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# What's Inside **Everything You Ever Wanted to Know About Terps** Page 8 by Jarrett Ashley **THE 420 COMIC** Page 12 An Interview with Jeffrey Peterson by Indica Azula The Boston Freedom Rally Page 18 An American Cannabis Tradition by Roland Endblazin From Medical Marijuana to Magic Mushrooms Page 28 The Future of Plant Medicine by lauren lofacono Page 34 **Irradiating Cannabis** Kill the Mold. Bomb the Weed. by Indica Azula

Cover Image by Michael Chandler Table of Contents Image by Indica Azula Plant Grown by John Labo



# Everything You Ever Wanted To Know About Terps

by Jarrett Ashley

A while back I wrote a piece all about trichomes, those beautiful, sticky, pungent powerhouses of the female cannabis plant. In that article, I briefly covered terpenes or "terps" as being one of the key components of trichomes. I wanted to take this opportunity to expand on that and take a deeper dive into the aromatic world of these essential oils! I say "essential" because they are just that in so many ways: essential to the unique character of your favorite cannabis strain, essential to the health of your cannabis grows, and quite literally the main component of the essential oils you can get at your local health food store that have been gaining in popularity over the past decade or so. Although terpenes make up what are considered secondary effects in the overall "entourage effect" of mature, full-spectrum cannabis - they have been used on their own, or in combination with each other, for centuries as a primary source of alternative healthcare. Aromatherapy is a rich tradition that says it all in the name and is based on these fragrant terpenes.

#### WHAT ARE CANNABIS TERPENES?

When it comes to cannabis, the primary effects come from cannabinoids. Household names like THC, CBD, and even a few my own mom talk about regularly now like THCV, CBN, and CBG. Terpenes like myrcene, limonene, and borneol sound almost foreign to most people, but surprisingly even among many cannabis users as well. While the ratio of cannabinoids determines whether a plant is sativa or indica, the terpenes present and their ratio determine the unique identifiers of individual strains. All the smells, tastes, and unique effects of your favorite go-to buds are terpenes! The levels of myrcene can determine if you get "couch lock" or not. The absence or presence of humulene will be the difference between getting the munchies or suppressing your appetite. Terpenes, despite their status as "secondary" in the context of cannabis, in fact play a HUGE role.

Terpenes are lipids like cannabinoids, but more sim-

ple. They are most commonly derived from plants, including flowers, trees, herbs, and, of course, cannabis. Terpenes can also be found in animal's skin, fish scales, feathers, and hair. For plants, especially cannabis, terpenes are vital. As I already touched on above, terpenes in unique combinations are what give plants their fragrance, taste, and appearance. A plant's terpenes are also its primary way to protect itself from predators or to attract insects for pollination.

#### WHAT ARE THE BENEFITS OF TERPENES?

When it comes to us humans, terpenes can do a good deal of protecting as well. Studies have identified a range of therapeutic benefits associated with these compounds. It should be noted, however, that more research needs to be done to solidify our understanding of them as the study of these compounds is relatively new. That being said, some of the benefits of various terpenes that have been found so far include:

Antiviral - Researchers are always on the hunt for new antiviral compounds. Many of the terpenes they've looked at show the potential to kill viruses. Side note, this is also why essential oils like lemon or pine tree make incredible natural cleaners.

Anticancer - As more and more people are affected by cancer each year, they and their loved ones demand solutions. Unfortunately, even in the face of hard evidence, progress on using cannabis to treat and potentially cure cancer (rather than as an afterthought to fight back harmful chemo) is still excruciatingly slow. Luckily, some terpenes, including those found in cannabis, exhibit anticancer properties and showed slowing and even reversing the growth of cancer cells in early studies.

Antidepressant - This one is already fairly well known in the medical industry as a full quarter of medications for treating depression are made with various terpenes.



for treating depression are made with various terpenes.

Antimicrobial - Many known terpenes may help in killing or stopping the progression of microorganisms. It's a shield for the plant and then it's a shield for us after harvest!

Pain relief - Researchers have found that some cannabis terpenes may mimic cannabinoids by creating a pain-relieving effect. In one 2021 study looking at the "entourage effect", researchers combined terpenes with cannabinoids. They found that pain relief was greatly increased without any negative side effects.

#### **MOST COMMON CANNABIS TERPENES**

So far I've just been talking about terpenes generally. And they deserve it because as we've seen, they are pretty amazing on their own. But we're here for Mary Jane. If terpenes are so great and all, which ones are in my ganj and what are they doing when I put them in my body with this exquisite diamond dab, bruh? Chill... I've got you covered. There are literally thousands of known terpenes and several hundred of them can be found in cannabis across the sea of genetic variety. A pretty sizable portion of them are present in very teeny-tiny amounts which doesn't make them any less impactful on the character and effects of the bud but it DOES mean that for the sake of time, we can cut a few hundred from our list. Phew! (\*wipes forehead with towel\*)

Here are a few of the terpenes that can be consistently found in higher quantities than most in all the strains we've come to know and love. There are even a few strains included that contain high levels of the various terps so you can go out and try for yourself. Better yet, you can start growing your own medicine based on exactly what you want to get out of it like my mom. She HATES getting the munchies, so when she found out that humulene suppresses appetite and limonene promotes weight loss and that BOTH were in Durban Poison, she immediately started growing it and still does to this day! As I said, there are a bunch of terps, but we are gonna talk about the most prominent. Check it out:

Myrcene - Known for a full body relaxation, aka "Couch-Lock." Another property is the ability to enhance absorption through the skin and to also increase

the number of cannabinoid substances in the brain. More cannabinoids in the brain give the user a sense of euphoria. The scent is an earthy, clove-like smell. Cannabis strains with this terpene include OG Kush, Girl Scout Cookies, and Grape Ape. Myrcene is also a chemical in hops, the major component in beer.

Pinene - This compound is commonly derived from the resin in pine trees. Like trees, in other plants, it also has that wonderful outdoorsy, earthy aroma. As a therapeutic remedy, it can be used as an anti-inflammatory, anti-bacterial, and bronchial dilator. Haze Berry, OG Kush, and Blue Dream tend to have a higher amount of the cannabis terpene, Pinene.

Humulene - This is another outdoorsy, woodsy scent. Two main medicinal uses for this compound are as an appetite suppressant and an anti-inflammatory. Humulene terpenes can be found in marijuana strains such as Gelato, Durban Poison, and Sour Diesel.

Limonene - With its bright, citrusy scent, Limonene's aroma is a mood elevator. Its uplifting qualities help to reduce anxiety and depression. Another therapeutic property is as a digestive and potential weight loss aid. This compound is found in Wedding Cake, Quantum Kush, and Durban Poison.

Borneol - This terpene has a minty aroma and flavor with an unusual underlying metallic tone. Its medicinal qualities include uses as an anti-inflammatory and an analgesic. You can find Borneol in cannabis strains such as K13-Haze, Golden Haze, and Amnesia Haze.

Phytol - With flora tones, this marijuana terpene gives the user a sense of relaxation. It's often used for its sedative and anti-anxiety properties. Another of its therapeutic qualities is as an anti-inflammatory. This terpene can be found in the underlying tones of Sour Diesel, Blue Dream, and one of my personal favorites -UK Cheese.

Eucalyptol - The aroma of this terpene is a cooling subtle minty scent. It has both anti-bacterial and anti-fungal properties. It is a secondary component of the marijuana strains Girl Scout Cookies, AC/DC, and Headband.

Sabinene - Although not one of the most common cannabis terpenes, this terp has a unique peppery or spicy



scent. Many users say it smells like pumpkin pie or reminds them of the holidays. Its medicinal uses include anti-bacterial and antioxidant properties. Some of the main strains it's found in is, Super Silver Haze, Lemon Haze, and Northern Lights.

#### TLDR QUICK REFERENCE LIST:

Myrcene -- earthy, musk, fruity -- relaxation, euphoria, "couch-lock" -- strains: OG Kush, Girl Scout Cookies, and Grape Ape

Pinene -- pine, woodsy -- anti-inflammatory, anti-bacterial, bronchial dilator -- strains: Haze Berry, OG Kush, and Blue Dream

Humulene -- spicy, herbal -- anti-inflammatory, appetite suppressant -- strains: Gelato, Durban Poison and Sour Diesel

Limonene -- citrus -- uplifting, anti-anxiety, anti-depressant, weight control -- strains: Wedding Cake, Quantum Kush, and Durban Poison

Borneol -- mint, metallic -- anti-inflammatory and analgesic -- strains: lots of hazes i.e. K13-Haze, Golden Haze, and Amnesia Haze Phytol -- floral -- sedative, anti-anxiety, anti-inflammatory -- strains: Sour Diesel, Blue Dream, and UK Cheese

Eucalyptol -- minty, menthol -- anti-bacterial and anti-fungal -- strains: Girl Scout Cookies, AC/DC, and Headhand

Sabinene -- woodsy, spicy, peppery -- digestive aid, anti-bacterial, antioxidant -- strains: Super Silver Haze, Lemon Haze, and Northern Lights

#### A FEW LAST THOUGHTS

If you're anything like me, the smell of cannabis is a gigantic part of the whole experience. When I crack open a fresh sack of primo buds, I immediately shove my face in it and breathe in the amazing scent. I find myself saying things like "I could live in there" or "This must be what heaven smells like". I feel a sense of joy, relaxation, and excitement all jumbled together at the same time and that's before I even take my first hit. All of that is thanks to terpenes! I hope you enjoyed learning about them as much as I did! Now go enjoy some terps - I know I'll be!





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#### An Interview with Jeffrey Peterson,



by Indica Azula

Jeffrey Peterson, aka "The 420 Comic," is a Cannabis themed comedian. Originally from Connecticut, he now resides in Las Vegas where he has a Residency at Planet 13 (the World's largest Dispensary). He has appeared on prominent stations and shows such as, HBO, TMZ, ABC, Monday Night Football, the Season One Winner of "The Marijuana Show," and recently seen on Rotten Tomatoes. He has performed with infamous Cannabis Icons such as Willie Nelson, Cheech and Chong, Doug Benson, Ziggy Marley and More. Also a former Animator, Heavy Metal Singer and publisher of his own Comic books.

Below is an interview with Jeffrey, where you will be able to find out more information about one of the Cannabis Industry's own 420 friendly comedians.



### Hi Jeffrey. Can we begin with you letting us know what made you want to become a comic?

I was the lead singer for 2 popular Heavy Metal bands in Los Angeles. When the rock n roll thing became too hectic, I started doing Stand Up Comedy. 21 years later, I'm starting to like it.

I truly find successful comedians to be extremely skilled at their craft as it is no easy task to master for most people. What do you attribute your comic success to?

It takes a lot of confidence to be a Stand Up Comic. That and Attitude. I was always a class clown, loved imitating people. When I got the nerve to do Comedy, I really found myself.

### What is your creative process when working on your routines?

I smoke a lot of pot and watch old sitcoms all the time. This gets me in state of mind to come up with the funny stuff.

### Who are some individuals who inspired you to become a comedian?

I loved Stand Up Comedy albums as a kid, especially Cheech and Chong. I met Comedy Legend George Lopez in 1993, when I was singing in a metal band. It was George actually, that suggested I make my routine about Weed in 2003. It was "The Unknown Comic" that inspired my moniker and one liner style. Also, Vegas Headliner, Rich Little, inspired me to do Celebrity Impressions and now I do them on the Vegas Strip.

#### Who is your favorite comic?

It's hard to narrow it down, but George Carlin is one of favorites. He had razor sharp wit and he did voices. Steve Martin and Jerry Seinfeld are great. I always liked guys like Dom Irrera, Kevin Pollock, Eddie Murphy, and Jim Breuer. But It's old school comics like Frazier Smith, Vic Dunlop and Carl LaBove that helped me be a better Comedian.

#### What is your favorite line or skit you have created?

My favorite Comedy bit from my act is called "Legos Expendables" where I make fun of Lego Movies with a long list of celebrity Impressions. Trump, Obama, Ice T, Ozzy, Alex Jones and Seth Rogan are among the stars of this fictitious film

### What is your favorite Cannabis event you have performed at?

Being one of the Headliners at the Las Vegas High Times Cannabis Cup in 2017 was unforgettable. It was supposed to be a 2 day event, but high winds made it a one day event. Performing Stand Up Comedy at a Cup with Ludacris, B-Real and Chief Keef. When members of Wu Tang Clan showed up, things got wild.



Photograph by Michael Chandler. Seth Rogan & the 420 Comic





Times Cannabis Cup in 2017 was unforgettable. It was supposed to be a 2 day event, but high winds made it a one day event. Performing Stand Up Comedy at a Cup with Ludacris, B-Real and Chief Keef. When members of Wu Tang Clan showed up, things got wild.

### What is your favorite venue to perform at in Las Vegas?

My all time favorite venue to perform at has got to be Planet 13. To see my face and name on a neon sign in Las Vegas is surreal. It's beyond awesome that the world's largest Dispensary has a weekly comedy show. This Residency is exactly what my 11 years in Sin City was all about. Winning!

Being a current Las Vegas native, what recommendations would you have for our readers traveling there that may be looking for some 420 friendly activities while in town?

I am a Las Vegas resident, from New England raised in Hollywood. I am very proud of my east coast roots and the events I've done in New England, but The Boston Freedom Rally is on my to do list. Las Vegas is a 24 hour adult amusement park with endless options especially for cannabis consumers. We are quickly becoming the New Amsterdam. We have 56 Dispensaries, dozens of smoke shops, Jerome Baker's Dream Factory and soon 40 consumption lounges. I love this town.

#### What is your favorite Cannabis strain?

My favorite cannabis strain is "Purple Conspiracy" from Sonoma, CA. My friend Moonfire is a gifted cultivator and this grapey, sticky strain packs a punch.

#### Have you ever grown your own Cannabis before?

Like my late great friend Jack Herer, I'm no grower. In fact, I suck at it. That's why I'm friends with Cannabis Cup Winning Growers.

What are some upcoming performances you are looking forward to? And where do you regularly perform?

The Planet 13 Residency continues. The comedy shows have been packed every night. I will be Hosting The, 2 location, 3rd Annual Virginia 420 Fest with Keller Williams. I'll be signing Comic books at All C's Collector's Showcase and doing comedy in Denver in April. As always, I'll be Performing all around Las Vegas.

#### What advice would you give to aspiring comedians?

To aspiring comedians I say. Write Jokes and then tell them on stage. Be patient, being a comedian takes many years, especially if you want to be great. Put in the work, get on stage often.

#### Stay Stoney My Friends, Hope to see you in Boston soon!



Photograph by Dagwood X.
The 420 Comic at Las Vegas Live Comedy Club





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# THE BOSTON FREEDOM RALLY

### An American Cannabis Tradition

by Roland Endblazin

It is September in Boston once again, and that can only mean one thing for sure, The Boston Freedom Rally is bringing it's friendly protest to the actual location that our forefathers fought for the foundation of freedom that this country was built on.

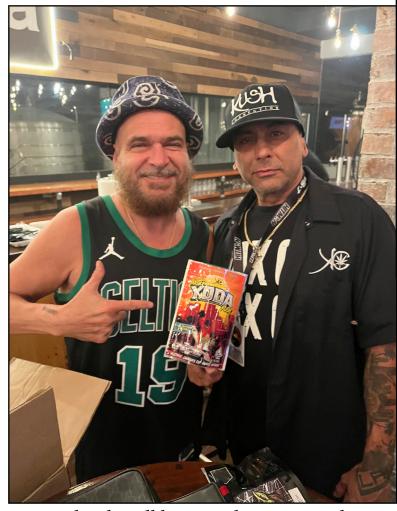
That thought alone somehow brings a chill up my spine. I am very proud that I have been a part of a different revolution that has been taking place in my backyard for decades.

The Boston Freedom Rally celebrated it's 34th anniversary this year. Making it one of the oldest cannabis protest/celebrations this country has ever seen.

And what a long strange trip it's been.

Starting off in 1989 and over the next few years taking place in a few different locations, the event finally found its home in the Boston commons in 1995. Although it found a home, that does not mean there were not obstacles. For many years, the city of Boston fought hard to try to ruin or even cancel the event. However, the dedicated cannabis activism in Massachusetts continued to win the battles that allow this event to take place every year. Now 34 years later, it is a welcome celebration that seamlessly incorporates itself with a day in the park at the Boston Commons. It is an event that brings our community together in a very special way.

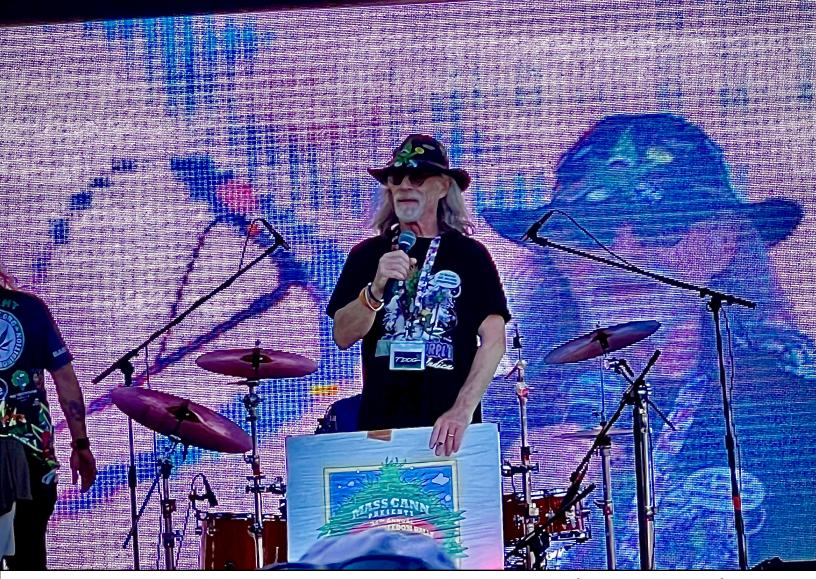
The event is held in the Boston Commons, which is a public park. It is open to the public to walk through and spend the day with family and friends. Although it might be shocking for some to see everyone openly



Roland Endblazin with Master Yoda







TDOG speaking on Stage at the BFR

consuming cannabis, it is ultimately a very peace-ful and welcoming event. Cannabis enthusiast are allowed to be themselves while being surrounded by all members of society. Individuals enjoying the park or people with their family and friends interact and combine for a day like no other. Even the police, who are a very visible presence, are as tolerant as can be and seem to be more concerned with keeping people safe rather than babysitting a bunch of stoners. There is a very welcoming vibe. It's a great feeling for any cannabis enthusiast.

But as with everything, nothing ever goes as planned. This year mother nature made sure to remind us of this. As much as anyone plans for an event, there is only so much you can control.

Weather is not one of them.

Because of severe weather forecasts, the Boston freedom rally was postponed one day. The event was held on Sunday instead of Saturday giving the weather a chance to clear up, and allowing for a beautiful day of celebration.

Part of the celebration included enthusiastic Cannabis Community Members, from laymen to legends. Some of the best parts of being at these events is the social interactions and sharing some cannabis with legendary members of the community which is always a treat.

This year, Boston was treated with the presence of a true legend, Master Yoda. Master Yoda is a legendary grower, producing some of California's Finest Cannabis for over a decade. His Master Yoda Kush is absolutely one of my favorite strains, It has treated me like a Jedi every time I have had the pleasure to

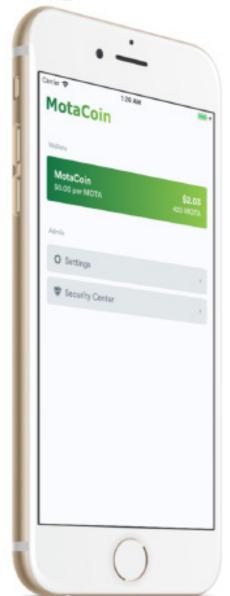


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Instagram.com/MotaCoin Twitter.com/MotaCoin\_ Facebook.com/MotaCoin T.me/MotaCoin Linkedin.com/in/motacoin partake. His work has brought on many award winnings over the years, including winning Cannabis Cups, where legends have been made.

Speaking of legends, (as if this wasn't enough) sharing the booth with Master Yoda was legendary breeder, Crockett. His work with iconic strains, like Tangie, have completely revolutionized Cannabis, taste buds and have also earned him countless awards. One that is special to me, was his first place win at the very first Dab A Doo in Amsterdam. Dab A Doo is an event that is held all over the world and hosted by Amsterdam's Hash Queen, Mila. The First Dab A Doo is an event I will never forget.

The Boston Freedom Rally features two stages that are

filled with music and speakers, who educate and entertain the crowd. There is no shortage of food, vendors and booths to showcase products and companies that span throughout the cannabis community. A fun day fir anyone who enjoys marijuana and the community that surrounds it.

Boston has been the epitome of revolution and it is no surprise that we stand here united, still fighting for the love a plant that has helped so many. It is a wonderful feeling to know that our struggle is changing and in some circumstances, ending. And that is all because of the dedication of true cannabis activists, helping us to evolve in the right direction. When it comes to cannabis, Boston is a wicked good place to be!

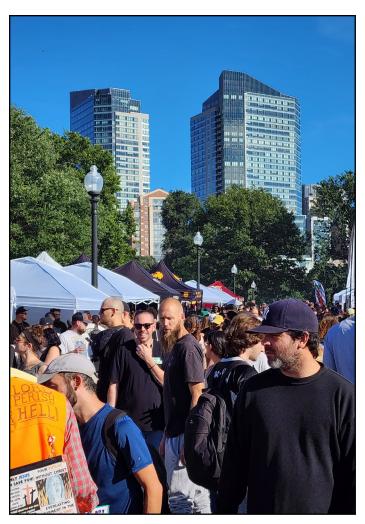
















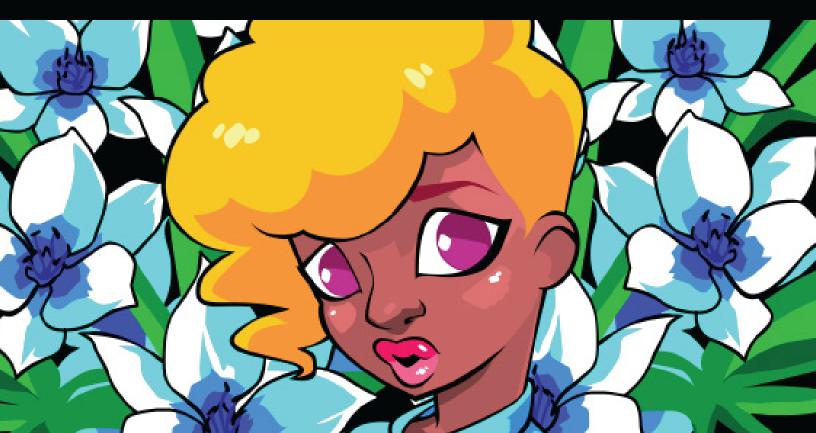


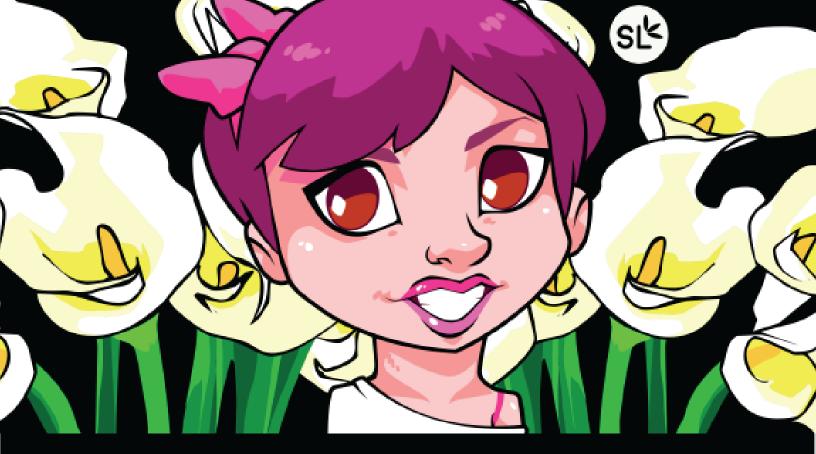




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## From Medical Marijuana to Magic Mushrooms:

### The Future of Plant Medicine

Medical marijuana has rapidly escalated from the fringes of society to mainstream healthcare in our lifetime. In a world continuously looking for the next big wave to catch, are psychedelics next?

Much like cannabis, the historic research of psychedelics has a checkered past without a baseline consensus. While universities and government branches have traditionally controlled the studies, you may be catching onto a growing momentum with psychedelics being professionally utilized outside of the typical scientists, professors, and CIA agents that have claimed exclusive rights to researching these substances in the past.

Maybe you've seen a psychedelic doula tent at a music festival, or heard of people getting off of antidepressants with microdosing. Perhaps your local bookstore has been displaying memoirs about healing PTSD with ayahuasca or Ph.D authored psychology books about psilocybin. Or maybe you've witnessed how far cannabis has come in such a short amount of time and are just wondering what's next in alternative plant medicine. That's why we spoke to Alex Shaw, a training practitioner in the psychedelic medicinal field, as well as a visionary for the movement.

"So when we talk about psychedelics, there's multiple compounds like psilocybin, MDMA, the plant allies like DMT whether it's extracted through ayahuasca, San Pedro or peyote...Their ability to produce altered states of consciousness is honestly wild. What is even more wild is the ability to map such phenomenons with modern imaging," Shaw explains. "There's this thing called the DMN which stands for Default Mode Network, which is a network of interacting brain regions that are active when a person is not focused on the outside world. This is measurable with the fMRI technique. When you take something like psilocybin to trigger your brain into this Default Mode Network, your ability for integration increases."

According to Shaw, psilocybin can uniquely help brain entropy and cause recognition of different activation and decision making patterns. "It basically enables your brain to break down all of the conditioning in your mind. It allows your brain to disconnect from all your long range activity patterns. You assume all these things in your mind—you've built up categories and all these systems—but psilocybin breaks down your actual networking systems to let it go and disrupt the paths your brain would otherwise instantly default to, which is where trauma plays an important part."

As a healthcare worker, volunteer for victim advocacy, and self-proclaimed "warrior for psychedelics" in her path and own mind, Shaw sees them as a medicine for trauma much like cannabis has been for cancer, and even sees how they can work together.

"John Hopkins did a double blind study in 2016 that reported a substantial majority of people suffering from cancer-related anxiety, that is, existential anxiety about dying, were provided considerable relief from a high dose of psilocybin. To break down the fear and anxiety of dying and just let go to connect to actual neural pathways in your brain means psilocybin can work for the minds of cancer patients symbiotically with cannabis healing physical symptoms in the body. It all comes back to being harmonious with everything - to have something to free your mind and another substance that can calm your body of the symptoms of cancer, which is what cannabis has done so well."

Shaw also references an endocannabinoid study from the '90s that mapped the DNA sequence encoding a cannabinoid receptor in the brain, which she believes could be mirrored with psychedelics, but from the body to the mind.

"In the late '80s and early '90s, scientists discovered that humans have an endocannabinoid system, our bodies' natural active system and complex cell signaling network. I've always had this weird theory around all the rising cancer rates we're seeing now. Back in the day when we would eat meat, all these animals fed largely off hemp, which would then feed our endocrine system. So we already got those molecules





through them - when we cut that off, there was a lack there and a disconnect. A major theme with psychedelics is also disconnect."

Along the lines of her theory, our ancestors not only consumed hemp-fed meat that could have helped engineer these systems in our bodies, but also partook in magic mushrooms and psychedelia that could have mapped similar pathways in our minds.

"Discovering our bodies have this system blew scientists' minds in the '90s, which is not that long ago! We know our bodies have that. But what if our minds have the same thing, except with psilocybin and plants for the nootropic system in our brain, and we just don't know it yet?"

As research in the psychedelic field as a legitimate medicine increases, there is still much to be done to catch up to the breadth of the studies that have been done with cannabis. Still, Shaw sees this growth in both fields as complementary:

"To normalize a plant as medicine, and not a drug, for which your body has its own system to literally connect to a plant, I think cannabis paves the road for plants as medicine being acceptable even marijuana is still Schedule 1 and many Americans still have felonies for growing a garden. However, it is opening the public's eyes to plants as a source of healing. Getting people familiarized with a plant, even hemp used in consumer products, is a great starting point to open minds to things that seem more illicit, like psilocybin or a cactus growing in the desert. That can kind of ease people into the fact that there is so much more out there, and our bodies are actually a part of these plant systems, just like we are a part of water."

"That may be the bridge or the gateway - we don't have to hide or do these crazy things to utilize cannabis anymore - a plant is literally a plant. When you normalize how beneficial a plant can be, you can start to go deeper. Cannabis is not only amazing, but I think it's a bridge."

There are so many versions and trends that have hit the medical marijuana market, not all of which Shaw agrees with. Still, she is optimistic about the potential they offer. "I'm not a big fan of modifications and extracts like CBD, because imagine you want to eat an orange but can only access one part, like the pulp. Well the whole tree worked so hard to provide you with a perfect fruit, not just a fraction of it. Every part of a plant works symbiotically with your body to be wholly beneficial to it.

What I do like about CBD however, is that it gets people on board with a plant they used to be scared of. It's a building block to open the mind, which has to start somewhere. So if that means my grandmother is taking CBD, it also means her mind is opening to the plant and what it represents. So if she recognizes one part of this plant has done nothing but help her, maybe she'll take the next step toward something that can help her more."

Our libraries on the benefits of medical marijuana and even extractions of it like CBD keep growing. So where can we expect psychedelics to fit in?

For Shaw, the healing focus is both mental and soulful, which comes together as a spiritual medicine.

"One of the major things that has drawn me to psychedelics is healing trauma - taking the science and applying it through therapy. To me, trauma is essentially a wound of the soul. Working with psychedelics is like soul repair. The heart of trauma is disconnection with the self. You have fragmented parts of yourself, whether it's your soul, your spirit, or your ancestry. These fragmented parts are spread all out. Psychedelic work lowers range level on everything in your mind of what 'should be,' what 'could be,' and allows you to drop that. The heart of trauma is being disconnected from self, and psychedelics allow us to bring it all back together. The hardest part is getting the public to see it that way and how the science works. To show that there is a network in your mind that can release trauma with psychedelics is the beginning for me."

As a healthcare worker, Shaw has a deep understanding of how the FDA and big pharmaceuticals operate. As a victim advocate, she also has a deep understanding of how the human mind operates. And as a trainee in psychedelic therapy, she also has a deep understanding of how the human mind can be liberated.





4g Mushroom Chocolate Bars

"There are so many people operating off an inundated system that has been established for so long. So in order for all of this to matriculate into a system that works for them, there needs to be safety, learning, facilitation, and ceremony - because you can't just have people go microdose when they're on SSRI's [antidepressants] and pharmaceuticals altering the chemistry of the brain. The cool thing about microdosing psilocybin is that it IS nootropics, but when you do a large dose, it becomes psychedelics. But that's why microdosing can work so well, because it operates in your brain the same way nootropics do and is kind of like a seesaw until you find that level in your mind where you can drop non-conducive patterns."

She continues, "Medicine should integrate the brain to be connected with the body and with the self. There's this feeling of anxiety when you don't feel okay in the world you live in, and there's pharmaceuticals that can help you with that. But what if instead of pumping your body and mind with chemicals, there's a plant source that provides the endocannabinoid system for the brain? What if there was a way to relate to trauma through therapy without being triggered? What if you could have those boundaries dropped down so you can actually analyze it? That's what I hope to discover - that there's a plant that grows in your garden and comes from the Earth and can connect you back to it in a full circle - this full circle of where you come from and where you are. You don't need a prescription, you just might need a different avenue."

While the future of psychedelic therapies is hazy, it could be the next plant medicine for the masses on a not-so-distant horizon. The more we question, the more we learn. And the more we explore, the more we grow. With healers like Alex Shaw working toward both mind and body liberation, may the next wave of plant medicine expand our holistic paths to wholeness!





# ROLLING TRAY PHONE CASE

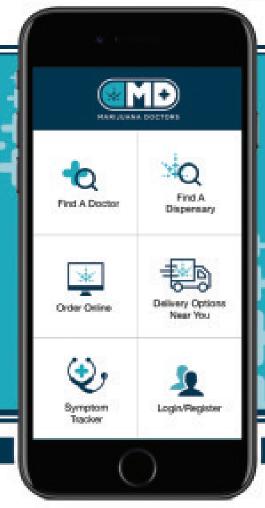






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# Irradiating Cannabis

## Kill the Mold. Bomb the Weed.

by Indica Azula

When the subject of healthy food and medicinal herbs (like cannabis) is brought up, you often hear about concerns of GMOs, Organic vs Non Organic, Antibiotic Use, Pesticide Applications & Chemical Fertilizers. There is another process however, that is less discussed and that procedure is called Irradiation. Now Irradiation is not new news, nor is the procedure. In fact, they have been Irradiating our food since as early as the 1950s, with over 60 countries who use this technique.

You may be asking yourself, what exactly is Irradiation? Irradiation is essentially exposing a natural product, such as cannabis (and sometimes its packaging) to ionizing radiation such as from gamma rays, electron beams or x-rays. By doing so, it is believed to extend the preservation and safety of the product. The idea is, if they are able to eradicate any organisms such as bacterias, microbes or molds that are present, it will stop any potential food borne illness or spoilage that may occur. From the information I was able to find, the products are subject to the Irradiation Procedure for 24 hours during which they are continuously blasted with the rays. According to the FDA, "Gamma Rays are emitted from radioactive forms of the element Cobalt (Cobalt 60) or the element Cesium (Cesium 137). Gamma radiation is used routinely to sterilize medical, dental and household products and is also used for the radiation treatment of cancer." (1)

Is Irradiation safe? According to the FDA, the WHO, the CDC and the USDA, they have all performed tests on products that had been treated with Irradiation, and have determined that it is in fact "safe." They go on to state that the levels of radiation left over in the products are measured afterwards. It should be noted that all four of those organizations have been subject to scrutiny over the years for countless questionable practices and health recommendations. That being said, we may want to take things with a grain of salt and discern on our own, whether we wish to

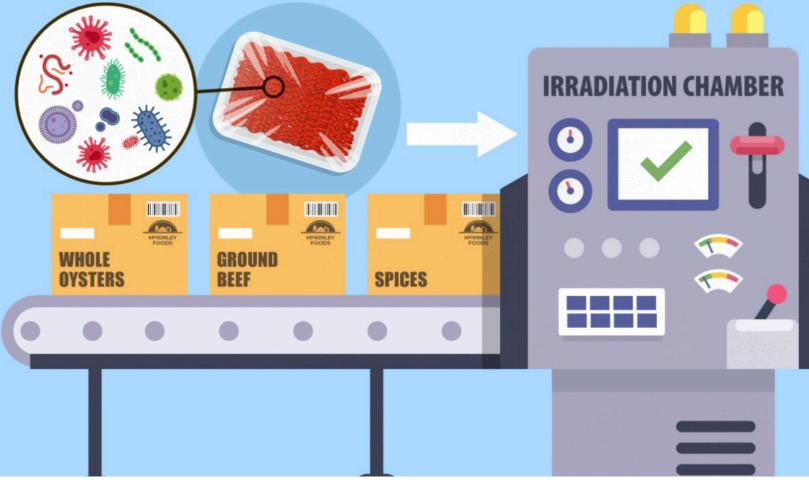
consume foods or products that have been irradiated or not after conducting our own research on the matter. To give you an idea of some foods that can be subject to irradiation: beef & pork, poultry, seafood (shellfish & crustaceans), fruits & vegetables, seeds, lettuce & spinach, shell eggs and spices, to name a few.

Now let me circle things back to the use of Irradiation on Cannabis, specifically. According to the majority of sites, videos and articles I viewed while researching this topic, over 80% of Cannabis purchased from dispensaries in the U.S. has been subject to Irradiation. Whereas in Canada, the percentage seems to be closer to 100%. It is not just the U.S. and Canada who use Irradiation on Cannabis. In Germany, all Medical Cannabis imported must be Irradiated. In the Netherlands, Medical Cannabis cannot be sold until the country's Ministry of Health verifies the product has been irradiated. It is their preferred method of decontamination.

One might wonder, how did this procedure get adopted in widespread use by the Cannabis Industry? According to most companies who openly spoke about its use on their products, it was due to "strict compliances" and "broad analysis requirements." Essentially, state governments (at least in the U.S.) enforce that Cannabis be tested under a wide umbrella of any of the potential millions of total viable aerobic bacteria and mold. Because of this, many farms, even "organic" ones, Irradiate out of fear of failing. While some seem to do it routinely as a preventative, so to speak, while others, if they fail for microbe counts, simply send their product out to be Irradiated, and then distribute it to be sold to the consumer.

Now you may be thinking, well the FDA, the WHO, the CDC etc., have all deemed Irradiation safe and effective (again, use your own discernment, I am simply stating the information I have gathered), should we be





Cartoon Imagery of the Irradiation Process photo from cdc.gov

oncerned out Irradiated Cannabis? Potentially yes and no. If it is in fact as "safe and effective" as major organizations and governments claim to be, the removal of harmful organisms is beneficial. No one wants to consume moldy weed. Especially people with weakened immune systems who may be using Cannabis for medical reasons. Because Cannabis (in the U.S. specifically) is not federally legal, it is only subject to regulations by the state. It seems that the State's major concern is that of microbial content. There is supposedly no organization or persons regulating the Irradiation Process of Cannabis, as it is by the FDA with the food on a federal level. There are different levels at which certain products are Irradiated, High, Medium and Low. If these practices are done unethically, at high levels, who's to know if in fact, there is little to no radiation left in the Cannabis after the fact? Under FDA regulations, they can require a product be labeled that it had undergone to process of Irradiation while Cannabis is currently not required to do so.

Another question you may have is does it alter the natural compounds and make up of the Cannabis? Again, according to companies that Irradiate, and those who provide the service of irradiation, it only has a very minuscule effect. Supposedly it does not alter the levels of cannabinoids, such as THC and CBD. Though it does however, cause "a slight decrease" in terpene levels. From those statements, you may

branch off as you will with your own feelings on the matter.

I am not here to tell you to what you should or shouldn't think about Irradiation. I am simply trying to bring more

awareness to the usage of the practice widely used on our food, medicine and cannabis. However, I will end with the observation that there are major differences between handcrafted, homegrown cannabis and commercial dispensary cannabis.

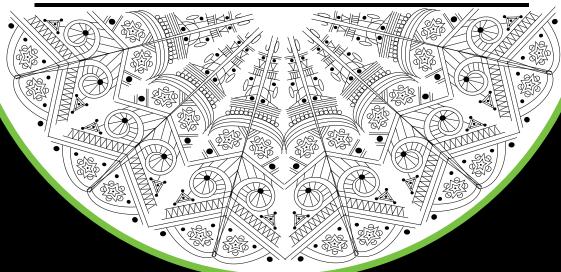


A Portable, Food Irradiation Machine. 1968 photo from Wikipedia

 $<sup>1) \</sup> https://www.fda.gov/food/buy-store-serve-safe-food/food-irradiation-what-you-need-know$ 



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