible for many important brain functions including mood and memory. Those authors also cited anti-anxiety and anti-depressant effects and that marijuana helps improve cognitive function in bipolar disorder patients. MARIJUANA AVAILIBILITY LEADS TO LESS SUICIDES A Denver state-level study analyzed the statistical trend of suicide after introduction of medical marijuana. From the study: "Our results suggest that the passage of a medical marijuana law is associated with an almost 5% reduction in total suicide rate, an 11% reduction in the suicide rate of age 20-29 males, and a 9% reduction in the suicide rate of 30-39 males." NO DEFINITIVE EVIDENCE THAT MARIJUANA CAUSES LUNG CANCER UCLA Medical Doctor Donald Tashkin, author of the largest study of it kind and marijuana researcher of more than 30 years has stated: "We hypothesized that there would be a positive association between marijuana use and lung cancer, and that the association would be more positive with heavier use. What we found instead was no association at all, and even some suggestion of a protective effect." This adds to the case for the anti cancer effects of the plant. DIFFERENT KINDS OF MARIJUANA PROVIDE DIFFERENT EFFECTS The two types for all the nick names and strands are are categorized as "Sativa" or "Indica." Sativas are usually day-time strains, used to enhance the experience of social events, time in nature or listening to new music. Caregivers often recommend sativa strains for patients seeking relief from depression, PTSD, fatigue and some types of anxiety and pain. Some patients even report positive effects on ADHD while medicating with sativa strains. Sometimes first time smokers can experience "bad trip" effects from this form where as the other one may have been more calming. Indicas are

often smoked at night due to their narcotic effect on the user. Indica strains are perfect for users suffering from any type of pain, nausea or anxiety. They're also preferable for novice users as they acclimate themselves to the herb. This variety is popular for meditation or yoga due to its mind-calming qualities. Like anything, it was once perceived that marijuana isn't for everyone, but the mounting wealth of new evidence available shows that cannabis can legitimately be used as a medicine and/or supplemental treatment with real definitive benefits. • Dan Capener

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 9:04 AM
To: pbstestimony
Cc: cashirota808@gmail.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Carrie Ann Shirota	Individual	Support	No

Comments: Aloha, I support this bill that would change drug paraphernalia possession and delivery offenses from felonies to civil violations. Removing the felony offense and NOT imprisoning people for non-serious offenses could save Hawai`i millions of dollars. Monies saved could be reinvested into policies and programs that address chemical dependency, homelessness, mental health and other health issues, etc. Please pass HB 1501.

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February 7, 2017

ON THE FOLLOWING MEASURE: H.B. NO. 1501, RELATING TO DRUG PARAPHERNALIA

BEFORE THE: HOUSE COMMITTEE ON PUBLIC SAFETY

DATE: Thursday, February 9, 2017

TIME: 10:00 A.M.

LOCATION: State Capitol, Conference Room 312

Hello Members of the Committee,

My name is Tangy, and I am a U.S. Marine Corps veteran. I humbly addressed this court thanking you in advance for taking the time to address the needs of the community, and for hearing how this plant has and will continue to change lives. After serving my country, and receiving a honorable discharge I was quickly diagnosed with PTSD after I suffered from terrifying nightmares where I would viciously die in my sleep each night. Just like everyone else the medication prescribed to me by the VA was strong enough to tranquilize a horse, so it left me as an unproductive, incoherent member of society after I took it. I became depressed, and had a fluctuation in my weight that I never experienced before.

A friend gave me cannabis to try, and at the time I didn't know I was self medicating, but it not only gave me a restful night's sleep, but I didn't have the horribly dreams either. I began to do my own research about this plant and our Endocannabinoid system, and I found out this plant was specially designed for all our bodies. I wish I could stand before you, so that you could hear the conviction in my voice when I tell you that cannabis saved my life, but I am currently in the UK sharing my story here. With over 50 to 60 servicemembers committing suicide a day it is our duty as a country to explore all options if it means saving at least one life. Cannabis is one of those options, and I encourage this council to allow safe, secure, affordable access to this plant for all who choose to use it. Again thank you for your time, and upon my return I would be more than happy to discuss this further with anyone interested.

Respectfully,

Tanganyika Daniel
U.S. M. C. Veteran
CEO, Jayn Green
1jayngreen@gmail.com

lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 7, 2017 10:35 PM
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HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Keiko Beatie	Individual	Support	No

Comments: Federal Marijuana Still Being Issued to 2 Patients: Elvy Musikka resides in Eugene, Oregon, where she is close to her son and his family in a quaint downtown apartment. She lives near an abundance of stores and restaurants in a place with small town energy that makes you feel right at home. Here we are, in a recreational state about to unveil to many in the community and industry of cannabis, a clandestine aspect of our United States Federal Government. A subject of which information has been squelched, scenarios altered for secrecy, and an appearance of cover ups galore as… Elvy has been receiving free medical cannabis for 28 years, from (shhhhhhh) Uncle Sam! Elvy, along with Irvin Rosenfeld are part of the Compassionate Care Investigational New Drug Program, also known in short as: Compassionate IND. First started in 1976, it is a United States Federal Government-run program that allowed a limited number of patients to use medical cannabis grown at the University of Mississippi. The program is not available to any new patients, as it was dissolved in 1992 under the jurisdiction of President George W. Bush. During its time, they had about 30 participants at its peak, and upon closure they had 13 active participants. Twenty-eight patients sadly didn't make the active participant level as their applications did not make the cut-off date of the federal program. It is administered by the National Institute on Drug Abuse and at this time there are four known surviving patients who were grandfathered into the program. How did this secret program get initiated into our Federal Government? The Compassionate Care Investigational New Drug Study program began after Robert C. Randall filed a lawsuit against the Food and Drug Administration, The National Institute on Drug Abuse, the Department of Justice, and the Department of Health, Education & Welfare. Robert was afflicted with glaucoma, a degenerative eye disease and had made a wise calculative move to make reference to the "Common Law doctrine of necessity" to argue against charges of cannabis cultivation because it was deemed a medical necessity. This is the case of United States verses Robert Randall in 1976. After the trial and presentation of evidence on November 24th, 1976, Federal Judge James Washington ruled in Randall's favor in a major landmark case. The first medical cannabis prescription in the United States since the 1930's was written, and Robert headed over to the local pharmacy to fill his prescription. The second person to be admitted to the IND Program was Irvin Rosenfeld back in 1982. Irvin has a rare degenerative bone disease from a very young age and was in his freshman year at college when he tried cannabis. He discovered by smoking cannabis he was able to sit for more than 30 minutes, which was virtually an impossible feat with his disease. With an analytical mind and many family members who were in the medical field, he comprised his own clinical trial on himself while in college. His data collected was scientific and conclusive of the dynamic effects of the cannabinoids on his body. For the past 34 years, Irvin has

had no tumors develop in his body and his continuing healthy life is an inspiration. Both Elvy and Irvin are able to see their patient care physician during the year and receive their Federal supply of Mississippi grown cannabis. The other two patients Barbara Douglas and George McMahon are eligible to receive their medicine, but are not able to find a physician who would be responsible for their patient care. They would require a Doctor whom they would see twice a year and sign up to distribute the Federally approved prescription. Speaking of the prescription, the cannabis medicine is rolled into joints and packed into a metal canister in increments of 300. Interestingly, after the cannabis was harvested in Mississippi, it was transported to Raleigh, North Carolina and freeze dried. A canister of joints that Elvy recently received was dated from 2009. In most cases, when tested it was shown to have a THC content of 3% to 5%. So for those of you, who complain about your buds not being fresh, please don't consider Government grown buds in the future as it appears the cultivators at Ole' Miss could use some help from Master Grower Ed Rosenthal, as well as bud care tips from the local dispensary budtender! Elvy Musikka, who was the third person to be included in the IND Program was born in Columbia, came to the U.S. and married in the late 1960's. She has two children who are now grown. Her daughter resides in Austin, Texas, and her son in Eugene, Oregon. She is a musician with an album as we found she is always comfortable about breaking out in song! When we got a hold of her, I introduced myself to request a time to meet to interview her exclusively for Edibles List Magazine. A date was arranged and I was looking forward to bring to light this incredulous aspect of Federal Government prescribed cannabis, which seems almost an oxymoronic situation! Why doesn't everyone know about this?! A revelation, there are factors that have worked against the general public being aware of IND program. For instance, the first doctor for Robert Randall who was arranged to provide his patient care was suddenly offered a large grant for a government research project. Offers like this don't come along for research physicians and the doctor left the IND Program, which left Randall high and dry. Musikka has had scrutiny, arrest, and a litany of harassments occur. As for Irvin, he has a different outlook, that his life is an open book and he is just seeking to receive his medicine and if they need to watch him then go right ahead. While spending time researching Elvy's medical cannabis life career, I was curious, excited and looking forward to bring forth this incredible story. Upon arriving and sharing pleasantries at her apartment, one is able to see her life amongst the art, books and photographs decorating her home. We walked on a balmy summer night to a cozy restaurant close by with a patio garden lush with flowering foliage. The company and conversation was easy flowing and filled with enrapturing conversation. Together, we found ourselves breaking out in song from the Beatles, to the Eagles, and her positive uplifting spirit was charming. Medically at this time, Elvy is feeling great for being a spry 77 years young. Her sight in her right eye is diminished but there is enough in her left eye to know how to order a cocktail before dinner. Elvy chose a Lavender Lemon Cocktail with Rocks on the Rim to start the dinner conversation. Because of a debilitating case of glaucoma, an operation was necessary in the early 80's which left her right eye clinically blind with no hope to regenerate her eye-sight. Elvy felt she needed to find something to save what sight she had remaining. Ever since she first started smoking cannabis in 1975, she has been comfortable with infusing. She found it helped her keep balanced with her daily life and little did she know at the time it was helping her eye sight keep intact as well. She began growing at her home in Florida and definitely felt the benefits. Elvy first heard about the program after she was arrested for growing cannabis and she received a call from Robert Randall in mid-1988. He introduced himself and shared with Elvy how their debilitating medical condition of glaucoma was so similar and how he was receiving medical cannabis from the U.S. Federal Government. She decided to sue to have access to the IND program and won, so on November 17th, 1988, Elvy went to her local pharmacy to fill her prescription for 320 marijuana cigarettes every month. She speaks each year at HempFest, the festival held in Seattle, Washington now running twenty years. With attendance at over 120,000 hemp/cannabis friendly supporters, it is one of the largest gatherings in the U.S. celebration of the culture and lifestyle of cannabis. Of course to those in attendance, Elvy is a treasured icon and heralded by all once she graces the stage. She is known to break out in song, as she does consider herself a musician. She autographed her album for us when

we were spending time in her apartment in Eugene, Oregon. Elvy is also part of Patients Out Of Time, a non-profit organization that focuses on education about the medical attributes of cannabis with continuing education accredited classes. She speaks at least once a year to appreciative nurses, doctors and other interested parties. Now that she resides in Oregon, she has attempted to find a new Doctor to oversee her IND Program needs, but has been unable to do so. She travels to Florida twice a year to see her physician and pick up her prescription. On her way back to Oregon, she hand-carries her precious canisters of medicine and the paperwork to back up any scrutiny that arises. Elvy would like for us to realize that we all have the power to change the laws, as for the past 28 years she has lived as an open cannabis consumer. But on the other hand, she has had her phone tapped and her life scrutinized for her actions. Is she breaking the law? Absolutely not! But she has been harassed, scrutinized, arrested and threatened. At this time in her life, Elvy would like acceptance and true freedom from this scrutiny. Musikka says her glaucoma is under control and reaffirms that her consumption of cannabis is proof that it works as a medicine. No other pharmaceuticals or aspirin are available in her home as medical cannabis does it all for her. Musikka considers herself a pioneer, patient and activist. She is passionate that prohibition should not be continued. Elvy Musikka is researching on the country of Uruguay, where there are no rules or restriction on the growth, distribution or consumption of cannabis. Yes, Elvy is done with America and it's hypocrisy of medical cannabis by the U.S. Federal Government. Advocates for legalizing cannabis either for medical or recreational purposes say the program is a glaring contradiction in the nation's 40-year war on drugs maintaining the federal ban on pot while at the same time supplying it. This is hypocrisy to the American people. While we have 200,000 people in Federal U.S. Prisons for simple possession of cannabis, yet the same Federal Government has been supplying it to needy medical patients for the past 40 years, starting with Robert Randall who passed away in 2001. He was an amazing visionary who we need to honor and acknowledge. As we head into the home stretch of the November Election, there are many states that have initiatives set on the ballots for the voting public to make their decision on. With this realization of the shadows of insulting deceit that patients have had to endure through the years with the continuing denial of legalization of cannabis through our countries leaders. May we all share this story and let everyone know that the U.S. Federal Government has truly been holding back from the suffering citizens a true natural medicine. We should not feel that we need to hide or infuse on the down low and feel the scrutiny of judgmental small minded individuals. The Compassionate Care IND Program should have never been discontinued, just as prohibition should have never been passed back in the 1930's. Government officials say there is no contradiction. The program is no longer accepting new patients, and public health authorities have concluded that "there was no scientific medical value to cannabis," as Steven Gust of the US National Institute on Drug Abuse was quoted stating to The Associated Press. What are we, as concerned citizens, missing in this picture? Is this an entity speaking from both sides of their mouth? Do they not know what they are standing for as a country of extreme contradictions? Let us hope that the elections bring balance of understanding and access. If you recall 13 people were receiving Federal Government cannabis. Now, there are four left. Others who were in the program have mostly passed away. Again, two of them who were approved and grandfathered in are still in need of a new physician. To be in the program an attending physician needs to see the patient twice a year to adhere to the stipulations agreed for the Compassionate Care Investigative New Drug Program. . Let's join together and find a way for Barbara Douglas and George McMahon to once again receive their medicine. A call to action for the following: A Physician who has the proper license to practice in the state of Iowa where both George McMahon and Barbara Douglas reside. Funds to support physician's travel expenses to patient's homes in Iowa, as both George and Barbara are unable to travel at this time. Elvy is in need of a new physician as well. If you are licensed in Oregon and close to the Eugene area. If you want to support, have a doctor or stay informed, or have suggestions please feel free to contact us at info@edibleslist.com We deserve secure access to medical and recreational cannabis, and to have the Government discontinue the lies! Keiko Beatie Staff Editor Edibles List Magazine

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lopresti2 - Isabella

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To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM
Attachments: EDIBLES_MAGAZINE_PETS_AND_CANNABIS2.jpg

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Allen Miller	Individual	Support	No

Comments: We have seen a dramatic change in how animals negotiate thier environment. In the wild animals eat from food sources we both manage and that come from the landscape. We are seeing an uptick in Cancers, Autoimmune Disorders, Tumors, viruses as well as numerous other diseases that were rare or nonexistent not 10 years earlier. Mice are the most commonly used vertebrate species, popular because of their availability, size, low cost, ease of handling, and fast reproduction rate. (D. Mahdi, personal communication, 2007)] Another reason rodents are used as models in medical testing is that they're genetic, biological and behavior characteristics closely resemble those of humans, and many symptoms of human conditions can be replicated in mice and rats. However, we have animals such as, dogs, cats, horses and even deer that are showing effects of disease outside the lab that are acting and reproducing lab results. Recently my cat a Maine Coon started showing symptomology consistent with Stomatitis Dentalis, which WebMD defines stomatitis, a condition caused by canker sores, cold sores and other irritations in the mouth. In the regards to my cat, this is a virus that is an autoimmune disorder that attacks the dentin in the teeth, causing inflammation and pain. The conventional treatment for this condition is extracting all the teeth or a lifetime of anti-inflammatory drugs like steroids or animal herbs. This was rare to non-existent just a few years ago but is rapidly rising in numbers. Additionally, we're seeing this condition even though non-transmittable in children once their teeth come in. Now we are seeing deer in the Midwest presenting with Tumors caused by a variety of viruses and inflammatory disorders. Coincidently a 2012 study was published, "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize" by a group of French scientists led by Gilles-Eric Séralini, claims that a Monsanto herbicide-tolerant GM corn and Roundup, Monsanto's brand name for the herbicide, caused severe diseases and tumor growths in rats. (Seralini, 06/24/2014, p. 2) Roundup is a common outdoors herbicide used everywhere to kill weeds, insects etc. There is no non-GMO corn in the United States and it is grown and proliferated in the Midwest. As I stated, animals such as deer are suffering from Tumors from unexplained reasons, however, the Tumors are similar to the Tumors seen in rats from the Monsanto study. But taking this premise further, consistent with the article I wrote on Inflammation.; our bodies have an immune system that protects us from foreign invaders that can cause disease and infection; however, if you have an autoimmune disease, your immune system attacks itself by mistake, causing illness. ("VCA Animal Hospital," 2014, p. 2) The immune cells fail to distinguish the body's normal healthy cells from foreign cells and thus try to destroy the normal tissues. The cause of this "mistake" is not well understood. Autoimmune disease can affect a single system or multiple body systems. Autoimmune diseases can affect the skin, connective tissue,

nerves, muscles, the endocrine system (the system that controls hormones and other chemicals), and the digestive system. What we are seeing are multiple factors of our environment, our food, our, water and our air that contains particles of substances that are causing these diseases in our pets, food sources, and ourselves. Many industrialized nations such as Canada are outlawing GMO Foods for this very reason attempting to keep their population and food sources healthy. What we are seeing is a bombardment of these factors on animals effectively showing the results as if they were in a lab experiment. But there are no labs in the same environment that our dogs play in, our cats' encounter, and our cattle and wildlife eat and live in. We are seeing the same factors as we've seen in the lab but on a larger wider scale. It is almost impossible to protect yourself from encountering these environmental factors in everyday life. Everything and everyone is affected by the environment they live in and now we're seeing supporting evidence that proves the cascading health problems we are experiencing have a direct correlation to GMO Foods, toxic water, food, and air and plants. It is difficult and expensive for humans to buy non-GMO Foods. However, animal products contain GMO based fillers for the food supply for dogs and cats as well as most animals. The literature suggests that all these factors are leading to the rise in viruses and autoimmune disorders within our pets. In earlier articles, I referenced numerous studies utilizing high CBD cannabis related supplements to act as both a preventative, treatment and cure for these problems in humans. Animals being similar in anatomy and physiology should see the same benefit. However, the component Tetrahydrocannabinol (THC) the psychoactive component in MMJ is toxic to pets. Some people think that if they enjoy something, their pets will, too. Or we think it's funny to blow pot smoke in a cat's face and watch her get crazy. But did you know that marijuana could be toxic to pets? Veterinarians report that they are encountering more incidents of marijuana poisoning in pets, mostly dogs. (Smith, 2011, p. 1) It's usually an accident when an animal ingests marijuana in edibles; some bud dropped on the floor or even discarded trimmings. Now we're seeing high CBD treats for dogs and cats from extracted from hemp products. Numerous articles and journals are reporting positive results from using hemp based CBD's treating autoimmune disorders, Tumors, cancers in our pets. As more people are trying these avenues as both a treatment and a preventative to diseases. Pets have taken a very large step to become beloved companions and family members. It's this author's opinion and experience these products work and I both use them for myself and my pets to protect them from environmental toxins and disease. One caution is to read the label and do your due diligence to see what fillers were used in making the pet food and confirm no GMO products were included in the recipe. This way the pets will not be ingesting both the problem and cure at the same time. There are several veterinarians that recommend these products and support their use. Searching the web will no doubt give you several veterinarians to consult. References: Seralini, G. (06/24/2014). Scientists react to republished Seralini GMO maize rat study. Retrieved from geneticliterarcyproject.org Smith, D. K. (2011). Pets on Pot. Retrieved 08/24/2015, from Compassionatcenter.net What is an autoimmune disease? (2014). Retrieved from vcahospitals.com DR. ALLEN MILLER

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HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Allen Miller	Individual	Support	No

Comments: Cannabis & Kicking Opiod Addiction My name is Dr. Allen Miller, DC, DACBSP; I am a chiropractor with a specialty in Sports Medicine. I was the team physician for numerous international Track & Field Teams and accompanied them to multiple meets and ultimately to the 1992 and 1996 Olympic Games. In my off time, I raise horses, guide back country horseback camping and hunting trips. I have competed on horses professionally and have the scars to prove it. In the years prior to beginning my life in chiropractic and sports medicine, I was the bodyguard for celebrities beginning with Dinah Shore. To say the least, I have led a very exciting but physically taxing life. I have broken almost every bone in my body, and on one hunt 7 years ago, I was several miles in the back country and my horse slipped, falling crushing my left foot and fracturing my right ankle and leg. After riding the 12 miles back to the truck, it started to snow, resulting in hypothermia and frostbite to my feet bilaterally. This short strip resulted in severe nerve damage in both feet, along with open fractures and chronic pain that required four surgeries to correct. Without a great explanation of every horse that has bucked me off, or every accident, and repairative surgical technique I had to endure, suffice to say if it weren't for scar tissue I would not be standing. As a result of all these crashes, I was taking 10-12 Norcos a day to be able to walk and function in a very highly physical life. Over the last few years, it's been harder to get this level of Norco, Vicoden or the other pain opioids because the insurance companies are requiring a 50% reduction of these prescriptions by 2018. This family of Opiates are analgesic alkaloid compounds found naturally in the opium poppy plant Papaver somniferum.[1] The psychoactive compounds found in the opium plant include morphine, codeine, and thebaine.(, p. 1) The opioids were the drug of choice, it was great for the patient, and even better for the doctor because the patient was happy, he was drugged out of his mind, but happy. Off and on, through injuries, broken bones, stabbings and reconstructive surgeries I traveled down prescription hell. The pills were great, they let me work, think and keep up with my unique lifestyle. The flipside is you have to "whore" yourself, and convince a doctor that regardless of the extensive history of injuries you have had, you still have pain. Because it's becoming harder and harder to obtain Opioids, I investigated cannabis solutions, subsequently obtained a recommendation and started medicating myself. This is where the fun really begins; the path to finding the right combination of MMJ strains is arduous. For the most part, the "budtender" in essence is acting like your pharmacist providing product advice based on several factors, personal use, research and patient interaction. These people are savant's regarding the plants, the chemical structure it actions, everything. However they don't know the other disease process of the body, the impact of the aging process, lack of hormones, aging and all the factors that cascade forward into the current symptoms one has due to a disease. The body reacts, adapts, evolves and changes to different factors allowing the body to function.

Where the work comes in is finding the right dosage of which strain to use for your condition. This is very personal, however, the purpose of this article is to explain the rationale behind the products I used and how I got off opioids without withdrawals, loss in function, or production. The following is my personal journey and my analysis. There are two types of pain, mental and physical, for sake of space I will not describe the anatomy of the pain structures. For this purpose, I'm going to speak to the subjective component of Opioid addiction. My biggest fear was and still is I would be stuck in a situation my disabilities rendered me helpless. I kept a pain pill in my pocket that was my crutch if something happened. After obtaining the recommendation for MMJ, without guidance whatsoever I headed to different dispensaries. I did not tell my doctor that I was going to try MMJ to treat my pain. I did bring up the subject, but I was told he would stop seeing me as a patient if I did use cannabis. I have tried most products available for pain, and this is not an incitement of other products, this is what I found works for my me and subsequently a lot of my patients. As I stated, you have two areas that are going to report pain, whether the pain is real or not is immaterial, that's another issue, right now the brain has been rewarded every time a person takes an opioid, In essence, you are rewarding the brain for having pain. The more pain, the more pills regardless of the actual level of pain experienced. In my case, I see patients, write reports and manage the marketing for 50 clinics internationally. I, like other patients cannot be "high." I need to be effective, with this said, and based on my history, blood tests, and following a physical exam with Dr. Stephanie King at Dedicated To Health Medical Group, we decoded that I would start on a regime of 40mg of an edible a day to be divided at 20mg during day for pain and again before bed for sleep. I decided on a high CBD, low THC formula to work at my level. I wanted a low THC level as it helps the CBD's work better, but because I was taking long term opioids I would have withdrawals, and I can't have that in my environment nor do I have time for rehab. One other thing to consider that rapidly came to my attention, cannabis is not like prescription drugs, there is no immediacy. I realize this is elementary however it's a complex issue to the chronic pain patient taking opioids; we patients have been conditioned for years to take a prescribed amount over a prescribed amount of time with expected results. In the case of cannabis, it takes some more time than others to see positive pain killing effects, which is slow in comparison to prescription medication. This is the problem, every chronic pain patient including myself is deathly afraid of the pain escalating into debilitating pain. Simply put a patient on long-term opioid treatment has been conditioned to take a prescribed amount and this kills his pain and this gives the patient confidence in their surroundings. However when the brain does not get the drug it wants at the time it wants it, the body revolts with increased pain, disability, cramping, nerve pain and muscle spasms. This is because the painkillers (e.g. Vicodin, OxyContin, Norco, Hydrocodone) – commonly prescribed by physicians to treat pain – cause a change in your brain chemistry that is not under your control. (Burke, 2013, p. 3) So as time goes on, the patient has no concept of what part of the pain is residual from the injury or the brain calling out for more drugs. My philosophy was to use MMJ, or a cannabis product first before taking a pain pill, slowly weaning off the opioids replacing them with cannabis products. I am not a smoker, and can't smell like marijuana in my work environment. After investigating several products, I settled on edibles, it was discreet, nobody knew what I was taking and it didn't smell. In this transition from the controlled result of pain pills to cannabis, a natural product, I discovered I had to be confident in the effects of cannabis. This is difficult because not all products are made equal. First, I had to embrace that it worked, and I had to be patient with the effects and its ability to work. Through significant trial and error, I found a product that killed the pain, reduced the cravings and "energized" me so I could work and live normally. What worked best for me was "The HealthCare Bar", a 200mg THC nut bar. It had just enough THC that it blocked the pain signals and the craving of the opioid. The CBD's had an immediate effect reducing my sedentary and active pain. This bar is what I settled on for daytime use, for work, and everyday activities. Again, the philosophy behind dosing with cannabis with a consistent dosage at set intervals with cannabis products to relieve the effects cravings and discomfort associated with chronic pain. This product is great for giving me relief during the day and through everything I do. I take approximately 20mg in the morning 10 mg in the afternoon till about 4 pm. It is

great for everyday use. The second factor to consider is the breakthrough pain, where as sharp pain, comes as a result of increased activity. Doctors love to say, “Curtail your activities. Learn to live within your pain.” I believe that is complete crap. If you’re feeling better, you live life, you do what you want to do, if not, you are not living. What is the point of living stuck on the couch, depressed from your pain, which means to live, one must increase activities, the breakthrough pain is a necessary evil. Seated on a horse for several hours results in significant back pain. Well, I do have significant back pain, I’ve broken my back, and had numerous operations to correct the damage, but I like to ride horses. Instead of using the pain pills shortly before an activity, killing the pain, I now have to be more cognizant of what my activities will be and medicate accordingly. The first and not in any particular order is Jumbo Superfood products in the form of THC/CBD Potion. This is a spray for the mouth that when used kills pain and muscle spasms quickly through product absorption in the mouth. What is great is it tastes and smells like Peppermint. If I have to stand for more than about 15 minutes I get severe bilateral foot pain due to the fractures and nerve damage associated with frostbite. However, life and work do not allow the luxury of sitting after 15 minutes, in my work I have to stand on a stage for a TV show, and other activities that require standing for long periods of time. This is why I favor Jumbo Superfoods THC Potion as its small discrete and does not smell “green.” As I said, I use it for breakthrough pain, and it works great, extending my ability to stand or move and I use it for horseback riding, and all the other activities I participate in. If I am by myself and out of the way of patients or others I utilize the W-Vapes Sativa for breakthrough pain and relaxation as well. W-Vapes has done an amazing job of making a quality product that does not leave an aftertaste that works quickly. Remember, one of my biggest fears is having pain that escalates and I can’t elevate it. This is what was great about W-Vapes, great product and it works well for my chronic pain rheumatoid arthritis patients as well. A third product that I thoroughly enjoy, that again has the highest quality rating I’ve found, is Something Chocolate by Mitch Koulouris. These chocolate truffles taste as good or better than anything I have tasted anywhere in the world. I used to travel with Olympic teams and they just love to feed us every delicacy known to man. Something Chocolate is up there with them all. What I appreciated, is the quality of the product. I found when testing Something Chocolate truffles for my patients, the purity of the product made the absorption of the 20mg of THC/CBD mix enhanced. I only need to cut his product in half to get the pain relief I needed without any memory loss or feeling of high. Speaking personally, and from experience, using cannabis does not get me “high.” It relieves the pain, giving me a feeling of being unshackled from my body. I’m not high; I don’t sit and contemplate my navel. I need my body to keep up with my mind; I cannot be burdened by pain, and muscle spasms, this is what takes me off my game. I require the cannabis to fill the void of pain killers so I can function with the fractures, and biomechanical problems I have from the years of abuse, which was a tremendous amount of fun at the time. One other remedy I have found for quick pain relief and muscle soreness is Xternal Balm. It’s a great topical cream that does not smell like weed and gives instant relief. We compared a similar product from prescription medicines and they don’t work as well as this product and Xternal Balm was at a fraction of the cost. For sleep, this has been the biggest problem for me as sleep is difficult because everything hurts. I can get to sleep, but staying asleep is tremendous work because my body hurts and spasms waking me up. I again found W-Vapes Indicia Brand to work best getting me to sleep and keeping me asleep. I woke up without a hangover and in most cases I woke up pain-free. This gave me enough time to begin the daytime regime with the bars and other products I mentioned. The advantage prescription drugs have been that it’s easy, very little work with exceptional accuracy, and it’s predictable. However, with times changing and the physicians inability to prescribe these drugs now, people are moving to another easy remedy and that’s Heroin. We’re seeing reports of high school and college-age student athletes that are addicted, as they can no longer get the drugs and subsequently move to Heroin with several reports of deaths due to overdose. One must ask why are people moving to of all drugs Heroin from opioids, not cannabis? Driven people have to function they thrive by being busy and productive. They want the quick fix to the problem, and hide it so nobody knows their secret. Kill the pain in 10 minutes and go back to work is the philosophy, not much different than the football player we used to shoot-up

with painkillers so he could go back on the field, same mentality. The good news is cannabis is great in this situation, very little or no harm from ingesting the products. If one does over ingest, it will wear off without significant side effects, and most importantly cannabis will not interfere with anything in the body, it allows the body to heal. The bad news is it's slow, the body has to accommodate and substitute the more potent synthetic drug for the safer, more natural alternative. This while the brain is screaming in pain, making it physically difficult to even move, motivating the patient to kill the pain as fast as possible. Cannabis is not a quick and easy fix in these situations, it takes longer, but it's safer increasing a patients longevity and pain-free existence. In conclusion, substituting cannabis products to treat pain is the course of therapy for surviving and thriving in your life. We all know the disadvantages and side effects of prescription medication. I have found what works for me. I have confidence that the products I use will not leave me stranded in pain. I utilized blood tests, DNA tests to evaluate which vitamins worked best for my metabolism, and I used Bio-Identical Hormone Replacement Therapy (BHRT) and Hormone Replacement Therapy (HRT) to make up for the loss in hormones consistent with my years of physical abuse and the natural consequence in aging. I'm 60 years old, broken everything, and still ride horses, back country camp, fish and more. I've had more than 30 surgeries, with plates, screws and other hardware bonded to my skeleton that keep me vertical. I use a cannabis product about every 4 hours to get through my grueling workday. Yes, finding the natural alternative is a difficult one, however, it's a rewarding one. I have spent the last 30 years treating patients; I wish I had this in my bag of tricks years ago. Not only do I use it personally, I counsel Rheumatoid Arthritis, Chronic Pain, PTSD, Pro Athletes and all patients on the use of cannabis to increase their quality of life. DR. ALLEN MILLER References Burke, S. (2013, 09/11/2013). How Pain Killers Sometimes Increase Chronic Pain. Spine-Health. Retrieved from http://www.spine-health.com/blog/how-pain-killers-sometimes-increase-chronic-pain Wikipedia. (2015). Opiate. Retrieved from http://www.Wikipedia.com

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 12:35 AM
To: pbstestimony
Cc: bo@edibleslist.com
Subject: Submitted testimony for HB1501 on Feb 9, 2017 10:00AM
Attachments: Edibles_List_Magazine_Featured_Article_Cannabis_and_Glaucoma.jpg

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Allen Miller	Individual	Support	No

Comments: Glaucoma is the second leading cause of blindness in the world. Over 60 million worldwide suffer from glaucoma. It is a complicated disease in which the optic nerve leads to progressive, irreversible vision loss. There are several types of glaucoma including the most common two; primary open-angle glaucoma (POAG) and angle-closure glaucoma (ACG). Medical marijuana has been used as a treatment for glaucoma by patients for many years in the United States, however due to the stigmas and legalities surrounding cannabis, aging Americans have not widely accepted it as a treatment, yet. Medical marijuana has always been promoted as a treatment for a laundry list of diseases and symptoms including glaucoma. Though the plant is currently classified as a schedule I drug citing that is has no medical benefits to it – this is simply not true. The primary goal in treating glaucoma is to reduce the levels of intraocular pressure (IOP). Currently, the main techniques in accomplishing this are medications and eye drops, laser treatments, and surgery. However, smoking cannabis has been definitively proven to lower IOP as well. The idea that marijuana can be helpful in treating glaucoma dates to the 1970s. Studies conducted then showed that smoking marijuana lowered the IOP of people with glaucoma. Unfortunately, glaucoma needs to be treated 24 hours a day and the effects of cannabis only last 3-4 hours, meaning that one would need to consume cannabis 6-8 times a day. The problem with this is that right now there is very little actual data on how much cannabis must be consumed each time for it to effectively lower IOP levels. Researchers are working to find a more effective method for cannabis to be used in treating glaucoma. In fact, Canasol a cannabis derived eye drop was created in Jamaica by developers including ophthalmologist Dr. Albert Lockhart. As technology improves, no doubt we will see a far more effective method of treating glaucoma using cannabis.

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HB1501
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Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Bo Nicole Capener	Individual	Support	No

Comments: Arthritis is an ailment that afflicts 52.5 million adults, and is expected to climb to 67 million by 2030. Currently, there is no cure for the condition and current treatments include pharmaceuticals with severe side effects. Cannabis is a suitable alternative, as it naturally possesses pain relief and anti-inflammatory properties. However, many medical officials are averse to prescribing marijuana for rheumatic disease citing the lack of the data on the efficacy of the plant. Though there may be limited resources on this issue, that does not mean there is nothing on the subject. The Rheumatology journal published a study from Dr. Sheng-Ming Dai of China's Second Military Medical University found that CB2 receptors are found in unusually high levels in the joint tissue of arthritis patients. The use of cannabis is shown to fight inflammation in the joints by activating the pathways of CB2 receptors. Dr. Jason McDougall, Canadian professor of pharmacology and anesthesia at Dalhousie University in Halifax, has received a grant and backing from the Arthritis Society to commence a new three-year study to examine cannabis and if it is not just dampening the pain in the brain, but also working to fight inflammation and repair the joint itself. In fact, on May 4, the Medical Cannabis Research Roundtable, comprised of high-level physicians, patients, researchers and experts, urged the Canadian federal government to invest $25 million in clinical trials and medical research. The funding will be targeting three main points: • Basic Science – to have a better understanding of the role of the endocannabinoid system (ECS) in disease, and to explore how medical cannabis impacts disease progression, physiological function, and how the body processes cannabinoids. • Clinical Science – to include peer-reviewed observational and clinical trials with a focus on safety, efficacy, dosing and administration. • Health Services & Policy – to include the exploration of issues of wider policy concern such as equitable access to medical cannabis, how to manage and market medical cannabis in the context of legalization, knowledge transfer to health care workers and the broader public, social and economic impacts. There are two main forms of Rheumatoid (RA) and Osteoarthritis (OA). RA is caused by a malfunction of the immune system. Instead of fighting off intruders such as bacteria or viruses, the body attacks the synovial membranes, which facilitate the movement of joints, eventually destroying cartilage and eroding bones. Osteoarthritis (OA), or arthritis of the bones, is also found primarily among the elderly, where cartilage has been worn away through many years of use. Arthritis may also manifest as chronic inflammation of the joints as the result of injuries. Arthritis of any type can be an extremely painful and debilitating condition that presents challenges for pain management. The use of cannabis as a treatment for musclo-skeletal pain in western medicine dates to the 1700s and as far back as 2000 BC the Chinese called cannabis a treatment that "undoes rheumatism." The current most effective treatment for arthritis is a pain management regimen comprised of painkillers and aspirin, which often have limited benefits and

hazardous side effects. Cannabis is known to have natural analgesic and anti-inflammatory properties with limited side effects. Though cannabis has been shown to help if ingested or inhaled, that is not the only way it can help arthritis sufferers. Cannabis infused topicals can be applied directly to the inflamed area and immediate relief will be seen. For current marijuana patients looking for arthritic relief, look for products (or the flowers themselves) including these strains: Blue Dream, Girl Scout Cookies, Mango Kush, Sour Diesel, Harlequin (High CBD), Blueberry Kush or Agent Orange.

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Attachments: cbd.png

HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Bo Nicole Capener	Edibles List Magazine	Support	No

Comments: In many new cases in the media, we are seeing veterinarians and emergency room doctors counting their arising weekly intakes of overdoses on cannabis infused edibles. In each story they say, “There’s nothing that can be done.” We are here to let you know that this is not true, something absolutely can be done. Cannabidiol (CBD) is a known tetrahydrocannabinol (THC) inhibitor, which means that a CBD dose can be administered to any patient or any that is feeling “too high.” No matter where you stand or how you feel about the cannabis plant, the medical research shows definite evidence of THC metabolizing at a different rate when cannabidiol was administered. In 1996 a study was conducted by the Department of Pharmacy, at the University of California, San Francisco determining that cannabidiol inhibited the metabolization of tetrahydrocannabinol and cyclosporine (an immunosuppressive drug used to prevent the rejection of grafts and transplants), in mouse and human microsomes. The study found that cannabidiol selectively decreased THC levels in human cells, specifically the group of metabolizing enzymes in the human liver. Another study was conducted early last year in January of 2013 that found CBD inhibited paranoid and psychotic symptoms in human test subjects when administered prior to dosing intravenous THC. The Beckley Foundation also conducted a study on a female human. In this two day study, on one occasion, she was given a mixture of intravenous THC + CBD and on the other day she was administered pure THC. With the CBD mix she was euphoric, coherent and happy. In contrast with the pure THC, she was paranoid, couldn’t form thoughts, couldn’t remember things, and was extremely mentally uncomfortable with how she was feeling. THC is the psychoactive compound that makes you feel “high” and sometimes too high if ingested in concentrated forms. Cannabidiol (CBD) is the answer when a human or animal “overdoses” on marijuana. On a molecular level, CBD inhibits and decreases THC levels in the body. It is a statistical fact that there have been zero deaths in history from cannabis alone. Do not let a doctor tell you that nothing can be done for your dog that accidentally ate your roach, hash, or brownie. Cannabidiol or high CBD oils, including extractions from the legal hemp plant are available at your local cannabis dispensary or you can purchase sublingual products online and have it shipped to you for your medicine cabinet. The dosing for a pet or a dog will not need to be nearly as high for a human, but it’s important to spread the word and knowledge about this so that eventually veterinary offices and hospitals have cannabidiol on hand as the antidote for a THC overdose. There are many CBD drops available at shops and legally online. HempMeds Px makes an affordable sublingual tincture called Cibdex, which usually runs about $30. Valley Hi in Woodland Hills, Calif. carries it, so do many other shops. ACTUAL STUDY FINDINGS: Inhibition of cyclosporine and tetrahydrocannabinol metabolism by cannabidiol in mouse and human

microsomes. [W Jaeger, L Z Benet, L M Bornheim Department of Pharmacy, University of California, SF] “ABSTRACT 1. The in vitro and in vivo effects of cannabidiol on mouse and human liver microsomal metabolism of the immunosuppressive drug cyclosporine and the psychoactive compound tetrahydrocannabinol have been examined. 2. Preincubation of mouse or human liver microsomes with cannabidiol decreased the formation of all detectable cyclosporine metabolites by 73-89%. 3. In vivo cannabidiol treatment of mouse similarly decreased the formation of all detectable cyclosporine metabolites by 60-86%. 4. Preincubation of human liver microsomes with cannabidiol selectively decreased the formation of tetrahydrocannabinol metabolites catalyzed by cytochrome P4503A by 60% but had no effect on P4502C9-catalyzed metabolites. 5. Cannabidiol has the potential to clinically affect cyclosporine metabolism which may result in increased cyclosporine blood levels and an increase in its toxic side effects, and likewise may also affect tetrahydrocannabinol and its metabolite levels in man.”

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From: Bo - Edibles List <bo@edibleslist.com>
Sent: Tuesday, February 7, 2017 10:00 PM
To: pbstestimony
Subject: HB 1501 - Multiple Testimonies Attached
Attachments: Hawaii_PBS_HB_1501_Bo.pdf; Hawaii_PBS_HB_1501_Bob_Incredibles.pdf; Hawaii_PBS_HB_1501_Canna_Kids.pdf; Hawaii_PBS_HB_1501_Tangy_D.pdf; Hawaii_PBS_HB_1501_Jackie_S.pdf

February 7, 2017

Public Health & Safety Committee
Hawaii State Capitol
415 South Beretania St.
Honolulu, HI 96813

Re: HB 1501 - Changes to the Hawaii Dispensary Laws

Dear Honorable Chair Takayama and Members of the Committee,

My name is B. Le Grand and I am the CEO and President of Edibles List, LLC and the Infused Expo, Los Angeles-based businesses. I run an educational magazine and several medical cannabis websites and events. I was born and raised in Hawaii and my family still lives and runs local family owned and operated businesses in Honolulu. I am a member of the National Cannabis Industry Association, Women Grow, and Founder of the Asian Cannabis Association.

I have seen the many changes occur in the cannabis industry over the last 7 years. Most importantly, we've seen progress, acceptance, licensing, taxation and the overall evolution of the only new industry since the tech industry, established less than 30 years ago.

I started my company with a need for information, and I began filling that gap with a Yelp-like website for edibles in 2009. I quickly learned that there was a severe lack of education about cannabis and its known medical benefits. There was no where to go for patients looking for real starting information when it came to edibles and using cannabis for cancer and chemotherapy. So, in an effort to create a tool in the market to help self-regulate the industry, I launched Edibles Magazine to help educate the growing cannabis community.

I wanted to know exactly what was in my edibles, who packaged them, how many milligrams the product is, and I wanted healthier options to consume. I didn't want to smoke, and I couldn't in my offices. The fact of the matter is, if you need cannabis as a medicine the most concentrated way to get it in your system is via edible consumption through the gastrointestinal tract, where the body has the most cannabinoids.

My magazine is now in 8 medical states with subscribers worldwide. What I've seen in this industry is the stabilization of the dispensary and manufacturing markets as well as economic benefits and improvements to funding for local infrastructure. While Los Angeles is still figuring out their licensing structure, places like Colorado have now sold just short of 1 billion dollars of legal cannabis last year, of which $135 million went to taxes, and $35 million of that went to schools. Not only does cannabis provide and create an array of new jobs, in Colorado crime went down nearly 20% since the legalization of cannabis.

San Francisco has allowed for licensing to dispensaries for over a decade. In 2012, San Francisco reported an estimated $41 million in medical cannabis sales, of which $3.5 million went to taxes, and this is before the

marijuana dispensaries zoning recently opened up allowing for more pot shops and before the sales tax rate went up.

While LA officials have shown its reluctance to open up licensing to marijuana businesses, between 2011-2013, $8.6 million dollars in marijuana taxes from dispensaries were taken in and reported by the city of Los Angeles. Imagine what the overall tax revenue will be for the 6th largest economy in the world, let alone local tax to the cities that open up licensing.

In the areas that have allowed licensing and dispensary storefronts, I consistently have dispensary managers and owners testifying that the mandatory heightened security has cleaned up the streets and unwanted trespassers, rather than attracting crime like some would believe.

While numbers and statistics may turn a skeptic into a believer, the most compelling arguments are the success stories associated with cannabis. Many of the feature stories I've highlighted in my magazine involve the extreme and almost overnight success with cannabis infused products and CBD (cannabidiol - a non-psychoactive profile of the plant) for children, veterans, and cancer patients alike. Some of the most amazing stories I have are:

•cannabis taking a 4 year old's 600 seizures a month (from Dravet Syndrome) down to 1 a week
•cannabis miraculously shrinking both benign and malignant brain tumors in innocent children
•cannabis allowing Veterans with PTSD to live a normal life
•cannabis taking my Uncle's Lymphoma from Stage 4 terminal to complete remission
•cannabis nearly curing my 12 years husky's degenerative arthritis
•cannabis curing my beautician's dementia and other Uncle's dementia
•cannabis personally helps my debilitating back pain, debilitating menstrual cycles and PTSD

The list goes on of success stories with cannabis. While we might not have the Federal greenlight on cannabis medical studies, everyone in the cannabis industry has seen exactly what the medical benefits are. Furthermore, while the government and DEA says there is no medical benefit to marijuana, the Federal government currently issues federal medical marijuana to two patients, and has been from 1976 to today. Additionally, the Federal government owns the patent on CBD, domestically and internationally, for cannabis as an antioxidant and as a neuroprotectant. That patent is licensed out to a pharmaceutical company producing the test drug Epiodilex for epilepsy, which is soon to be released in the public markets, but can't until cannabis gets rescheduled. The proof that there is medical benefit to cannabis is there.

And with all these facts and all this passion for cannabis and its benefits, I still can't get my own Veteran father, with PTSD, diabetes, extremely bad heart health, blood clots in his lungs and in his legs, a hernia, early onset dementia and more, to try CBD or any form of natural medical cannabis to help improve his health. Until elected officials like yourselves begin to allow for proper permitting, there will still be a stigma associated with cannabis, its production and its medical usage.
While cannabis regulation change will not be an easy task, it is be better to be a leader, setting an example on this forefront, helping other municipalities understand that there is tax, economic, and health benefits to medical cannabis.

I've attached multiple testimonies from reputable individuals and companies in the cannabis industry in support of HB 1501.

Thank you for your time,

-Bo

Bo Nicole Capener (aka B. Le Grand) | **CEO** / **Editor-in-Chief**
Direct: 415.203.3549 | **Office: 310.601.7299** | **bo@edibleslist.com**
www.EdiblesList.com | www.EdiblesMagazine.com

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Submitted on: 2/7/2017
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Submitted By	Organization	Testifier Position	Present at Hearing
Bo Nicole Capener	Individual	Support	No

Comments: U.S. Patent No. 6,630,507: The Government Patent on CBD MOST AMERICANS ARE UNAWARE: THE UNITED STATES GOVERNMENT HOLDS THE PATENT TO CANNABINOIDS AS USE FOR MEDICINE. Yes, it's true. The majority of the world is unaware that the United States government holds multiple domestic AND international patents on cannabinoids as use for medicine, specifically as an antioxidant and neuroprotectant. How can this be? Cannabis is currently listed as a Schedule I Drug, on the Federal government's Controlled Substances List. It's time that the government's hypocrisy comes to light. United States Patent 6,630,507 Hampson , et al. October 7, 2003 **Please see images for: (Certificate of Correction) ** Cannabinoids as antioxidants and neuroprotectants Abstract Cannabinoids have been found to have antioxidant properties, unrelated to NMDA receptor antagonism. This new found property makes cannabinoids useful in the treatment and prophylaxis of wide variety of oxidation associated diseases, such as ischemic, age-related, inflammatory and autoimmune diseases. The cannabinoids are found to have particular application as neuroprotectants, for example in limiting neurological damage following ischemic insults, such as stroke and trauma, or in the treatment of neurodegenerative diseases, such as Alzheimer's disease, Parkinson's disease and HIV dementia. Nonpsychoactive cannabinoids, such as cannabidoil, are particularly advantageous to use because they avoid toxicity that is encountered with psychoactive cannabinoids at high doses useful in the method of the present invention. A particular disclosed class of cannabinoids useful as neuroprotective antioxidants is formula (I) wherein the R group is independently selected from the group consisting of H, CH.sub.3, and COCH.sub.3. ##STR1## Inventors: Hampson; Aidan J. (Irvine, CA), Axelrod; Julius (Rockville, MD), Grimaldi; Maurizio (Bethesda, MD) Assignee: The United States of America as represented by the Department of Health and Human Services (Washington, DC) Family ID: 26767641 Appl. No.: 09/674,028 Filed: February 2, 2001 PCT Filed: April 21, 1999 PCT No.: PCT/US99/08769 PCT Pub. No.: WO99/53917 PCT Pub. Date: October 28, 1999 Current U.S. Class: 514/454 Current CPC Class: A61K 31/35 (20130101) Current International Class: A61K 31/35 (20060101); A61K 031/35 () Field of Search: ;514/454 References Cited [Referenced By] U.S. Patent Documents 2304669 December 1942 Adams 4876276 October 1989 Mechoulam et al. 5227537 July 1993 Stoss et al. 5284867 February 1994 Kloog et al. 5434295 July 1995 Mechoulam et al. 5462946 October 1995 Mitchell et al. 5512270 April 1996 Ghio et al. 5521215 May 1996 Mechoulam et al. 5538993 July 1996 Mechoulam et al. 5635530 June 1997 Mechoulam et al. 5696109 December 1997 Malfroy-Camine et al. 6410588 June 2002 Feldmann et al. Foreign Patent Documents 427518 May 1991 EP 576357 Dec 1993 EP 656354 Jun 1995 EP 658546 Jun 1995 EP WO9305031 Mar 1993 WO WO9412667 Jun 1994 WO WO9612485

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H, substituted or unsubstituted alkyl, carboxyl or alkoxy. 7. The method of claim 2, wherein the cannabinoid is: ##STR23## where A is cyclohexyl, substituted or unsubstituted aryl, or ##STR24## but not a pinene; R.sub.1 is H, substituted or unsubstituted alkyl, or substituted or unsubstituted carboxyl; R.sub.2 is H, lower substituted or unsubstituted alkyl, or alkoxy; R.sub.3 is of H, lower substituted or unsubstituted alkyl, or substituted or unsubstituted carboxyl; R.sub.4 is H, hydroxyl, or lower substituted or unsubstituted alkyl; and R.sub.5 is H, hydroxyl, or lower substituted or unsubstituted alkyl. 8. The method of claim 7, wherein R.sub.1 is lower alkyl, COOH or COCH.sub.3 ; R.sub.2 is unsubstituted C.sub.1 -C.sub.5 alkyl, hydroxyl, methoxy or ethoxy; R.sub.3 is H, unsubstituted C.sub.1 -C.sub.3 alkyl, or COCH.sub.3 ; R.sub.4 is hydroxyl, pentyl, heptyl, or diemthylheptyl; and R.sub.5 is hydroxyl or methyl. 9. The method of claim 1, wherein the cannabinoid is: ##STR25## where R.sub.1, R.sub.2 and R.sub.3 are independently H, CH.sub.3, or COCH.sub.3. 10. The method of claim 9, wherein the cannabinoid is: ##STR26## where: a) R.sub.1 =R.sub.2 =R.sub.3 =H; b) R.sub.1 =R.sub.3 =H, R.sub.2 =CH.sub.3 ; c) R.sub.1 =R.sub.2 =CH.sub.3, R.sub.3 =H; d) R.sub.1 =R.sub.2 =COCH.sub.3, R.sub.3 =H; or e) R.sub.1 =H, R.sub.2 =R.sub.3 =COCH.sub.3. 11. The method of claim 2, wherein the cannabinoid is: ##STR27## where R.sub.19 is H, lower alkyl, lower alcohol, or carboxyl; R.sub.20 is H or OH; and R.sub.21 -R.sub.25 are independently H or OH. 12. The method of claim 11, wherein R.sub.19 is H, CH.sub.3, CH.sub.2 OH, or COOH, and R.sub.20 -R.sub.24 are independently H or OH. 13. The method of claim 2, wherein the cannabinoid is: ##STR28## where R.sub.19 and R.sub.20 are H, and R.sub.26 is alkyl. 14. The method of claim 10, wherein the cannabinoid is cannabidiol. 15. A method of treating an ischemic or neurodegenerative disease in the central nervous system of a subject, comprising administering to the subject a therapeutically effective amount of a cannabinoid, where the cannabinoid is ##STR29## where R is H, substituted or unsubstituted alkyl, carboxyl, alkoxy, aryl, aryloxy, arylalkyl, halo or amino. 16. The method of claim 15, wherein the cannabinoid is not a psychoactive cannabinoid. 17. The method of claim 15 where the ischemic or neurodegenerative disease is an ischemic infarct, Alzheimer's disease, Parkinson's disease, and human immunodeficiency virus dementia, Down's syndrome, or heart disease. 18. A method of treating a disease with a cannabinoid that has substantially no binding to the NMDA receptor, comprising determining whether the disease is caused by oxidative stress, and if the disease is caused by oxidative stress, administering the cannabinoid in a therapeutically effective antioxidant amount. 19. The method of claim 18, wherein the cannabinoid has a volume of distribution of at least 1.5 L/kg and substantially no activity at the cannabinoid receptor. 20. The method of claim 19, wherein the cannabinoid has a volume of distribution of at least 10 L/kg. 21. The method of claim 1, wherein the cannabinoid selectively inhibits an enzyme activity of 5- and 15-lipoxygenase more than an enzyme activity of 12-lipoxygenase. 22. A method of treating a neurodegenerative or ischemic disease in the central nervous system of a subject, comprising administering to the subject a therapeutically effective amount of a compound selected from any of the compounds of claims 9 through 13. 23. The method of claim 22 where the compound is cannabidiol. 24. The method of claim 22, wherein the ischemic or neurodegenerative disease is an ischemic infarct, Alzheimer's disease, Parkinson's disease, and human immunodeficiency virus dementia, Down's syndrome, or heart disease. 25. The method of claim 24 wherein the disease is an ischemic infarct. 26. The method of claim 1, wherein the cannabinoid is not an antagonist at the AMPA receptor. Description FIELD OF THE INVENTION The present invention concerns pharmaceutical compounds and compositions that are useful as tissue protectants, such as neuroprotectants and cardioprotectants. The compounds and compositions may be used, for example, in the treatment of acute ischemic neurological insults or chronic neurodegenerative diseases. BACKGROUND OF THE INVENTION Permanent injury to the central nervous system (CNS) occurs in a variety of medical conditions, and has been the subject of intense scientific scrutiny in recent years. It is known that the brain has high metabolic requirements, and that it can suffer permanent neurologic damage if deprived of sufficient oxygen (hypoxia) for even a few minutes. In the absence of oxygen (anoxia), mitochondrial production of ATP cannot meet the metabolic requirements of the brain, and tissue damage occurs. This process is exacerbated by neuronal

release of the neurotransmitter glutamate, which stimulates NMDA (N-methyl-D-aspartate), AMPA (.alpha.-amino-3-hydroxy-5-methyl-4-isoxazole propionate) and kainate receptors. Activation of these receptors initiates calcium influx into the neurons, and production of reactive oxygen species, which are potent toxins that damage important cellular structures such as membranes, DNA and enzymes. The brain has many redundant blood supplies, which means that its tissue is seldom completely deprived of oxygen, even during acute ischemic events caused by thromboembolic events or trauma. A combination of the injury of hypoxia with the added insult of glutamate toxicity is therefore believed to be ultimately responsible for cellular death. Hence if the additive insult of glutamate toxicity can be alleviated, neurological damage could also be lessened. Anti-oxidants and anti-inflammatory agents have been proposed to reduce damage, but they often have poor access to structures such as the brain (which are protected by the blood brain barrier). Given the importance of the NMDA, AMPA and kainate receptors in the mechanism of injury, research efforts have focused on using antagonists to these receptors to interfere with the receptor mediated calcium influx that ultimately leads to cellular death and tissue necrosis. In vitro studies using cultured neurons have demonstrated that glutamate receptor antagonists reduce neurotoxicity, but NMDA and AMPA/kainate receptor antagonists have different effects. Antagonists to NMDAr prevent neurotoxicity if present during the glutamate exposure period, but are less effective if added after glutamate is removed. In contrast, AMPA/kainate receptor antagonists are not as effective as NMDA antagonists during the glutamate exposure period, but are more effective following glutamate exposure. Some of the research on these antagonists has focused on cannabinoids, a subset of which have been found to be NMDA receptor antagonists. U.S. Pat. No. 5,538,993 (3S,4S-delta-6-tetrahydrocannabinol-7-oic acids), U.S. Pat. No. 5,521,215 (sterospecific (+) THC enantiomers), and U.S. Pat. No. 5,284,867 (dimethylheptyl benzopyrans) have reported that these cannabinoids are effective NMDA receptor blockers. U.S. Pat. No. 5,434,295 discloses that the 1,1 dimethylheptyl (DMH) homolog of [3R,4R]-7-hydroxy-.DELTA..sup.6 THC (known as HU-210) is a superpotent cannabinoid receptor agonist with cannabinomimetic activity two orders of magnitude greater than the natural .DELTA..sup.9 THC. The HU-210 dimethylheptyl cannabinoid, has severe side effects, including fatigue, thirst, headache, and hypotension. J. Pharmacol. Sci. 60:1433-1457 (1971). Subjects who received this synthetic cannabinoid with a dimethylheptyl group experienced marked psychomotor retardation, and were unwilling or incapable of assuming an erect position. In contrast to HU-210, the (-)(3R,4R) THC-DMH enantiomer (known as HU-211) displays low affinity to the cannabinoid receptors, but retains NMDA receptor antagonist neuroprotective activity. ##STR2## THC (tetrahydrocannabinol) is another of the cannabinoids that has been shown to be neuroprotective in cell cultures, but this protection was believed to be mediated by interaction at the cannabinoid receptor, and so would be accompanied by undesired psychotropic side effects. ##STR3## Although it has been unclear whether cannabimimetic activity plays a role in neuroprotection against glutamate induced neurological injury, the teaching in this field has clearly been that a cannabinoid must at least be an antagonist at the NMDA receptor to have neuroprotective effect. Hence cannabidiol (2-[3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-pentyl-1,3-benzenediol or CBD), a cannabinoid devoid of psychoactive effect (Pharm. Rev. 38:21-43, 1986), has not been considered useful as a neuroprotectant. Cannabidiol has been studied as an antiepileptic (Carlini et al., J. Clin. Pharmacol. 21:417S-427S, 1981; Karler et al., J. Clin. Pharmacol. 21:437S-448S, 1981, Consroe et al., J. Clin Phannacol. 21:428S-436S, 1981), and has been found to lower intraocular pressure (Colasanti et al, Exp. Eye Res. 39:251-259, 1984 and Gen. Pharmac. 15:479-484, 1984). ##STR4## No signs of toxicity or serious side effects have been observed following chronic administration of cannabidiol to healthy volunteers (Cunha et al., Pharmacology 21:175-185, 1980), even in large acute doses of 700 mg/day (Consroe et al., Pharmacol. Biochem. Behav. 40:701-708, 1991) but cannabidiol is inactive at the NMDA receptor. Hence in spite of its potential use in treating glaucoma and seizures, cannabidiol has not been considered a neuroprotective agent that could be used to prevent glutamate induced damage in the central nervous system. SUMMARY OF THE INVENTION It is an object of this invention to provide a new class of antioxidant drugs, that have particular application as neuroprotectants, although they are generally useful in the treatment of many

oxidation associated diseases. Yet another object of the invention is to provide a subset of such drugs that can be substantially free of psychoactive or psychotoxic effects, are substantially non-toxic even at very high doses, and have good tissue penetration, for example crossing the blood brain barrier. It has surprisingly been found that cannabidiol and other cannabinoids can function as neuroprotectants, even though they lack NMDA receptor antagonist activity. This discovery was made possible because of the inventor's recognition of a previously unanticipated antioxidant property of the cannabinoids in general (and cannabidiol in particular) that functions completely independently of antagonism at the NMDA, AMPA and kainate receptors. Hence the present invention includes methods of preventing or treating diseases caused by oxidative stress, such as neuronal hypoxia, by administering a prophylactic or therapeutically effective amount of a cannabinoid to a subject who has a disease caused by oxidative stress. The cannabinoid may be a cannabinoid other than THC, HU-210, or other potent cannabinoid receptor agonists. The cannabinoid may also be other than HU-211 or any other NMDA receptor antagonist that has previously been reported. A potent cannabinoid receptor agonist is one that has an EC.sub.50 at the cannabinoid receptor of 50 nM or less, but in more particular embodiments 190 nM or 250 nM or less. In disclosed embodiments the cannabinoid is not psychoactive, and is not psychotoxic even at high doses. In some particularly disclosed embodiments, the cannabinoid is selected from the group: ##STR5## where A is aryl, and particularly ##STR6## but not a pinene such as: ##STR7## and the R.sub.1 -R.sub.5 groups are each independently selected from the groups of hydrogen, lower substituted or unsubstituted alkyl, substituted or unsubstituted carboxyl, substituted or unsubstituted alkoxy, substituted or unsubstituted alcohol, and substituted or unsubstituted ethers, and R.sub.6 -R.sub.7 are H or methyl. In particular embodiments, there are no nitrogens in the rings, and/or no amino substitutions on the rings. In other embodiments, the cannabinoid is one of the following: ##STR8## where there can be 0 to 3 double bonds on the A ring, as indicated by the optional double bonds indicated by dashed lines on the A ring. The C ring is aromatic, and the B ring can be a pyran. Particular embodiments are dibenzo pyrans and cyclohexenyl benzenediols. Particular embodiments of the cannabinoids of the present invention may also be highly lipid soluble, and in particular embodiments can be dissolved in an aqueous solution only sparingly (for example 10 mg/ml or less). The octanol/water partition ratio at neutral pH in useful embodiments is 5000 or greater, for example 6000 or greater. This high lipid solubility enhances penetration of the drug into the CNS, as reflected by its volume of distribution (V.sub.d) of 1.5 L/kg or more, for example 3.5 L/kg, 7 L/kg, or ideally 10 L/kg or more, for example at least 20 L/kg. Particular embodiments may also be highly water soluble derivatives that are able to penetrate the CNS, for example carboxyl derivatives. R.sub.7-18 are independently selected from the group of H, substituted or unsubstituted alkyl, especially lower alkyl, for example unsubstituted C.sub.1 -C.sub.3 alkyl, hydroxyl, alkoxy, especially lower alkoxy such as methoxy or ethoxy, substituted or unsubstituted alcohol, and unsubstituted or substituted carboxyl, for example COOH or COCH.sub.3. In other embodiments R.sub.7-18 can also be substituted or unsubstituted amino, and halogen. The cannabinoid has substantially no binding to the NMDAr (for example an IC.sub.50 greater than or equal to 5 .mu.M or 10 .mu.M), has substantially no psychoactive activity mediated by the cannabinoid receptor (for example an IC.sub.50 at the cannabinoid receptor of greater than or equal to 300 nM, for example greater than 1 .mu.M and a K.sub.i greater than 250 nM, especially 500-1000 nM, for example greater than 1000 nM), and antioxidant activity, as demonstratable by the Fenton reaction or cyclic voltametry. In other particular embodiments, the cannabinoids are one of the following: ##STR9## where R.sub.19 is substituted or unsubstituted alkyl, such as lower alkyl (for example methyl), lower alcohol (such as methyl alcohol) or carboxyl (such as carboxylic acid) and oxygen (as in .dbd.O); R.sub.20 is hydrogen or hydroxy; R.sub.21 is hydrogen, hydroxy, or methoxy; R.sub.22 is hydrogen or hydroxy; R.sub.23 is hydrogen or hydroxy; R.sub.24 is hydrogen or hydroxy; R.sub.25 is hydrogen or hydroxy; and R.sub.26 is substituted or unsubstituted alkyl (for example n-methyl alkyl), substituted or unsubstituted alcohol, or substituted or unsubstituted carboxy. In yet other embodiments of the invention, the cannabinoids are ##STR10## wherein numbering conventions for each of the ring positions are shown, and R.sub.27, R.sub.28 and R.sub.29 are

independently selected from the group consisting of H, unsubstituted lower alkyl such as CH.sub.3, and carboxyl such as COCH.sub.3. Particular examples of nonpsychoactive cannabinoids that fall within this definition are cannabidiol and ##STR11## and other structural analogs of cannabidiol. In more particular embodiments, the cannabinoid is used to prevent or treat an ischemic or neurodegenerative disease in the central nervous system of a subject, by administering to the subject a therapeutically effective amount of a cannabinoid to protect against oxidative injury to the central nervous system. The cannabinoid may be any of the compounds set forth above, or more specifically ##STR12## wherein R.sub.27, R.sub.28 and R.sub.29 are independently selected from the group consisting of H, lower alkyl such as CH.sub.3, and carboxyl such as COCH.sub.3, and particularly wherein a) R.sub.27 =R.sub.28 =R.sub.29 =H b) R.sub.27 =R.sub.29 =H; R.sub.28 =CH.sub.3 c) R.sub.27 =R.sub.28 =CH.sub.3 ; R.sub.29 =H d) R.sub.27 =R.sub.28 =COCH.sub.3 ; R.sub.29 =H e) R.sub.27 =H; R.sub.28 =R.sub.29 =COCH.sub.3 When R.sub.27 =R.sub.28 =R.sub.29 =H, then the compound is cannabidiol. When R.sub.27 =R.sub.29 =H and R.sub.28 =CH.sub.3, the compound is CBD monomethyl ether. When R.sub.27 =R.sub.28 =CH.sub.3 and R.sub.29 =H, the compound is CBD dimethyl ether. When R.sub.27 =R.sub.28 =COCH.sub.3 and R.sub.29 =H, the compound is CBD diacetate. When R.sub.27 =H and R.sub.28 =R.sub.29 =COCH.sub.3, the compound is CBD monoacetate. The ischemic or neurodegenerative disease may be, for example, an ischemic infarct, Alzheimer's disease, Parkinson's disease, Down's syndrome, human immunodeficiency virus (HIV) dementia, myocardial infarction, or treatment and prevention of intraoperative or perioperative hypoxic insults that can leave persistent neurological deficits following open heart surgery requiring heart/lung bypass machines, such as coronary artery bypass grafts (CABG). The invention also includes an assay for selecting a cannabinoid to use in treating a neurological disease by determining whether the cannabinoid is an antioxidant. Once it has been determined that the cannabinoid is an antioxidant, an antioxidant effective amount of the cannabinoid is administered to treat the neurological disease, such as a vascular ischemic event in the central nervous system, for example the type caused by a neurovascular thromboembolism. Similarly, the method of the present invention includes determining whether a disease is caused by oxidative stress, and if the disease is caused by oxidative stress, administering the cannabinoid in a therapeutically effective antioxidant amount. The invention also includes identifying and administering antioxidant and neuroprotective compounds (such as cannabidiol) which selectively inhibit the enzyme activity of both 5- and 15-lipoxygenase more than the enzyme activity of 12-lipoxygenase. In addition, such compounds posses low NMDA antagonist activity and low cannabinoid receptor activity. Assays for selecting compounds with the desired effect on lipoxygenase enzymes, and methods for using identified compounds to treat neurological or ischemic diseases are also provided. Such diseases may include a vascular ischemic event in the central nervous system, for example a thromboembolism in the brain, or a vascular ischemic event in the myocardium. Useful administration of the compounds involves administration both during and after an ischemic injury. These and other objects of the invention will be understood more clearly by reference to the following detailed description and drawings. BRIEF DESCRIPTION OF THE FIGURES FIG. 1A is a graph showing NMDA induced cellular damage in a neuron (as measured by LDH release) in cells that were exposed to glutamate for 10 minutes, which demonstrates that increasing concentrations of cannabidiol in the cell culture protects against cellular damage. FIG. 1B is a graph similar to FIG. 1A, but showing that AMPA/kainate receptor mediated damage (induced by glutamate and the AMPA/kainate receptor potentiating agents cyclothiazide or concanavalin A) is also reduced in a concentration dependent manner by the presence of cannabidiol in the culture medium. FIG. 2A is a bar graph showing cellular damage (as measured by LDH release) in the presence of glutamate alone (100 .mu.M Glu), and in the presence of glutamate and 5 .mu.M cannabidiol (CBD) or 5 .mu.M THC, and demonstrates that CBD and THC were similarly protective. FIG. 2B is a bar graph similar to FIG. 2A, but showing the cellular damage assessed in the presence of the cannabinoid receptor antagonist SR 141716A (SR), which was not found to alter the neuroprotective effect of CBD (5 .mu.M) or THC (5 .mu.M), indicating the effect is not a typical cannabinoid effect mediated by the cannabinoid receptor. FIG. 3 is a graph showing the reduction

oxidation potentials determined by cyclic voltametry for some natural and synthetic cannabinoids, the antioxidant BHT, and the non-cannabinoid anandamide (arachidonyl ethanolamide) which is a ligand for the cannabinoid receptor. The voltage at which initial peaks occur is an indication of antioxidant activity. FIG. 4 is a graph that demonstrates the antioxidant properties of BHT, CBD and THC, by plotting the fluorescence of a fluorescent dye against concentrations of these substances, where declining fluorescence is an indication of greater antioxidant activity. FIG. 5A is a graph illustrating decreased t-butyl peroxide induced toxicity (as measured by LDH release) in the presence of increasing concentrations of cannabidiol, demonstrating that cannabidiol is an effective antioxidant in living cells. FIG. 5B is a bar graph comparing the antioxidant activity of several antioxidants against glutamate induced toxicity in neurons, showing that CBD has superior antioxidant activity. FIG. 6A is a graph showing the effect of CBD (as measured by the change in absorbance at 234 nm) on the enzymatic activity of two lipoxygenase enzymes, rabbit 15-LO and porcine 12-LO, which demonstrates that CBD inhibits 15-LO, but not 12-LO enzyme. FIG. 6B is a graph demonstrating that inhibitory effect of CBD on 15-LO is competitive. FIG. 7A is a graph similar to FIG. 6A, but was performed in whole cells rather than purified enzyme preparations, and shows the effect of CBD (as measured by the change in absorbance at 236 nm) on the enzymatic activity of 5-LO from cultured rat basophillic leukemia cells (RBL-2H3), which demonstrates that CBD inhibits 5-LO. FIG. 7B is a graph showing the effect of CBD (as measured by the change in absorbance at 236 nm) on the formation of 12-HETE (the product of 12-LO) by human leukocytes (12-LO type 1). FIG. 7C is a graph similar to FIG. 7B, showing the effect of CBD (as measured by the change in absorbance at 236 nm) on the formation of 12-HETE by human platelets (12-LO type 2). FIG. 8 is a bar graph demonstrating that 12-HETE can protect cortical neurons from NMDAr toxicity most effectively when administered during and post ischemia. DETAILED DESCRIPTION OF SOME SPECIFIC EMBODIMENTS This invention provides antioxidant compounds and compositions, such as pharmaceutical compositions, that include cannabinoids that act as free radical scavengers for use in prophylaxis and treatment of disease. The invention also includes methods for using the antioxidants in prevention and treatment of pathological conditions such as ischemia (tissue hypoxia), and in subjects who have been exposed to oxidant inducing agents such as cancer chemotherapy, toxins, radiation, or other sources of oxidative stress. The compositions and methods described herein are also used for preventing oxidative damage in transplanted organs, for inhibiting reoxygenation injury following reperfusion of ischemic tissues (for example in heart disease), and for any other condition that is mediated by oxidative or free radical mechanisms of injury. In particular embodiments of the invention, the compounds and compositions are used in the treatment of ischemic cardiovascular and neurovascular conditions, and neurodegenerative diseases. However the present invention can also be used as an antioxidant treatment in non-neurological diseases. Molecular oxygen is essential for aerobic organisms, where it participates in many biochemical reactions, including its role as the terminal electron acceptor in oxidative phosphorylation. However excessive concentrations of various forms of reactive oxygen species and other free radicals can have serious adverse biological consequences, including the peroxidation of membrane lipids, hydroxylation of nucleic acid bases, and the oxidation of sulfhydryl groups and other protein moieties. Biological antioxidants include tocopherols and tocotrieneols, carotenoids, quinones, bilirubin, ascorbic acid, uric acid, and metal binding proteins. However these endogenous antioxidant systems are often overwhelmed by pathological processes that allow permanent oxidative damage to occur to tissue. Free radicals are atoms, ions or molecules that contain an unpaired electron, are usually unstable, and exhibit short half-lives. Reactive oxygen species (ROS) is a collective term, designating the oxygen radicals (e.g. .O.sub.2.sup.- superoxide radical), which by sequential univalent reduction produces hydrogen peroxide (H.sub.2 O.sub.2) and hydroxyl radical (.OH). The hydroxyl radical sets off chain reactions and can interact with nucleic acids. Other ROS include nitric oxide (NO.) and peroxy nitrite (NOO.), and other peroxyl (RO.sub.2.) and alkoxyl (RO.) radicals. Increased production of these poisonous metabolites in certain pathological conditions is believed to cause cellular damage through the action of the highly reactive molecules on proteins, lipids and DNA. In particular, ROS are believed to

accumulate when tissues are subjected to ischemia, particularly when followed by reperfusion. The pharmaceutical compositions of the present invention have potent antioxidant and/or free radical scavenging properties, that prevent or reduce oxidative damage in biological systems, such as occurs in ischemic/reperfusion injury, or in chronic neurodegenerative diseases such as Alzheimer's disease, HIV dementia, and many other oxidation associated diseases. DEFINITIONS "Oxidative associated diseases" refers to pathological conditions that result at least in part from the production of or exposure to free radicals, particularly oxyradicals, or reactive oxygen species. It is evident to those of skill in the art that most pathological conditions are multifactorial, and that assigning or identifying the predominant causal factors for any particular condition is frequently difficult. For these reasons, the term "free radical associated disease" encompasses pathological states that are recognized as conditions in which free radicals or ROS contribute to the pathology of the disease, or wherein administration of a free radical inhibitor (e.g. desferroxamine), scavenger (e.g. tocopherol, glutathione) or catalyst (e.g. superoxide dismutase, catalase) is shown to produce detectable benefit by decreasing symptoms, increasing survival, or providing other detectable clinical benefits in treating or preventing the pathological state. Oxidative associated diseases include, without limitation, free radical associated diseases, such as ischemia, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial ischemia or infarction, cerebrovascular accidents (such as a thromboembolic or hemorrhagic stroke) that can lead to ischemia or an infarct in the brain, operative ischemia, traumatic hemorrhage (for example a hypovolemic stroke that can lead to CNS hypoxia or anoxia), spinal cord trauma, Down's syndrome, Crohn's disease, autoimmune diseases (e.g. rheumatoid arthritis or diabetes), cataract formation, uveitis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cellular apoptosis, radiation sickness, and others. The present invention is believed to be particularly beneficial in the treatment of oxidative associated diseases of the CNS, because of the ability of the cannabinoids to cross the blood brain barrier and exert their antioxidant effects in the brain. In particular embodiments, the pharmaceutical composition of the present invention is used for preventing, arresting, or treating neurological damage in Parkinson's disease, Alzheimer's disease and HIV dementia; autoimmune neurodegeneration of the type that can occur in encephalitis, and hypoxic or anoxic neuronal damage that can result from apnea, respiratory arrest or cardiac arrest, and anoxia caused by drowning, brain surgery or trauma (such as concussion or spinal cord shock). As used herein, an "antioxidant" is a substance that, when present in a mixture containing an oxidizable substrate biological molecule, significantly delays or prevents oxidation of the substrate biological molecule. Antioxidants can act by scavenging biologically important reactive free radicals or other reactive oxygen species (.O.sub.2.sup.-, H.sub.2 O.sub.2, .OH, HOCl, ferryl, peroxyl, peroxynitrite, and alkoxyl), or by preventing their formation, or by catalytically converting the free radical or other reactive oxygen species to a less reactive species. Relative antioxidant activity can be measured by cyclic voltametry studies of the type disclosed in Example 5 (and FIG. 3), where the voltage (x-axis) is an index of relative antioxidant activity. The voltage at which the first peak occurs is an indication of the voltage at which an electron is donated, which in turn is an index of antioxidant activity. "Therapeutically effective antioxidant doses" can be determined by various methods, including generating an empirical dose-response curve, predicting potency and efficacy of a congener by using quantitative structure activity relationships (QSAR) methods or molecular modeling, and other methods used in the pharmaceutical sciences. Since oxidative damage is generally cumulative, there is no minimum threshold level (or dose) with respect to efficacy. However, minimum doses for producing a detectable therapeutic or prophylactic effect for particular disease states can be established. As used herein, a "cannabinoid" is a chemical compound (such as cannabinol, THC or cannabidiol) that is found in the plant species Cannabis saliva (marijuana), and metabolites and synthetic analogues thereof that may or may not have psychoactive properties. Cannabinoids therefore include (without limitation) compounds (such as THC) that have high affinity for the cannabinoid receptor (for example K.sub.i <250 nM), and compounds that do not have significant affinity for the cannabinoid receptor (such as cannabidiol, CBD). Cannabinoids also include compounds that have a characteristic dibenzopyran ring structure (of the type seen in THC) and

cannabinoids which do not possess a pyran ring (such as cannabidiol). Hence a partial list of cannabinoids includes THC, CBD, dimethyl heptylpentyl cannabidiol (DMHP-CBD), 6,12-dihydro-6-hydroxy-cannabidiol (described in U.S. Pat. No. 5,227,537, incorporated by reference); (3S,4R)-7-hydroxy-.DELTA..sup.6 -tetrahydrocannabinol homologs and derivatives described in U.S. Pat. No. 4,876,276, incorporated by reference; (+)-4-[4-DMH-2,6-diacetoxy-phenyl]-2-carboxy-6,6-dimethylbicyclo[3.1. 1]hept-2-en, and other 4-phenylpinene derivatives disclosed in U.S. Pat. No. 5,434,295, which is incorporated by reference; and cannabidiol (-)(CBD) analogs such as (-)CBD-monomethylether, (-)CBD dimethyl ether; (-)CBD diacetate; (-)3'-acetyl-CBD monoacetate; and .+-.AF11, all of which are disclosed in Consroe et al., J. Clin. Phannacol. 21:428S-436S, 1981, which is also incorporated by reference. Many other cannabinoids are similarly disclosed in Agurell et al., Pharmacol. Rev. 38:31-43, 1986, which is also incorporated by reference. As referred to herein, the term "psychoactivity" means "cannabinoid receptor mediated psychoactivity." Such effects include, euphoria, lightheadedness, reduced motor coordination, and memory impairment. Psychoactivity is not meant to include non-cannabinoid receptor mediated effects such as the anxiolytic effect of CBD. The "lipoxygenase enzyme activity" refers to the relative level of lipoxygenase enzyme activity for a particular lipoxgenase, such as 5-, 15- or 12-lipoxygenase, as measured in Example 8. A compound would be said to "selectively inhibit a lipoxgenase enzyme" if the concentration of inhibitor required to reduce enzyme activity by 50% was at least about 5 times less than the amount required to reduce activity of a second lipoxgenase enzyme by the same degree (under the same conditions, i.e. temperature, substrate concentration, etc.) An "antagonist" is a compound that binds and occupies a receptor without activating it. In the presence of a sufficient concentration of antagonist, an agonist cannot activate its receptor. Therefore, antagonists may decrease the neurotoxicity mediated by NMDA (as described in Example 3) or AMPA and Kainate (as described in Example 4). An "agonist" is a compound that activates a receptor. When the receptor is activated for a longer than normal period of time, this may cause neurotoxicity, as in the case of NMDA, AMPA and kainate receptors (see Examples 3 and 4). The term "alkyl" refers to a cyclic, branched, or straight chain alkyl group containing only carbon and hydrogen, and unless otherwise mentioned contains one to twelve carbon atoms. This term is further exemplified by groups such as methyl, ethyl, n-propyl, isobutyl, t-butyl, pentyl, pivalyl, heptyl, adamantyl, and cyclopentyl. Alkyl groups can either be unsubstituted or substituted with one or more substituents, e.g. halogen, alkyl, alkoxy, alkylthio, trifluoromethyl, acyloxy, hydroxy, mercapto, carboxy, aryloxy, aryloxy, aryl, arylalkyl, heteroaryl, amino, alkylamino, dialkylamino, morpholino, piperidino, pyrrolidin-1-yl, piperazin-1-yl, or other functionality. The term "lower alkyl" refers to a cyclic, branched or straight chain monovalent alkyl radical of one to seven carbon atoms. This term is further exemplified by such radicals as methyl, ethyl, n-propyl, i-propyl, n-butyl, t-butyl, i-butyl (or 2-methylpropyl), cyclopropylmethyl, i-amyl, n-amyl, hexyl and heptyl. Lower alkyl groups can also be unsubstituted or substituted, where a specific example of a substituted alkyl is 1,1-dimethyl heptyl. "Hydroxyl" refers to --OH. "Alcohol" refers to R--OH, wherein R is alkyl, especially lower alkyl (for example in methyl, ethyl or propyl alcohol). An alcohol may be either linear or branched, such as isopropyl alcohol. "Carboxyl" refers to the radical --COOH, and substituted carboxyl refers to --COR where R is alkyl, lower alkyl or a carboxylic acid or ester. The term "aryl" or "Ar" refers to a monovalent unsaturated aromatic carbocyclic group having a single ring (e.g. phenyl) or multiple condensed rings (e.g. naphthyl or anthryl), which can optionally be unsubstituted or substituted with, e.g., halogen, alkyl, alkoxy, alkylthio, trifluoromethyl, acyloxy, hydroxy, mercapto, carboxy, aryloxy, aryl, arylalkyl, heteroaryl, amino, alkylamino, dialkylamino, morpholino, piperidino, pyrrolidin-1-yl, piperazin-1-yl, or other functionality. The term "alkoxy" refers to a substituted or unsubstituted alkoxy, where an alkoxy has the structure --O--R, where R is substituted or unsubstituted alkyl. In an unsubstituted alkoxy, the R is an unsubstituted alkyl. The term "substituted alkoxy" refers to a group having the structure --O--R, where R is alkyl which is substituted with a non-interfering substituent. The term "arylalkoxy" refers to a group having the structure --O--R--Ar, where R is alkyl and Ar is an aromatic substituent. Arylalkoxys are a subset of substituted alkoxys. Examples of useful substituted alkoxy groups are: benzyloxy, naphthyloxy, and chlorobenzyloxy. The

term "aryloxy" refers to a group having the structure --O--Ar, where Ar is an aromatic group. A particular aryloxy group is phenoxy. The term "heterocycle" refers to a monovalent saturated, unsaturated, or aromatic carbocyclic group having a single ring (e.g. morpholino, pyridyl or faryl) or multiple condensed rings (e.g. indolizinyl or benzo[b]thienyl) and having at least one heteroatom, defined as N, O, P, or S, within the ring, which can optionally be unsubstituted or substituted with, e.g. halogen, alkyl, alkoxy, alkylthio, trifluoromethyl, acyloxy, hydroxy, mercapto, carboxy, aryloxy, aryl, arylakyl, heteroaryl, amino, alkylamino, dialkylamino, morpholino, piperidino, pyrrolidin-1-yl, piperazin-1-yl, or other functionality. "Arylalkyl" refers to the groups --R--Ar and --R--HetAr, where Ar is an aryl group. HetAr is a heteroaryl group, and R is a straight-chain or branched chain aliphatic group. Example of arylaklyl groups include benzyl and furfuryl. Arylalkyl groups can optionally be unsubstituted or substituted with, e.g., halogen, alkyl, alkoxy, alkylthio, trifluoromethyl, acyloxy, hydroxy, mercapto, carboxy, aryloxy, aryl, arylalkyl, heteroaryl, amino, alkylamino, dialkylamino, morpholino, peperidino, pyrrolidin-1-yl, piperazin-1-yl, or other functionality. The term "halo" or "halide" refers to fluoro, bromo, chloro and iodo substituents. The term "amino" refers to a chemical functionality --NR'R" where R' and R" are independently hydrogen, alkyl, or aryl. The term "quaternary amine" refers to the positively charged group --N.sup.+ R'R", where R'R" and R" are independently selected and are alkyl or aryl. A particular amino group is --NH.sub.2. A "pharmaceutical agent" or "drug" refers to a chemical compound or composition capable of inducing a desired therapeutic or prophylactic effect when properly administered to a subject. All chemical compounds include both the (+) and (-) stereoisomers, as well as either the (+) or (-) stereoisomer. Other chemistry terms herein are used according to conventional usage in the art, as exemplified by The McGraw-Hill Dictionary of Chemical Terms (1985) and The Condensed Chemical Dictionary (1981). The following examples show that both nonpsychoactive cannabidiol, and psychoactive cannabinoids such as THC, can protect neurons from glutamate induced death, by a mechanism independent of cannabinoid receptors. Cannabinoids are also be shown to be potent antioxidants capable of preventing ROS toxicity in neurons. EXAMPLE 1 Preparation of Cannabinoids and Neuronal Cultures Cannabidiol, THC and reactants other than those specifically listed below were purchased from Sigma Chemical, Co. (St. Louis, Mo.). Cyclothiazide, glutamatergic ligands and MK-801 were obtained from Tocris Cookson (UK). Dihydrorhodamine was supplied by Molecular Probes (Eugene, Oreg.). T-butyl hydroperoxide, tetraethylammonium chloride, ferric citrate and sodium dithionite were all purchased from Aldrich (WI). All culture media were Gibco/BRL (MD) products. Solutions of cannabinoids, cyclothiazide and other lipophiles were prepared by evaporating a 10 mM ethanolic solution (under a stream of nitrogen) in a siliconized microcentrifuge tube. Dimethyl sulfoxide (DMSO, less than 0.05% of final volume) was added to ethanol to prevent the lipophile completely drying onto the tube wall. After evaporation, 1 ml of culture media was added and the drug was dispersed using a high power sonic probe. Special attention was used to ensure the solution did not overheat or generate foam. Following dispersal, all solutions were made up to their final volume in siliconized glass tubes by mixing with an appropriate quantity of culture media. Primary neuronal cultures were prepared according to the method of Ventra et al. (J. Neurochem. 66:1752-1761, 1996). Fetuses were extracted by Cesarian section from a 17 day pregnant Wistar rat, and the feral brains were placed into phosphate buffered saline. The cortices were then dissected out, cut into small pieces and incubated with papain for nine minutes at 37.degree. C. After this time the tissue was dissociated by passage through a fire polished Pasteur pipette, and the resultant cell suspension separated by centrifugation over a gradient consisting of 10 mg/ml bovine serum albumin and 10 mg/ml ovomucoid (a trypsin inhibitor) in Earls buffered salt solution. The pellet was then re-suspended in high glucose, phenol red free Dulbeco's modified Eagles medium containing 10% fetal bovine serum, 2 mM glutamine, 100 IU penicillin, and 100 .mu.g/ml streptomycin (DMEM). Cells were counted, tested for vitality using the trypan blue exclusion test and seeded onto poly-D-lysine coated 24 multiwell plates. After 96 hours, 10 .mu.M fluoro-deoxyuridine and 10 .mu.M uridine were added to block glial cell growth. This protocol resulted in a highly neuron-enriched culture. EXAMPLE 2 Preparation of Astrocytes and Conditioned Media Astrocyte conditioned DMEM was used throughout the

AMPA/kainate toxicity procedure and following glutamate exposure in the NMDAr mediated toxicity protocol. Media was conditioned by 24 hour treatment over a confluent layer of type I astrocytes, prepared from two day old Wistar rat pups. Cortices were dissected, cut into small pieces, and enzymatically digested with 0.25% trypsin. Tissue was then dissociated by passage through a fire polished Pasteur pipette and the cell suspension plated into untreated 75 cm.sup.2 T-flasks. After 24 hours the media was replaced and unattached cells removed. Once astrocytes achieved confluence, cells were divided into four flasks. Media for experiments was conditioned by a 24 hour exposure to these astrocytes, after which time it was frozen at -20.degree. C. until use. Astrocyte cultures were used to condition DMEM for no longer than two months. EXAMPLE 3 NMDA Mediated Toxicity Studies Glutamate neurotoxicity can be mediated by NMDA, AMPA or kainate receptors. To examine NMDAr mediated toxicity, cultured neurons (cultured for 14-18 days) were exposed to 250 .mu.M glutamate for 10 minutes in a magnesium free saline solution. The saline was composed of 125 mM NaCl, 25 mM glucose, 10 mM HEPES (pH 7.4), 5 mM KCl, 1.8 mM calcium chloride and 5% bovine serum albumin. Following exposure, cells were washed twice with saline, and incubated for 18 hours in conditioned DMEM. The level of lactate dehydrogenase (LDH) in the media was used as an index of cell injury. Toxicity was completely prevented by addition of the NMDAr antagonist, MK-801 (500 nM, data not shown). However, FIG. 1A shows that cannabidiol also prevented neurotoxicity (maximum protection 88.+-.9%) with an EC.sub.50 of 2-4 .mu.M (specifically about 3.5 .mu.M). EXAMPLE 4 AMPA and Kainate Receptor Mediated Toxicity Studies Unlike NMDA receptors, which are regulated by magnesium ions, AMPA/kainate receptors rapidly desensitize following ligand binding. To examine AMPA and kainate receptor mediated toxicity, neurons were cultured for 7-13 days, then exposed to 100 .mu.M glutamate and 50 .mu.M cyclothiazide (used to prevent AMPA receptor desensitization). Cells were incubated with glutamate in the presence of 500 nM MK-801 (an NMDAr antagonist) for 18-20 hours prior to analysis. Specific AMPA and kainate receptor ligands were also used to separately examine the effects of cannabinoids on AMPA and kainate receptor mediated events. Fluorowillardiine (1.5 .mu.M) was the AMPA agonist and 4-methyl glutamate (10 .mu.M) was the kainate agonist used to investigate receptor mediated toxicity. When specifically examining kainate receptor activity, cyclothiazide was replaced with 0.15 mg/ml Concanavalin-A. Cannabidiol protection against AMPA/kainate mediated neurotoxicity is illustrated in FIG. 1B, where LDH in the media was used as an index of cell injury. The neuroprotective effect of cannabidiol was similar to that observed in the NMDA mediated toxicity model (FIG. 1A). Cannabidiol prevented neurotoxicity (maximum protection 80.+-.17%) with an EC.sub.50 of 2-4 .mu.M (specifically about 3.3 .mu.M). Comparable results were obtained with either the AMPA receptor ligand, fluorowillardiine or the kainate receptor specific ligand, 4-methyl-glutamate (data not shown). Hence cannabidiol protects similarly against toxicity mediated by NMDA, AMPA or kainate receptors. Unlike cannabidiol, THC is a ligand (and agonist) for the brain cannabinoid receptor. The action of THC at the cannabinoid receptor has been proposed to explain the ability of THC to protect neurons from NMDAr toxicity in vitro. However in AMPA/kainate receptor toxicity assays, THC and cannabidiol were similarly protective (FIG. 2A), indicating that cannabinoid neuroprotection is independent of cannabinoid receptor activation. This was confirmed by inclusion of cannabinoid receptor antagonist SR-141716A in the culture media (SR in FIG. 2B). See Mansbach et al., Psychopharmacology 124:315-22, 1996, for a description of SR-141716A. Neither THC nor cannabidiol neuroprotection was affected by cannabinoid receptor antagonist (FIG. 2B). EXAMPLE 5 Cyclic Voltametery Studies or ReDox Potentials To investigate whether cannabinoids protect neurons against glutamate damage by reacting with ROS, the antioxidant properties of cannabidiol and other cannabinoids were assessed. Cyclic voltametry, a procedure that measures the ability of a compound to accept or donate electrons under a variable voltage potential, was used to measure the oxidation potentials of several natural and synthetic cannabinoids. These studies were performed with an EG&G Princeton Applied Research potentiostat/galvanostat (Model 273/PAR 270 software, NJ). The working electrode was a glassy carbon disk with a platinum counter electrode and silver/silver chloride reference. Tetraethylammonium chloride in acetonitrile (0.1 M) was used as an electrolyte. Cyclic voltametry

scans were done from +0 to 1.8 V at scan rate of 100 mV per second. The reducing ability of cannabidiol (CBD), THC, HU-211, and BHT were measured in this fashion. Anandamide, a cannabinoid receptor ligand without a cannabinoid like structure, was used as a non-responsive control. Each experiment was repeated twice with essentially the same results. Cannabidiol, THC and the synthetic cannabinoid HU-211 all donated electrons at a similar potential as the antioxidant BHT. Anandamide (arachidonyl ethanolamide) did not undergo oxidation at these potentials (FIG. 3). Several other natural and synthetic cannabinoids, including cannabidiol, nabilone, and levanantrodol were also tested, and they too exhibited oxidation profiles similar to cannabidiol and THC (data not shown). EXAMPLE 6 Iron Catalyzed Dihydrorhodamine Oxidation (Fenton Reaction) The ability of cannabinoids to be readily oxidized, as illustrated in Example 5, indicated they possess antioxidant properties comparable to BHT. The antioxidant activity of BHT was examined in a Fenton reaction, in which iron is catalyzed to produce ROS. Cannabidiol (CBD) and tetrahydrocannabinol (THC) were evaluated for their ability to prevent oxidation of dihydrorhodamine to the fluorescent compound rhodamine. Oxidant was generated by ferrous catalysis (diothionite reduced ferric citrate) of t-butyl hydroperoxide in a 50:50 water:acetonitrile (v/v) solution. Dihydrorhodamine (50 .mu.M) was incubated with 300 .mu.M t-butyl hydroperoxide and 0.5 .mu.M iron for 5 minutes. After this time, oxidation was assessed by spectrofluorimetry (Excit=500 nm, Emiss=570 nm). Various concentrations of cannabinoids and BHT were included to examine their ability to prevent dihydrorhodiamine oxidation. Cannabidiol, THC and BHT all prevented dihydrorhodamine oxidation in a similar, concentration dependent manner (FIG. 4), indicating that cannabinoids have antioxidant potency comparable to BHT. To confirm that cannabinoids act as antioxidants in the intact cell, neurons were also incubated with the oxidant t-butyl hydroperoxide and varying concentrations of cannabidiol (FIG. 5A). The t-butyl hydroperoxide oxidant was chosen for its solubility in both aqueous and organic solvents, which facilitates oxidation in both cytosolic and membrane cell compartments. Cell toxicity was assessed 18-20 hours after insult by measuring lactate dehydrogenase (LDH) release into the culture media. All experiments were conducted with triple or quadruple values at each point and all plates contained positive (glutamate alone) and baseline controls. The assay was validated by comparison with an XTT based metabolic activity assay. As shown in FIG. 5A, cannabidiol protected neurons against ROS toxicity in a dose related manner, with an EC.sub.50 of about 6 .mu.M. The maximum protection observed was 88.+-.9%. Cannabidiol was also compared with known antioxidants in an AMPA/kainate toxicity protocol. Neurons were exposed to 100 .mu.M glutamate and equimolar (5 .mu.M) cannabidiol, .alpha.-tocopherol, BHT or ascorbate (FIG. 5B). Although all of the antioxidants attenuated glutamate toxicity, cannabidiol was significantly more protective than either .alpha.-tocopherol or ascorbate. The similar antioxidant abilities of cannabidiol and BHT in this chemical system (FIG. 4), and their comparable protection in neuronal cultures (FIG. 5B), implies that cannabidiol neuroprotection is due to an antioxidant effect. EXAMPLE 7 In vivo Rat Studies The middle cerebral artery of chloral hydrate anesthetized rats was occluded by insertion of suture thread into it. The animals were allowed to recover from the anesthetic and move freely for a period of two hours. After this time the suture was removed under mild anesthetic and the animals allowed to recover for 48 hours. Then the animals were tested for neurological deficits, sacrificed, and the infarct volume calculated. To examine the infarct volume, animals were anesthetized, ex-sanguinated, and a metabolically active dye (3-phenyl tetrazolium chloride) was pumped throughout the body. All living tissues were stained pink by the dye, while morbid regions of infarcted tissue remained white. Brains were then fixed for 24 hours in formaldehyde, sliced and the infarct volumes measured. One hour prior to induction of ischemia 20 mg/kg of cannabidiol was administered by intra-peritoneal injection (ip) in a 90% saline:5% emulphor 620 (emulsifier):5% ethanol vehicle. A second ip 10 mg/kg dose of cannabidiol was administered 8 hours later using the same vehicle. Control animals received injections of vehicle without drug. IV doses would be expected to be 3-5 times less because of reduction of first pass metabolism. The infarct size and neurological assessment of the test animals is shown Table 1. TABLE 1 Cannabidiol protects rat brains from ischemia damage Volume of Infarct Behavioral Deficit (mm3) Score Animal Drug Control Drug Control 1 108.2 110.5 3 2 2 83.85 119.6 4

4 3 8.41 118.9 3 4 4 75.5 177.7 1 4 5 60.53 33.89 1 3 6 27.52 255.5 1 5 7 23.16 143 1 4 Mean 55.3 137.0 2.0 3.7 SEM 13.8 25.7 0.5 0.4 p = 0.016 significant p = 0.015 significant *Neurological scoring is performed on a subjective 1-5 scale of impairment. 0 = no impairment, 5 = severe (paralysis) This data shows that infarct size was approximately halved in the animals treated with cannabidiol, which was also accompanied by a substantial improvement in the neurological status of the animal. These studies with the nonpsychotropic marijuana constituent, cannabidiol, demonstrate that protection can be achieved against both glutamate neurotoxicity and free radical induced cell death. THC, the psychoactive principle of cannabis, also blocked glutamate neurotoxicity with a potency similar to cannabidiol. In both cases, neuroprotection is unaffected by the presence of a cannabinoid receptor antagonist. These results therefore surprisingly demonstrate that cannabinoids can have useful therapeutic effects that are not mediated by cannabinoid receptors, and therefore are not necessarily accompanied by psychoactive side effects. Cannabidiol also acts as an anti-epileptic and anxiolytic, which makes it particularly useful in the treatment of neurological diseases in which neuroanatomic defects can predispose to seizures (e.g. subarachnoid hemorrhage). A particular advantage of the cannabinoid compounds of the present invention is that they are highly lipophilic, and have good penetration into the central nervous system. The volume of distribution of some of these compounds is at least 100 L in a 70 kg person (1.4 L/kg), more particularly at least 250 L, and most particularly 500 L or even 700 L in a 70 kg person (10 L/kg). The lipophilicity of particular compounds is also about as great as that of THC, cannabidiol or other compounds that have excellent penetration into the brain and other portions of the CNS. Cannabinoids that lack psychoactivity or psychotoxicity are particularly useful embodiments of the present invention, because the absence of such side effects allows very high doses of the drug to be used without encountering unpleasant side effects (such as dysphoria) or dangerous complications (such as obtundation in a patient who may already have an altered mental status). For example, therapeutic antioxidant blood levels of cannabidiol can be 5-20 mg/kg, without significant toxicity, while blood levels of psychoactive cannabinoids at this level would produce obtundation, headache, conjunctival irritation, and other problems. Particular examples of the compounds of the present invention have low affinity to the cannabinoid receptor, for example a K.sub.i of greater than 250 nM, for example K.sub.i.gtoreq.500-1000 nM. A compound with a K.sub.i.gtoreq.1000 nM is particularly useful, which compound has essentially no psychoactivity mediated by the cannabinoid receptor. Cannabidiol blocks glutamate toxicity with equal potency regardless of whether the insult is mediated by NMDA, AMPA or kainate receptors. Cannabidiol and THC have been shown to be comparable to the antioxidant BHT, both in their ability to prevent dihydrorhodamine oxidation and in their cyclic voltametric profiles. Several synthetic cannabinoids also exhibited profiles similar to the BHT, although anandamide, which is not structurally related to cannabinoids, did not. These findings indicate that cannabinoids act as antioxidants in a non-biological situation, which was confirmed in living cells by showing that cannabidiol attenuates hydroperoxide induced neurotoxicity. The potency of cannabidiol as an antioxidant was examined by comparing it on an equimolar basis with three other commonly used compounds. In the AMPA/kainate receptor dependent neurotoxicity model, cannabidiol neuroprotection was comparable to the potent antioxidant, BHT, but significantly greater than that observed with either .alpha.-tocopherol or ascorbate. This unexpected superior antioxidant activity (in the absence of BHT tumor promoting activity) shows for the first time that cannabidiol, and other cannabinoids, can be used as antioxidant drugs in the treatment (including prophylaxis) of oxidation associated diseases, and is particularly useful as a neuroprotectant. The therapeutic potential of nonpsychoactive cannabinoids is particularly promising, because of the absence of psychotoxicity, and the ability to administer higher doses than with psychotropic cannabinoids, such as THC. Previous studies have also indicated that cannabidiol is not toxic, even when chronically administered to humans or given in large acute doses (700 mg/day). EXAMPLE 8 Effect of Cannabidiol on Lipoxygenase Enzymes This example describes in vitro and in vivo assays to examine the effect of cannabidiol (CBD) on three lipoxygenase (LO) enzymes: 5-LO, 12-LO and 15-LO. In vitro Enzyme Assay The ability of CBD to inhibit lipoxygenase was examined by measuring the time dependent change in absorption at 234 nM following addition of

5 U of each lipoxygenase (rabbit 15-LO purchased from Biomol (PA), porcine 12-LO purchased from Cayman chemicals (MI)) to a solution containing 10 .mu.M (final concentration) linoleic acid. Enzyme studies were performed using a u.v. spectrophotometer and a 3 ml quartz cuvette containing 2.5 ml of a stirred solution of 12.5 .mu.M sodium linoleic acid (sodium salt) in solution A (25 mM Tris (pH 8.1), 1 mM EDTA 0.1% methyl cellulose). The reaction was initiated by addition of 0.5 ml enzyme solution (10 U/ml enzyme in solution A) and recorded for 60 seconds. Lipoxygenase exhibits non-Michaelis-Menten kinetics, an initial "lag" (priming) phase followed by a linear phase which is terminated by product inhibition. These complications were reduced by assessing enzyme activity (change in absorption) over the "steepest" 20 second period in a 60 second run time. Recordings examined the absorption at 234 nm minus the value at a reference wavelength of 280 nm. Linoleic acid was used as the substrate rather than arachidonic acid, because the products are less inhibitory to the enzyme, thereby providing a longer "linear phase". Cell Purification and Separation Human platelets and leukocytes were purified from buffy coat preparations (NIH Blood Bank) using a standard Ficoll based centrifugation method used in blood banks. Prior to use, cells were washed three times to eliminate contaminating cell types. Cultured rat basophillic leukemia cells (RBL-2H3) were used as a source of 5-lipoxygenase. In vivo Determination of Lipoxygenase Activity Cells were incubated with arachidonic acid and stimulated with the calcium ionophore A23187. Lipids were extracted and separated by reverse phase HPLC. Product formation was assessed as the area of a peak that co-eluted with an authentic standard, had a greater absorbance at 236 nm than at either 210 or 280 nm, and the formation of which was inhibited by a lipoxygenase inhibitor. Cell pellets were triturated in DMEM culture media, aliquoted and pre-incubated for 15 minutes with 20 .mu.M arachidonic acid and varying concentrations of cannabidiol and/or 40 .mu.M nordihydroguaiaretic acid (a lipxygenase inhibitor). Platelets and leukocytes were also pre-incubated with 80 .mu.M manoalide (Biomol) to prevent phospholipase A2 activation. Product formation was initiated by addition of 5 .mu.M A23187 and incubation for 10 minutes at 37.degree. C. At the end of the incubation, the reaction was stopped by addition of 15% 1M HCl and 10 ng/ml prostaglandin B2 (internal standard). Lipids were extracted with 1 volume of ethyl ether, which was dried under a stream of nitrogen. Samples were reconstituted in 50% acetonitrile:50% H.sub.2 O and separated by reverse phase HPLC using a gradient running from 63% acetonitrile: 37% H.sub.2 O:0.2% acetic acid to 90% acetonitrile (0.2% acetic acid) over 13 minutes. Measurement of NMDAr Toxicity The ability of 12-HETE (12-(s)-hydroxy-eicosatetraenoic acid, the product of the action of 12-lipoxygenase on arachidonic (eicosatetraenoic) acid) to protect cortical neurons from NMDAr toxicity was measured as described in Example 3. The 12-HETE (0.5 .mu.g/ml) was added either during ischemia (co-incubated with the glutamate), during post-ischemia (co-incubated with the DMEM after washing the cells), or during both ischemia and post-ischemia. Results Using semi-purified enzyme preparations, the effect of CBD on rabbit 15-LO and porcine 12-LO was compared. As shown in FIGS. 6A and B, CBD is a potent competitive inhibitor of 15-LO with an EC.sub.50 of 598 nM. However, CBD had no effect on the 12-LO enzyme. Using whole cell preparations, the effect of CBD on 5- and 12-LO enzymes was investigated. As shown in FIG. 7A, CBD inhibited 5-LO in cultured rat basophillic leukemia cells (RBL-2H3) with an EC.sub.50 of 1.92 .mu.M. However, CBD had no effect on 12-LO, as monitored by the production of 12-HETE (the product of 12-LO), in either human leukocytes or platelets (FIGS. 7B and C). The leukocyte 12-LO is similar, while the platelet 12-LO is structurally and functionally different, from the porcine 12-LO used in the in vitro enzyme study. The ability of 12-HETE to protect cortical neurons from NMDAr toxicity is shown in FIG. 8. To achieve best protection from NMDAr toxicity, 12-HETE was administered both during and post ischemia. Therefore, CBD serves as a selective inhibitor of at least two lipoxygenase enzymes, 5-LO and 15-LO, but had no effect on 12-LO. Importantly, this is the first demonstration (FIG. 8) that the 12-LO product 12-HETE can play a significant role in protecting neurons from NMDAr mediated toxicity. Although the mechanism of this protection is unknown at the present time, 12-HETE is known to be an important neuromodulator, due to its ability to influence potassium channel activity. EXAMPLE 9 Methods of Treatment The present invention includes a treatment that inhibits oxidation associated diseases in a subject such as an animal, for example a rat or human.

The method includes administering the antioxidant drugs of the present invention, or a combination of the antioxidant drug and one or more other pharmaceutical agents, to the subject in a pharmaceutically compatible carrier and in an effective amount to inhibit the development or progression of oxidation associated diseases. Although the treatment can be used prophylactically in any patient in a demographic group at significant risk for such diseases, subjects can also be selected using more specific criteria, such as a definitive diagnosis of the condition. The administration of any exogenous antioxidant cannabinoid would inhibit the progression of the oxidation associated disease as compared to a subject to whom the cannabinoid was not administered. The antioxidant effect, however, increases with the dose of the cannabinoid. The vehicle in which the drug is delivered can include pharmaceutically acceptable compositions of the drugs of the present invention using methods well known to those with skill in the art. Any of the common carriers, such as sterile saline or glucose solution, can be utilized with the drugs provided by the invention. Routes of administration include but are not limited to oral, intracranial ventricular (icv), intrathecal (it), intravenous (iv), parenteral, rectal, topical ophthalmic, subconjunctival, nasal, aural, sub-lingual (under the tongue) and transdermal. The antioxidant drugs of the invention may be administered intravenously in any conventional medium for intravenous injection such as an aqueous saline medium, or in blood plasma medium. Such medium may also contain conventional pharmaceutical adjunct materials such as, for example, pharmaceutically acceptable salts to adjust the osmotic pressure, lipid carriers such as cyclodextrins, proteins such as serum albumin, hydrophilic agents such as methyl cellulose, detergents, buffers, preservatives and the like. Given the low solubility of many cannabinoids, they may be suspended in sesame oil. Given the excellent absorption of the compounds of the present invention via an inhaled route, the compounds may also be administered as inhalants, for example in pharmaceutical aerosols utilizing solutions, suspensions, emulsions, powders and semisolid preparations of the type more fully described in Remington: The Science and Practice of Pharmacy (19.sup.th Edition, 1995) in chapter 95. A particular inhalant form is a metered dose inhalant containing the active ingredient, in a suspension or a dispersing agent (such as sorbitan trioleate, oleyl alcohol, oleic acid, or lecithin, and a propellant such as 12/11 or 12/114). Embodiments of the invention comprising pharmaceutical compositions can be prepared with conventional pharmaceutically acceptable carriers, adjuvants and counterions as would be known to those of skill in the art. The compositions are preferably in the form of a unit dose in solid, semi-solid and liquid dosage forms such as tablets, pills, powders, liquid solutions or suspensions, injectable and infusible solutions, for example a unit dose vial, or a metered dose inhaler. Effective oral human dosage ranges for cannabidiol are contemplated to vary from about 1-40 mg/kg, for example 5-20 mg/kg, and in particular a dose of about 20 mg/kg of body weight. If the antioxidant drugs are to be used in the prevention of cataracts, they may be administered in the form of eye drops formulated in a pharmaceutically inert, biologically acceptable carrier, such as isotonic saline or an ointment. Conventional preservatives, such as benzalkonium chloride, can also be added to the formulation. In ophthalmic ointments, the active ingredient is admixed with a suitable base, such as white petrolatum and mineral oil, along with antimicrobial preservatives. Specific methods of compounding these dosage forms, as well as appropriate pharmaceutical carriers, are known in the art. Remington: The Science and Practice of Pharmacy, 19th Ed., Mack Publishing Co. (1995), particularly Part 7. The compounds of the present invention are ideally administered as soon as a diagnosis is made of an ischemic event, or other oxidative insult. For example, once a myocardial infarction has been confirmed by electrocardiograph, or an elevation in enzymes characteristic of cardiac injury (e.g. CKMB), a therapeutically effective amount of the cannabinoid drug is administered. A dose can also be given following symptoms characteristic of a stroke (motor or sensory abnormalities), or radiographic confirmation of a cerebral infarct in a distribution characteristic of a neurovascular thromboembolic event. The dose can be given by frequent bolus administration, or as a continuous IV dose. In the case of cannabidiol, for example, the drug could be given in a dose of 5 mg/kg active ingredient as a continuous intravenous infusion; or hourly intramuscular injections of that dose. EXAMPLE 10 The following table lists examples of some

dibenzopyran cannabinoids that may be useful as antioxidants in the method of the present invention. ##STR13## ##STR14## Compound R.sub.19 R.sub.20 R.sub.21 R.sub.22 R.sub.23 R.sub.24 R.sub.25 R.sub.26 H 5 7-OH-.DELTA..sup.1 -THC CH.sub.2 OH H H H H H H C.sub.5 H.sub.11 H 6 6.alpha.-OH-.DELTA..sup.1 -THC CH.sub.3 .alpha.-OH H 7 6.beta.-OH-.DELTA..sup.1 -THC CH.sub.3 .beta.-OH 8 1"-OH-.DELTA..sup.1 -THC CH.sub.3 OH H 9 2"-OH-.DELTA..sup.1 -THC CH.sub.3 OH 10 3"-OH-.DELTA..sup.1 -THC CH.sub.3 OH 11 4"-OH-.DELTA..sup.1 -THC CH.sub.3 OH H 12 6.alpha.,7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH .alpha.-OH H 13 6v,7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH .beta.-OH 14 1",7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH OH H 15 2",7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH OH H 16 3",7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH OH H 17 4",7-diOH-.DELTA..sup.1 -THC CH.sub.2 OH OH 18 1",6.beta.-diOH-.DELTA..sup.1 -THC CH.sub.3 .beta.-OH OH 19 1",3"-diOH-.DELTA..sup.1 -THC CH.sub.3 OH OH 20 1",6.alpha.,7-triOH-.DELTA..sup.1 -THC CH.sub.2 OH .alpha.-OH OH H 21 .DELTA..sup.1 -THC-6-one CH.sub.3 .dbd.O 22 Epoxyhexahydrocannabinol CH.sub.3 (EHHC)* 23 7-oxo-.DELTA..sup.1 -THC CHO H 24 .DELTA..sup.1 -THC-7"-oic acid COOH H 25 .DELTA..sup.1 -THC-3"-oic acid CH.sub.3 C.sub.2 H.sub.4 COOH H 26 1"-OH-.DELTA..sup.1 -THC-7"-oic acid COOH OH H 27 2"-OH-.DELTA..sup.1 -THC-7"-oic acid COOH OH H 28 3"-OH-.DELTA..sup.1 -THC-7"-oic acid COOH OH H 29 4"-OH-.DELTA..sup.1 -THC-7"-oic acid COOH OH H 30 3",4",5"-trisnor-2"-OH-.DELTA..sup.1 - COOH C.sub.2 H.sub.4 OH THC-7-oic acid H 31 7-OH-.DELTA..sup.1 -THC-2"-oic acid CH.sub.2 OH CH.sub.2 COOH H 32 6.beta.-OH-.DELTA..sup.1 -THC-2"-oic acid CH.sub.3 .beta.-OH CH.sub.2 COOH H 33 7-OH-.DELTA..sup.1 -THC-3"-oic acid CH.sub.2 OH C.sub.2 H.sub.4 COOH H 34 6.beta.-OH-.DELTA..sup.1 -THC-3"-oic acid CH.sub.3 .beta.-OH C.sub.2 H.sub.4 COOH H 35 6.alpha.-OH-.DELTA..sup.1 -THC-4"-oic acid CH.sub.3 .alpha.-OH C.sub.3 H.sub.6 COOH H 36 2",3"-dehydro-6U-OH-.DELTA..sup.1 - CH.sub.3 .alpha.-OH C.sub.3 H.sub.4 COOH THC-4"-oic acid H 37 .DELTA..sup.1 -THC-1",7-dioic acid COOH COOH H 38 .DELTA..sup.1 -THC-2",7-dioic acid COOH CH.sub.2 COOH H 39 .DELTA..sup.1 -THC-3",7-dioic acid COOH C.sub.2 H.sub.4 COOH H 40 .DELTA..sup.1 -THC-4",7-dioic acid COOH C.sub.3 H.sub.6 COOH H 41 1",2"-dehydro-.DELTA..sup.1 -THC-3",7- COOH C.sub.2 H.sub.2 COOH dioic acid H 42 .DELTA..sup.1 -THC-glucuronic acid CH.sub.3 gluc.sup..dagger. H 43 .DELTA..sup.1 -THC-7-oic acid COO gluc.sup..dagger. glucuronide *Epoxy group in C-1 and C-2 positions .sup..dagger. Glucuronide Note: R-group substituents are H if not indicated otherwise. Chemical structures of some of the dibenzopyran cannabinoids are shown below. ##STR15## ##STR16## ##STR17## EXAMPLE 11 Examples of Structural Analogs of Cannabidiol The following table lists examples of some cannabinoids which are structural analogs of cannabidiol and that may be useful as antioxidants in the method of the present invention. A particularly useful example is compound CBD, cannabidiol. Compound R.sub.19 R.sub.20 R.sub.21 R.sub.22 R.sub.23 R.sub.24 R.sub.25 R.sub.26 ##STR18## ##STR19## 44 CBD CH.sub.3 H H H H H H C.sub.5 H.sub.11 45 7-OH--CBD CH.sub.2 OH 46 6.alpha.- CH.sub.3 .alpha.-OH 47 6.beta.- CH.sub.3 .beta.-OH 48 1"- CH.sub.3 OH 49 2"- CH.sub.3 OH 50 3"- CH.sub.3 OH 51 4"- CH.sub.3 OH 52 5"- CH.sub.3 C.sub.4 H.sub.8 CH.sub.2 OH 53 6,7-diOH--CBD CH.sub.2 OH OH 54 3",7-diOH--CBD CH.sub.2 OH OH 55 4",7-diOH--CBD CH.sub.2 OH OH 56 CBD-7-oic acid COOH 57 CBD-3"-oic acid CH.sub.3 C.sub.2 H.sub.4 COOH ##STR20## ##STR21## 58 CBN CH.sub.3 H H H H H H C.sub.5 H.sub.11 59 7-OH--CBN CH.sub.2 OH 60 1"-OH--CBN CH.sub.3 OH 61 2"-OH--CBN CH.sub.3 OH 62 3"-OH--CBN CH.sub.3 OH 63 4"-OH--CBN CH.sub.3 OH 64 5"-OH--CBN CH.sub.3 C.sub.4 H.sub.8 CH.sub.2 OH 65 2"-7-diOH--CBN CH.sub.2 OH OH 66 CBN-7-oic acid COOH 67 CBN-1"-oic acid CH.sub.3 COOH 68 CBN-3"-oic acid CH.sub.3 C.sub.2 H.sub.4 COOH Note: R-group substituents are H if not indicated otherwise. The invention being thus described, variation in the materials and methods for practicing the invention will be apparent to one of ordinary skill in the art. Such variations are to be considered within the scope of the invention, which is set forth in the claims below. * * * * *

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Submitted By	Organization	Testifier Position	Present at Hearing
Bo Nicole Capener	Asian Cannabis Association	Support	No

Comments: ON THE FOLLOWING MEASURE: H.B. NO. 1501, RELATING TO DRUG PARAPHERNALIA BEFORE THE: HOUSE COMMITTEE ON PUBLIC SAFETY DATE: Thursday, February 9, 2017 TIME: 10:00 A.M. LOCATION: State Capitol, Conference Room 312 Honorable Chair Takayama and Members of the Committee: As a stakeholder in the medical marijuana industry I am writing in STRONG SUPPORT of HB1501 RELATING TO MEDICAL MARIJUANA, which changes drug paraphernalia possession and delivery offenses from felonies to civil violations. I support this bill because it offers common sense changes to Hawai‘i’s current statutes that will directly benefit the well-being of Hawai‘i’s most vulnerable patient populations. The removal of the felony penalty for paraphernalia will aid in removing the burden of an unnecessary stigma from the participants in a legal and legitimate industry that the lawmakers of Hawai‘i established some 16 years ago. By reducing the punishment for activities related to medical cannabis, HB1501 helps to normalize medical cannabis as a medicine. The stigma of medical cannabis is largely rooted in the criminality attributed by state laws to the use of the medicine and those tools necessary for safe ingestion of the medicine. Your efforts in HB1501 to reverse the perception of criminality surrounding this medicine will directly contribute to the health of patients across the state as more people become willing to at least consider medical cannabis for their qualifying ailments and doctors become unafraid to talk with their patients about effective, alternative treatment options. It is my opinion that your thoughtful approach to ensure safer access to better medicine and safe methods of ingesting that medicine through HB 1501 will not only help patients, but will boost the local economy with career opportunities and new jobs in a part of the industry that will no longer be forced to operate in the shadows or under the guise of the tobacco industry. This is a triple win for your constituency and the legacy that you leave. For these reasons, I stand in SUPPORT of HB 1501 I would like to recommend that this bill be moved forward for further discussion. Thank you very much for the opportunity to provide testimony on this measure. Respectfully, Bo Nicole Capener

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HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Robert Setari	Individual	Support	No

Comments: Veterans, PTSD and Cannabis, by Dr. Robert Setari Our men and women in the military have devoted themselves to the protection of our country, our freedoms, and our way of life. Unfortunately, their “reward” for such a sacrifice is a lifetime of medical issues of both a physical and mental nature. While the physical nature is obvious, the psychological ramifications of having experienced some of the horrific encounters remain invisible to the majority of the civilian population. The two most common terms used to describe the psychological disorders that are a by-product of exposure to combat or even the military way of life are Post-Traumatic Stress disorder (PTSD) and Operational stress. PTSD leaves Veterans with painful symptoms such as horrible flashbacks, social avoidance, isolation (even from family), and hyper-arousal reactions including outbursts of anger, anxiety and hyper-vigilance. These emotional and behavioral changes can have extremely destructive effects on a Vet’s interpersonal life, but also have a watershed effect on those close to them such as family and co-workers. Furthermore, PTSD can spiral into other problems such as panic disorder, substance abuse, depression, suicidal and homicidal feelings. The ramifications of PTSD are not preclusive to the Veteran, but all of society, especially their families. A spouse may have to abandon the role as wife or husband to become an in-house full time “caregiver” dealing with the daily crises. Veterans may develop their own anxieties and self-esteem issues propagating the problem to another generation. The estimated number of military members who suffer from PTSD or traumatic brain injury (TBI), or both, is over 30%. That statistic only includes those who formally get diagnosed or report having PTSD symptoms. Often times, symptoms are overlooked or misdiagnosed. Even worse, these veterans often suffer additional physical conditions like painful physical trauma, including missing limbs, chronic pain, spinal cord damage, and other symptoms that could potentially be alleviated by cannabis. Self-medication by many Veterans for their medical issues with the use of marijuana has garnered a lot of interest in the possible medical therapeutic effects of cannabinoids. Admittedly, it has taken years of anecdotal evidence to finally draw the medical community’s, the public’s, and the government’s attention to this possible treatment modality. Notably, the use of cannabis and the Veterans Affairs Hospital system’s relationship is convoluted. Twenty-four states plus the District of Columbia have legalized cannabis for sanctioned medical use, however at the Federal level marijuana is classified a Schedule I drug. This scheduling of the plant suggests there are absolutely no known medical benefits to cannabis. Since the VA is a Federal program, previously the predicament was that under the aegis of the government, the VA system, and by extension the veterans who use it, are were not legally allowed to use it as therapy. Antidepressants like Zoloft and Paxil, along with other heavy-duty pills, have been the traditional

therapies that VA doctors provide. Unfortunately, they do not work as well as doctors would hope and they are fraught with side effects such as impotence and loss of emotional spectrum called “flat affect.” This means the treated patient becomes a functional “zombie.” Going through life but not really enjoying it or even able to experience the range of emotions we feel as human beings. Many patients end up on multiple prescriptions, with each drug having its own side-effect profiles. Recent research indicates that medical marijuana may provide a single treatment option with much better side-effect profiles. Neuroscientists are providing tentative support for validating its use. Dr. Kerry Ressler of Emory University states, “One way of thinking about PTSD is an over activation of the fear system that can’t be inhibited, can’t be normally modulated,” In other words, the PTSD affected brain can not calm down. It constantly stays in a hyperactive state. Cannabis studies in animals over the past decade have shown that this may be modulated by the use of cannabis. It is now definitively obvious that the anxiety, insomnia, and hyperactivity of PTSD can be modulated by the use of medical marijuana in humans. Another interesting discovery with profound implications is that the endocannabinoid system is integrally related to memory, specifically to memory extinction. Memory extinction is the normal, healthy process of removing associations from stimuli. For example, an animal which has been administered an electric shock after a certain noise will “freak out” when hearing the noise even if there is no shock that follows. This is the classic Pavlovian effect; however, if the noise appears by itself (with no shock following) for a few days it will eventually it will forget about the shock. Mice bred specifically without cannabinoid systems in their brains simply never forget – they continue to cringe at the noise indefinitely. A classic PTSD symptom is that Vets respond to stimuli that remind them of their initial trauma even when it is no longer appropriate. If medical marijuana can aid in memory extinction it could help patients reduce their association between stimuli, (perhaps loud noises or stress), and the traumatic situations in their past. New Mexico has recently begun allowing VA Hospitals to prescribe medical marijuana for American soldiers suffering from PTSD. Maine became one of the first few states to follow suit. In November of 2014, Representatives Earl Blumenauer (D–Oregon) and Dana Rohrabacher (R–California) introduced the Veterans Equal Access Act, which aims to open the entire VA system to the judicious prescribing of medical cannabis. In May 2015, the Senate Appropriations Committee voted to back the amendment. Prior to its introduction, VA doctors couldn’t even discuss cannabis with their patients, much less prescribe it. Some Senators have gone on record and called it “unconstitutional.” In October 2015, a GOP spending bill was introduced allowing reforming marijuana and the VA. It attempts to allow physicians at the Department of Veterans Affairs to recommend medical marijuana to veterans. It also prevents the VA from retaliation: that is, denying services to veterans who choose to take part in medical marijuana programs, or otherwise prohibiting them from those programs in any other way. This measure has previously been proposed but never enacted. Veterans’ advocates and members of Congress, including GOP Sen. Rand Paul, as well as Democratic Sens. Cory Booker and Kirsten Gillibrand, consider marijuana to be a viable alternative to the over-reliance on opioids at the VA. There is a word of caution in all of this. Large doses of marijuana may not be of long term benefit. There can be attenuation of the endocannabinoid system; the patient’s nervous system can “get used” to the cannabis metabolites. Essentially, they become resistant to the effects. If a patient desired to get the most out of using therapeutic cannabis to improve PTSD they should use low to moderate doses. Also, THC isn’t always for everyone, consider trying a high-CBD (cannabidiol) low-THC flower or edible. The key is that everyone is different and finding your right dosing might require some trial and error. If you ever feel “too high,” remember to keep CBD edibles, vapes, or flower around, as CBD will inhibit the THC from metabolizing, making you feel “normal” again. If the goal is to use marijuana to facilitate extinction of the response to PTSD triggers, then small to moderate doses of cannabis vapors should be administered shortly before planned exposure to the trigger. A series of regular extinction sessions will produce better results than a single session. If cannabis appears to make aversion, fear, or aversive memories worse than the dosage should be lowered. If feelings of fear do not improve with lower dose then discontinue the use of cannabis completely and seek alternate methods of treatment. DR. ROBERT SETARI

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HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Dr. Robert Setari	Individual	Support	No

Comments: For centuries woman used to rely on marijuana as an effective treatment for everything from swollen breasts to pelvic cramping. Unfortunately, when marijuana became illegal this treatment modality was lost. Now as more states legalize marijuana, both physicians and patients are re-discovering the therapeutic benefits of medical marijuana. The potential for cannabis to enhance women's sex lives has been well documented. Currently, doctors have begun to recommend medical marijuana for menstrual related issues such as premenstrual dysphoric disorder (PMDD) more commonly called PMS (Premenstrual syndrome). The benefits are so well documented now that some states, such as California, specifically name PMDD as a qualifying illness for the medical As most of my readers know, I am very big on "what is the mechanism of action?" How does it work? Well, like most therapies there may be multiple levels by which tetrahydrocannabinol (or THC), one of the active ingredients in cannabis, can improve PMDD. It can certainly decrease overall pain sensation and it can also decrease anxiety and nausea — all of which may reduce the cramps, headaches, depression, and anxiety associated PMS and PMDD. Ethan Russo, a neurologist and psychopharmacology researcher emphasizes, "The right dose is the lowest dose that's going to control the symptoms." Essentially when the right dose and right strain are used it's possible to treat pain and take control of the symptoms without experiencing psychoactivity. Topical cannabis has also been touted as an effective way to disperse swelling and pain in the breasts prior to menses. Near a woman's cycle, her breast tissue can sometimes swells up to a cup size bigger. Today, there is a growing market for topical cannabis pain relievers. Marijuana has been shown to have anti-inflammatory properties which can reduce swelling. And the risk of psychoactive side effects is low. Since a transdermal (i.e. topical through the skin) delivery doesn't get enough THC absorbed into the bloodstream patients are less likely to get "buzzed." However, topically cannabis has been shown to reduce pain and inflammation. The potential for pot in managing women's health is promising, but more research is needed. This can be a daunting problem since cannabis has been illegal in this country for the past eight decades; and even today it is difficult to get funding for this type of research since marijuana is still illegal on a federal level. There are bills on Capitol Hill this year proposing that the procurement of federal funding for research from places like the National Institute on Drug Abuse (NIDA) and National Institute of Health (NIH) should be facilitated. It remains to be seen if they can actually be Many doctors and researchers are hoping interest in cannabis and women's health will gain momentum as more states legalize cannabis for both recreational and medicinal use. As Russo states, "It is wise for people to be cautious, but cannabis is a potential therapeutic agent and needs to be a part of medicine so we can treat some of the conditions that have not responded to other therapies." DR. ROBERT SETARI

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HB1501
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Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Jason David	Jayden's Journey	Support	No

Comments: The following is a success story with cannabis and dravet syndrome. You may have heard their story on Weed Wars, Weed 2 (with Sanjay Gupta), and the documentary Culture High. Jason David began treating his son Jayden with cannabidiol when he was was four years old. He obtained his first CBD tincture from Harborside dispensary in Oakland, California, and documented the first four days of treatment on the short-lived television show Weed Wars. Now five years later and Jayden is nine years old, taking his own brand of CBD medicine appropriately named “Jayden’s Juice.” We met Jason, Jayden and a dozen of other patients currently using Jayden’s Juice as their medicine for epilepsy and autism. Jayden has Dravet syndrome, also known as severe myoclonic epilepsy of infancy (SMEI). It is a type of epilepsy with seizures that are often triggered by hot temperatures or fever and often begins around six months of age. 70%-80% of patients with Dravet syndrome carry rare mutations in the sodium channel gene SCN1A, which encodes an important component of neuronal firing, creating a deficiency in preventing seizures. Approximately 90% of Dravet mutations are ‘de novo’, meaning they are not inherited from a parent. In Jayden’s case, neither of his parents carried the gene that, in extremely rare cases, can be inherited. Dravet syndrome it is characterized by cognitive impairment, behavioral disorders, and motor deficits. Behavioral deficits often include hyperactivity and impulsiveness, and in more rare cases, autistic-like behaviors. SMEI is also associated with sleep disorders including somnolence and insomnia. The seizures experienced by patients with Dravet syndrome become worse as the patient ages since the disease is not very predictable when first diagnosed. Jayden was born a normal boy. At four months old, he started having seizures and developed Dravet Syndrome. Jason describes it as a downward spiral from then on. Jayden was prescribed 12 medications, including rectal injections of Valium for his seizures. He was having grand mal seizures that lasted an hour and a half, and he would have myoclonic seizures all day long. Grand mal seizures involve a loss of consciousness and violent muscle contractions, caused by abnormal electrical activity in the brain. It is the kind of seizure most people picture when they think of seizures. Myoclonic seizures are brief shock-like jerks of a muscle or group of muscles, where the person is usually awake and able to think clearly. To control the seizures, doctors prescribed a “magic three” cocktail of pharmaceutical drugs that initially incited a honeymoon phase for a few months, but then things worsened. “We were at a life and death situation. Jayden was dying from the medications,” Jason said. In April of 2011, Jayden had not slept for a few months. Jason said, “Imagine not sleeping one day, let alone not sleeping everyday. I made a decision to make a change. God showed me a sign to give my son cannabis.” Jason began conducting his own research on CBD, at a time when no other parents were out there talking about

cannabis with children and epilepsy. The Cash Hyde Foundation was a charity he found for children with cancer, but did not find any support for Dravet syndrome patients. His research kept leading him back to the United States patent number 6,630,507, issued to The United States of America as represented by the Department of Health and Human Services (Washington, DC), issued October 7, 2003. He founde evidence that the government owns the patent to using cannabinoids as antioxidants and neuroprotectants. Not only is this proof that the Federal government knows there are medical benefits to cannabis, it is hard written proof that CBD is a neuroprotectant. Convinced CBD was the answer, Jason went to a dispensary to obtain CBD. The part of the story left out in Weed Wars was that he had the medicine in his possession for two weeks before he administered it to Jayden. “Everyone was scaring me. The first day I gave it to him, was the first day that he didn’t have a seizure in his life. I went back to the same dispensary, and got the same company’s CBD brand. There were no labels showing percentages, or levels, or ratios, or anything like that. I gave it to Jayden and it wasn’t working. I realized something was wrong,” he recollected. At that point in time, Jason started working with Dr. William Courtney, a world renowned doctor; known for curing cancer for an 8 month old baby with cannabis. He educated Jason on ratios and testing. Jason then had the medicine he was using tested, and found out that there was no CBD in that batch. Shortly thereafter, he began further researching plant material, the flowers the plant itself, and was able to obtain a high-CBD, low-THC plant. He began asking other people to make the medicine for them. For 6 months, a company made Jayden’s medicine, and Jason even helped them onto the cover of the LA Times, which is when they told Jason they would no longer make the medicine. Jason explained, “That left me hanging; [it] left me desperate.” As fate would have it, one day at a restaurant, Jason met a local man who had heard his story and wanted to work with him. At the time, Jason was paying $400 for ounces and $2,800 per half pound in order to make medicine, it was costly trial and error process. He received donations from friends and his church to help subsidize the cost of the medicine while he figured out the right ratios. He says he gave the plant to 10 people and this new guy was the only one to not dilute the ratio. “He was growing it correctly with the ratios, the others ruined the plant. It’s whole plant, not hemp. Hemp isn’t for medicine, it’s like the garbage of cannabis,” Jason said. At one point they tried hemp CBD and Jayden had 9 grand mal seizures in one day. Jason explains, “It’s not one size fits all. This plant is not half evil and half good.” Cannabidiol was so successful for Jayden, Jason started weaning him off the opioid medications. CBD gets metabolized through the same liver channels as benzodiazepines. Jason found that CBD did not work during the withdrawals which included attacks, tremors, and hallucinations, so he started giving Jayden THC and THC-A. THC-A is a non psychoactive chemical profile of the plant that has anti-inflammatory, neuroprotective and antiemetic effects. “Everyone just talks about CBD, CBD, CBD. They see it on TV; but you need the whole plant,” Jason stated. Jason points out that people develop a tolerance and notes that adjustments must be made from time to time. He admits that while using cannabis and cannabidiol oil has made monumental improvements to Jayden’s quality of life, his life is still not perfect. Jason also explained that sometimes it is hard to pinpoint the appropriate dosing for each patient, and that it is a trial and error process. Through their research, they found that each patient has a different reaction to different bases. Jason says they have some patients using a coconut oil extraction doing great while others do terribly with it and the same with olive oil, MCT oil, alcohol extractions, etc., using the same plant material. Prior to using cannabis oil, Jayden was having about 200 grand mal seizures a day. Jason even had trouble obtaining rectal diazepam at Walgreens because his insurance company thought he was selling it on the street. Since they have weaned him off 22 pharmaceutical drugs, and are down to the last two pharmaceuticals. Jason says he’s working on setting this project up, so he can really focus on weaning Jayden off the last two pills. “It’s hard, he needs my full attention in going through the withdrawals. He’s my number one priority,” Jason said. It took three and a half years to get Jayden off 22 pills, and Jason says taking a 10mg pill and even shaving off just a hair of medication can causessevere withdrawal symptoms like head zaps and seizures. Benzodiazepine withdrawal syndrome can be extremely dangerous, especially for a child. Jayden never had these symptoms before, but the doctors chalked it up to his epilepsy. Jason said, “I went and talked to

people on this medication, two years after being off the medication, and they were still having brain zaps." He used to attend support groups and Dravet Syndrome Foundation conferences around the nation. "I got kicked out of all the Dravet syndrome meetings in different states – before anyone came out with cannabis, I was treated very bad. The same people that kicked me out are trying to legalize only CBD states," Jason said. "I feel bad for these parents, because they're not being educated on the whole plant. The whole plant is the most important thing.There has been a fight for this plant for such a long time. They're brainwashed to think CBD is the only thing that is good for them… That's the biggest mistake anyone can make." Jason believes it is not right to fight for one specific aspect of the plant., He observes parents fighting for only CBD right now, and hypothesizes that when it does not work they will come to the realization that they need the whole plant. Wishy washy stances hinders the parent's credibility and makes it difficult for city council members and legislature writers to take them seriously. He shared stories about other parents that say CBD did not work for their children, because they only tried one product, and now they're turning to brain surgery. Marketing can make people believe there is only one product out there, but Jason points out there are 20,000 different strains of cannabis, thousands of ways to extract it, and hundreds of different bases. There is no "right" way, what works for one person may not work for another. "People aren't trying different things. Our kids should not suffer. Don't give up," Jason said. Another story he shared was a family that turned to fenluramine/phentermine (fen-phen), after learning about one German study treating epilepsy with the popular 1980s weight loss drug. They gave up on cannabis after moving to Colorado because they had not seen the results they were hoping for with their 5 year old. Jason stated, "We experiment trial and error with chemicals, why not experiment with this plant? In thousands of years, no one has died from cannabis. On pharmaceuticals, your kids are getting worse, a quarter of a million people die a year from pharmaceutical drugs, but no one says a thing. Pharmaceuticals don't work, so why do they keep prescribing them? I'm not anti-pharma, but some of the things we use are pretty scary. There's good and bad in everything." When I asked Jason what he hopes to achieve with Jayden, he said, "I'm thankful for everyday and every moment, I'll take whatever I can get. I've already achieved more than I thought I would ever achieve with Jayden already. So, I'll take anything and I'll take everything. My goal is to get him to say, 'I love you.' He's getting closer and closer and he's trying. I hope to God he will, but I know he loves me. Actions speak louder than words, and he shows more action on how much he loves me, how much he needs me, and how much he adores me; I need him too. He's made me the man I am today. I'm very thankful for what I do have, I could be in a much worse position if it wasn't for Jayden." "Jayden's suffering isn't for nothing. Jayden has saved many lives. Instead of cannabis being a last resort it can hopefully be a first resort, so people don't have to go through what Jayden did," Jason said optimistically. The UCSF pediatric neurologists that are treating Jayden support the use of CBD and cannabis oil for epilepsy. They are treating over 100 patients there, the youngest being 8 months. When asked what he would do if there was no access to CBD or THC oil, he said, "If I had to use anything else I would use diet, that's the main thing I would use." He is a religious man stating, "I've talked to my Bishop at my church. The big thing out there with our Christian community is that everyone's scared of it because we're Christians. It says in the bible, 'Use my plant, use my seeds.' Don't blame God for saying it's evil. God wouldn't do that to us." "Our community is blinded and very easily brainwashed from propaganda… this plant – that's never killed anyone. This plant is so dangerous, but not killing anyone, but we use everything else including alcohol, which kills people every day. I say, 'Try it, if it doesn't work, then I understand.' But what if you try it and it changes the rest of your life? What if it saves your life?" "When people call me telling me crying, [saying] 'I owe you my life, I love you,' and I haven't even met this person; it's because they've tried Jayden's Juice, and it's saving their life, it makes me stronger to fight for what's right." Jason proclaims, "It doesn't matter that it is cannabis or not, if it was Pepsi that was saving my son's life, I'd be fighting for Pepsi. This is what's saving my son's life, and I see it saving so many other's lives, so I have to fight for it." "We have the right to this God given plant. It's been put on Earth for a reason. So, it's against the law to use something natural. They say we haven't researched it, but it's been here for 5,000 years. But we've researched

everything else in the world, and drop bombs in other countries, and make these pills out of nowhere that go through the FDA process in a year and next thing you know, they're legal? But we can't figure out this plant, that's been here for 5,000 years, that shows ancient remedies from back in the day from people using it; but we can't figure it out? It scares me," Jason passionately states. "The first time I showed the patent document to my attorney, he called me up the next morning and said, 'I couldn't sleep last night, because of that paperwork you gave me, I read it, I couldn't sleep. That stuff helps with everything! I have family members with, this, this, this, and this, can you help me?'" Jason continues, "It's scary that it's a Schedule I drug, yet the Federal government owns the patent on it, but there are no medical benefits? What are the medical benefits from benzos, alcohol, cigarettes; all these things that are legal – energy drinks – all these things people are dying from. How is all that legal but this plant is so evil, and vicious and deadly? Propaganda has ruined what this plant can do for so many people." Jason hopes within 5-10 years everyone has safe access. In California, there are no real regulations, so he poses the question that what if we regulate and legalize it? Then there would not be anything to be afraid of. "It just shocks me that Arizona already has regulation for it. You're only keeping it away from the people that really need it. We need more research, real research, not lab rat testing. Why not find out from the people that are really using it," Jason said. "We are cannabinoid deficient. The last time we had cannabinoids was as a babies from breast milk. All auto-immune disorders come from that deficiency… There are so many things that are going to come out in the near future. CBD is going to be old. THC-A is the new CBD that people don't even know about yet," he foresees CBN and CBG becoming groundbreaking components with specific defined medical benefits. "The saddest thing is you're going to lose a loved one because they're not going to use the medicine – the real medicine. I hate the word "high." We don't get high we get medicated; you know when you get high? On a chemical," Jason said. "I thank God for this gift that brought my son back. Cannabis saved my son's life and saved my whole family. When you're child is sick and dying your whole family is dying; it brought back my son, it brought back my family." Jason says, "Do your research. I tell doctors, 'If you really believe you want to help someone, and you want the truth, instead of knocking it, why not research it and try it? But if it does work, research it and prove it.'" "If one person tells you it's working, and everything else out there isn't working, try it. We're still learning on an everyday basis. Jayden's Juice is an option. We made it so we can help people. We're not saying it works for everyone or it cures anything, it helps with different symptoms." He told me about multiple sclerosis patients, autistic patients, and cancer patients all having success with Jayden's Juice. Jason recommends that when trying CBD or THC oil, start with a few drops, a very low dose, then move up slowly, as no two people are alike. "It's not one size fits all, read their bodies. It's not milligram per pound. Figure out what works. everyone wants to find a cure right away and it doesn't work like that, but sometimes it does." _____
This article originally appeared in Edibles List Magazine.

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HB1501
Submitted on: 2/7/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Jason David	Jayden's Juice	Support	No

Comments: The following are stories of 6 families who experienced success while using cannabis for epilepsy and/or autism. Paul has a child who developed autism at age 2., it was shortly eafter his son received a round of vaccinations and four months later he was given the same shots, due to an error made by his doctors. His son remained untreated for a year. As a pharmacy tech Paul knew there were no medications specifically for autism; he knew he would have to give his son highly potent pharmaceuticals with horrible side effects. At three, he became incredibly violent and Paul & his wife had to do something. He knew Jason & Jayden through church and knew about their journey. He turned to Jayden's Juice. They administer the oil to their son by putting a couple of drops in his food. Instantaneously they noticed monumental differences. "It balanced him out, he started eating more and sleeping better," explained Paul. George is an epileptic patient who experienced his first seizure at 24 years old. He learned about CBD through dispensaries as a medical marijuana patient. He did his research and came into contact with Jason David & Jayden's Juice through his brother. Prior to using CBD and THCA, his doctor was using him as a "test dummy". He was becoming depressed and had a hard time maintaining a normal life. He was given several pharmaceuticals on a trial and error basis. Since starting Jayden's Juice, he has gone from four pharmaceuticals to one. He admits that not every day is perfect, but his quality of life has vastly improved. Andre has autism and Jason is his cousin, so he was familiar with Jason & Jayden's Journey. When Andre first developed autism, George went to a doctor who prescribed them twelve medications and George just could not do that to his son. They never used pharmaceuticals on Andre and prior to using Jayden's Juice he was combative, mute, and did not eat or sleep. After beginning Jayden's Juice, George explained that Andre "made a complete 180 and is a success story. He interacts with people. He eats; he sleeps and he's not combative anymore and is doing really well in school – all thanks to Jayden's Juice." When they first tried CBD it did not work, it made Andre hyperactive, so they tried THC. He explained that he tried both THC and CBD on himself before administering it to Andre and he had the same symptoms; hyperactivity with CBD and THC worked better. George's message to parents: "Give it a try. If it doesn't work, then it doesn't work, [but] if it does then be happy. It's about our kids, about a better life [and] we'll do whatever it takes, (legal or not), to give them a better life. Case has a genetic deletion syndrome and began having seizures at four months. His genetic deletion mimics MS, he has vision problems, and has epilepsy on top of everything. Katherine and Mike took him to a neurologist that started him on various pharmaceuticals. He began having more seizures and increased irritability. He started taking Jayden's Juice at eight months. It helped to wean him off of synthetic drugs and live a more normal life. When they first tried to treat Case, they felt as though

cannabis was not for them; but once the pharmaceuticals failed they prayed for help and God led them to cannabis. He is completely off of pharmaceuticals now. Currently, he takes eight drops of THCA in the morning, 1mL of Jayden's Juice midday, and 1mL of Jayden's Juice at night. Katherine explained, "It took some time for him to get to where he is. We felt like he would come alive when he took Jayden's Juice." He went from close to 500 seizures a day to one or two when he first wakes up. Avery has been diagnosed with Dravet syndrome and experienced her first seizure at seven months that lasted one and a half hours, but was not diagnosed until she was eleven months old. Three days later she had another seizure and about every ten days thereafter she would have a seizure lasting up to 3-4 hours. Nina explained that Dravet syndrome is different than epilepsy where they will experience daily seizures. After age two, the patient will regress and experience seizures more frequently. As soon as Avery was diagnosed, Nina turned to Google in search of information on Dravet syndrome; Jason & Jayden were the first results that came up. She went 6 months seizure free when they first started and saw major improvements developmentally. At 1 years old she could not walk or sit up nor could she hold her head up. Immediately after starting to use Jayden's Juice, Avery started pulling herself up. Avery uses a mix of THCA and CBD daily and THC as necessary. Nina explains that now after using Jayden's Juice, "[Avery] is almost a typical two year old, and most importantly she's happy." Bella had her first seizure at two months old. Kristin began giving Bella Jayden's Juice seven months ago, but has been using CBD for about sixteen months. Since beginning CBD, they have seen a 75% decrease in seizures and since using Jayden's Juice that percentage has continued to climb. The number of seizures Bella has per day went from 12-24 to 3-4. They are continuing to wean Bella off of pharmaceuticals and increase the CBD for better seizure control. "It's a medicine, and it's a plant that God created, it's not something to be afraid of," said Kristin. She explained that Jason had originally reached out to them when Bella was two months old. They thought he was a crazy person trying to get them to put their daughter on cannabis. It took a couple of years and several failed pharmaceutical attempts to realize they needed to get back in touch with Jason. Kristin had a message for parents who have children with epilepsy, "Consider this as a first option, not a last resort because it's so hard to wean [them off of] the pharmaceuticals once they are on them." She emphatically believes in cannabis and even moved from Nevada to California, so they could access CBD oil for Bella. Robert is a 25-year-old man with epilepsy. He had his first immunizations at three months old and within 24 hours he had seizures, a stroke, and a fever of 105 degrees. About five weeks later, the hospital told his mother Shelley that he would never function as an adult; he would be completely deaf and blind. He is totally deaf, but can see in front and to the right of him, has severe brain damage, but "has more get up and go than most people – he's awesome," explained Shelley. She met Jason through social media and he was her reference point. She explained they tried CBD from a couple different dispensaries, but the budtenders just did not know anything. At first, CBD did not help the seizures, but it did help him cognitively. They learned it was conflicting with another anti-epileptic drug and took him off of it after only five weeks. Now, he is using the Jayden's Juice THC oil and went four days seizure free after starting. His seizures are now milder and the recovery time is much faster. He went from 3-4 seizures a day to only having them every 4-7 days. He only takes four drops of THC, two in the morning and two in the evening. Eventually she opened her own collective to help other parents and children. If parents wanted to grow their own plants she would help them. _____ These success stories originally ran in Edibles List Magazine.

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 11:13 AM
To: pbstestimony
Cc: rkailianu57@gmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Rachel L. Kailianu	Individual	Support	Yes

Comments:

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ON THE FOLLOWING MEASURE:
H.B. NO. 1501, RELATING TO DRUG PARAPHERNALIA

BEFORE THE: HOUSE COMMITTEE ON PUBLIC SAFETY

DATE: Thursday, February 9, 2017 TIME: 10:00 A.M.
LOCATION: State Capitol, Conference Room 312

Honorable Chair Takayama and Members of the Committee:

As a mother, a wife, a cradholder I am writing in **STRONG SUPPORT of HB1501 RELATING TO MEDICAL MARIJUANA,** which changes drug paraphernalia possession and delivery offenses from felonies to civil violations. I support this bill because it offers families an opportunity to breathe a little easier when it comes to medical marijuana use. The fear of being taken away or having my child taken away is a fear covers many families in Hawaii. Passing HB1501 will directly benefit the well-being of many of Hawai‘i’s most vulnerable patient populations.

The removal of the felony penalty for paraphernalia will aid in removing the burden of an unnecessary stigma from the participants in a legal and legitimate industry that the lawmakers of Hawai‘i established some 16 years ago. There are a wide range of cardholders different races, ages, occupations. By reducing the punishment for activities related to medical cannabis, HB1501 helps to normalize medical cannabis as a medicine. The stigma of medical cannabis is largely rooted in the criminality attributed by state laws to the use of the medicine and those tools necessary for safe ingestion of the medicine. Your efforts in HB1501 to reverse the perception of criminality surrounding this medicine will directly contribute to the health of patients across the state as more people become willing to at least consider medical cannabis for their qualifying ailments and doctors become unafraid to talk with their patients about effective, alternative treatment options.

It is my opinion that your thoughtful approach to ensure safer access to better medicine and safe methods of ingesting that medicine. Bringing peace to homes and hearts should also be considered. With continued efforts through HB 1501 you can help patients, boost the local economy with career opportunities and new jobs. For these reasons, I stand in **SUPPORT** of **HB 1501** I would like to recommend that this bill be moved forward for further discussion. Thank you very much for the opportunity to provide testimony on this measure.

Respectfully,

Letrice M. Campbell

ON THE FOLLOWING MEASURE:
H.B. NO. 1501, RELATING TO DRUG PARAPHERNALIA

BEFORE THE:HOUSE COMMITTEE ON PUBLIC SAFETY

DATE: Thursday, February 9, 2017 TIME: 10:00 A.M.

LOCATION: State Capitol, Conference Room 312

Honorable Chair Takayama and Members of the Committee:

As a stakeholder in the medical marijuana industry I am writing in **STRONGSUPPORT of HB1501 RELATING TO MEDICAL MARIJUANA,** which changes drug paraphernalia possessionand delivery offenses from felonies to civil violations. I support this bill because it offers common sense changes to Hawai‘i’s current statutes that will directly benefit the well-being of Hawai‘i’s most vulnerable patient populations.

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It is my opinion that your thoughtful approach to ensure safer access to better medicine and safe methods of ingesting that medicine through HB 1501 will not only help patients, but will boost the local economy with career opportunities and new jobs in a part of the industry that will no longer be forced to operate in the shadows or under the guise of the tobacco industry. This is a triple win for your constituency and the legacy that you leave.

For these reasons, I stand in **SUPPORT**of **HB 1501**

I would like to recommend that this bill be moved forward for further discussion. Thank you very much for the opportunity to provide testimony on this measure.

Respectfully,

Stacy Kracher PMHNP, PMHCNS-BC, CSAC, APRNRX

STEPHEN P. PINGREE, J.D.
Attorney at Law, A Law Corporation
Hawaii Marijuana Business Lawyer
Mililani Building Suite 701, 820 Mililani Street
Honolulu, HI 96813
pingree@hawaiimarijuanabusinesslawyer.com
pingimac@mac.com

Tel: 808-983-9520 **Fax: 808-356-8189**

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Respectfully,
/s/ Stephen P. Pingree

Stephen P. Pingree, J.D.

lopresti1 - Randy

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 4:36 PM
To: pbstestimony
Cc: lady.flach@gmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Teri Heede	Individual	Support	No

Comments:

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lopresti2 - Isabella

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 8, 2017 10:07 PM
To: pbstestimony
Cc: rkailianu57@gmail.com
Subject: *Submitted testimony for HB1501 on Feb 9, 2017 10:00AM*

LATE

HB1501
Submitted on: 2/8/2017
Testimony for PBS on Feb 9, 2017 10:00AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Rachel L. Kailianu	Individual	Support	Yes

Comments:

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LATE

the Drug Policy Action Group
A sister organization of the Drug Policy Forum of Hawai'i
PO Box 83, Honolulu, HI 96810 ~ (808) 853-3231

Hawaii's Voice for Sensible, Compassionate, and Just Drug Policy

TO: HOUSE COMMITTEE ON PUBLIC SAFETY

FROM: PAMELA LICHTY, M.P.H., PRESIDENT

DATE: February 9, 2017, 1:15 p.m., Room 229

RE: H.B. 1501 RELATING TO DRUG PARAPHERNALIA – IN STRONG SUPPORT

Good afternoon, Chair Takayama, Vice Chair LoPresti and members of the Committee. My name is Pam Lichty and I'm President of the Drug Policy Action Group (DPAG), the government affairs arm of the Drug Policy Forum of Hawai'i.

We urge you to pass HB1501 to convert the possession of drug paraphernalia to a civil violation. Enforcement of this law is disproportionately costly for little to no benefit to society. It merely adds another charge to persons accused of possession of an illegal substance. Tax dollars are better spent on community programs and rehabilitation for non-violent, low risk drug offenders

Thank you for hearing this measure today and for considering our input. And mahalo for the opportunity to testify.

LATE

the Drug Policy Action Group
A sister organization of the Drug Policy Forum of Hawai'i
PO Box 83, Honolulu, HI 96810 ~ (808) 853-3231

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Thank you for hearing this measure today and for considering our input. And mahalo for the opportunity to testify.

Andre' S. Wooten
Attorney And Counselor At Law
Century Square, Suite 1908
1188 Bishop Street
Honolulu, Hawaii 96813
Tel: 808-545-4165

February 8, 2017

LATE

Hawaii State Legislature
Judiciary Committee
Honolulu, Hawaii

Re: Changing the Felony Drug Paraphernalia Law to a misdemeanor of civil penalty.

Dear Legislators,

Speaking for myself and the other members of the African American Lawyers Association of Hawaii, we support the reduction of the penalties of possession of items deemed "drug paraphernalia" as I for one have always deemed such laws over broad and subject to subjective interpretation, leading to over charging, and over sentencing. Which has lead to a crisis in excessive public funds being spent on locking up non-violent drug offenders. A practice which has very harmful effects upon a persons job, employment, housing future, as well as their children'S well being when the parents are taken away. Which can have life long affects upon the child' education, mental stability and success in life.

And despite the recent vote to stop the census study on the Native Hawaiian prison population. Those of us attorneys who do criminal defense work know that in the capitalist system, the black and brown minority people are statistically over represented in the prison population and the higher education population. Thirty, Forty years ago, before the war on crime many more people were obtaining public scholarships and grants to obtain job training and advanced education, and a far fewer percentage of Americans were in jail.

So, I and the other members of the African American Lawyers Association of Hawaii, we support the reduction of the penalties of possession of items deemed "drug paraphernalia" as I for one have always deemed such laws over broad and subject to subjective interpretation, leading to over charging, and over sentencing.

Sincerely,

Andre' S. Wooten