

# CANNABIS

## WORLD JOURNALS

*by Chnc*

Banking for the  
Cannabis Industry in  
the United States

Cannabis in the  
Stock Market

Cannabis Sativa: Beyond  
 $\Delta 9$ -tetrahydrocannabinol

New Cannabis Industry  
Trends for 2022

COMPANY *of the* Month

**NORMIL<sup>®</sup>**

Interview with  
Deputy Director:

**PAUL ARMENTANO**

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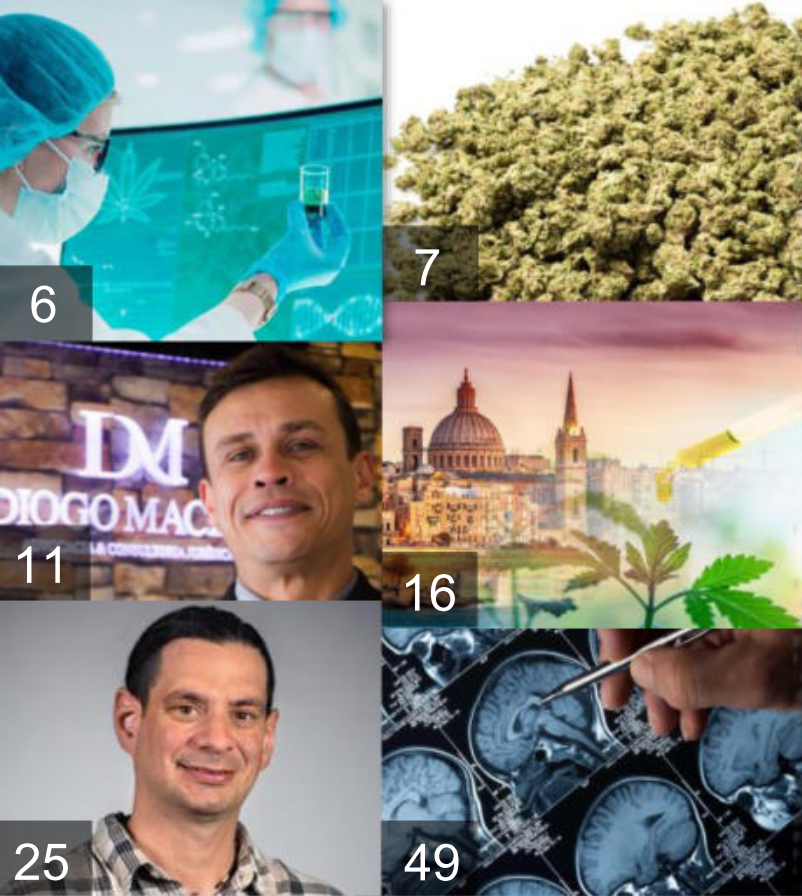
David Fajardo, 420

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Our Magazines **Canna Med Magazine** and **Canna Law Magazine**, each dedicated to the therapeutic area and the legal regulation areas of the cannabis industry, have decided to join forces and offer a new and more complete bi-weekly magazine: **Cannabis World Journals**. **Canna Med magazine** and **Canna Law magazine** are now sections of **Cannabis World Journals**. Along with them, we have created two new sections to offer a global look at the plant's market: we are talking about **CannaTrade** and **CannaGrow**, CannaTrade's objective is to reveal the rhythm of the businesses established around cannabis. Lastly, CannaGrow is a section dedicated to the botany and cultivation of the cannabis plant.

Cannabis World Journals is the most comprehensive cannabis magazine for discerning readers like you. Without further ado, we extend a warm welcome.

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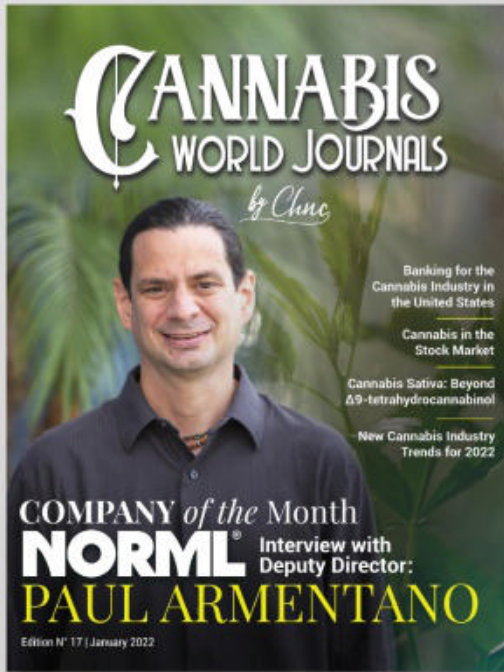
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## *Cannabis Shines in the 2022 Skyline*

Undoubtedly, 2021 was a year full of successes for the cannabis industry. The Latin American community was receptive and enthusiastic. It opened its arms to a new era with this medicinal plant as the protagonist. We won many battles and brought down many walls, corroborating once more that we are living and enjoying the golden age of cannabis. Although cannabis industry experts may disagree on the finer details of the plant's future, they still anticipate significant growth in the industry.

From a global perspective, many efforts are underway towards decriminalization and legalization in various parts of the world. When the United Nations Commission on Narcotic Drugs voted to remove cannabis from Annex IV of the 1961 Single Convention on Narcotic Drugs, which is the strictest schedule, it set a milestone in cannabis regulation in December 2020. Afterwards, a domino effect rippled through the industry's legalization efforts abroad, evidenced by the advanced decriminalization and legalization of cannabis in Europe, South America, North America, Oceania, and Africa.

On the other hand, within the medicinal aspect, with more research on the plant, the latest discoveries encompassing THC, CBD, cannabis terpenes, and many other compounds within the plant in question, its medicinal use is likely to advance dramatically. This sets the foundation for the experts' theorization that future medical use will become more common than adult-use thanks to future scientific research.

Starting a new year, one always wonders, what changes will we see in cannabis? What will be the events that will go down in the history of cannabis during 2022? Who will be the next country that will say YES to the industry? How many people will be learning about the therapeutic properties of the plant? We can throw around a thousand questions and theories. However, we are certain that this year, cannabis' path is green-lit; we are looking at a sky filled with thousands of opportunities.

**Editorial Team  
Cannabis World Journals**



# A Self-Criticism to my Activism

I have been involved with the cannabis plant for half of my life. In the beginning, it was just a hobby, years went by, and nowadays, some universities teach you how to grow it. This is already a profession, and I call myself "Cannagrower".

Cannabis activism as such, I would say started in 2012; together with my cousin (Jorge), we founded *4:20 PosterandPipe Shop*, a toy store for those of us who love cannabis. Back then, I used to talk to the customers looking for papers or a pipe, and I remember telling them how to grow and recommending to them: "grow your own cannabis."

Now involved in the "Cannabis Movement of Ecuador" and taking action, I alone went knocking on doors everywhere. I created Vida420 with the mission and vision of sharing free or low-cost knowledge about the industry. I managed to form a good

working team, from which Mariarte was born (an event where we spread the benefits of the plant through workshops, forums, conferences about cultivation, laws, risk reduction and damage, etc.).

Nowadays, we are working to hold the 2850 National Cup in Quito in November 2022, along with other recognized activists. In a short time, we have done a lot and it shows. We have shared our knowledge in local provinces (Pichincha, Tungurahua, Imbabura). At the same time, we have encouraged new or hidden cannabis actors to make themselves known. I believe the key has been union, communication, transparency, honesty, sincerity, and integrity, which are also the basis of a solid Cannabis Movement.

Now is when we need people to join the cause of CANNABIS DECRIMINALIZATION. It is time to come out of the cannabis closet and say: "I consume" whether it is adult or medicinal.

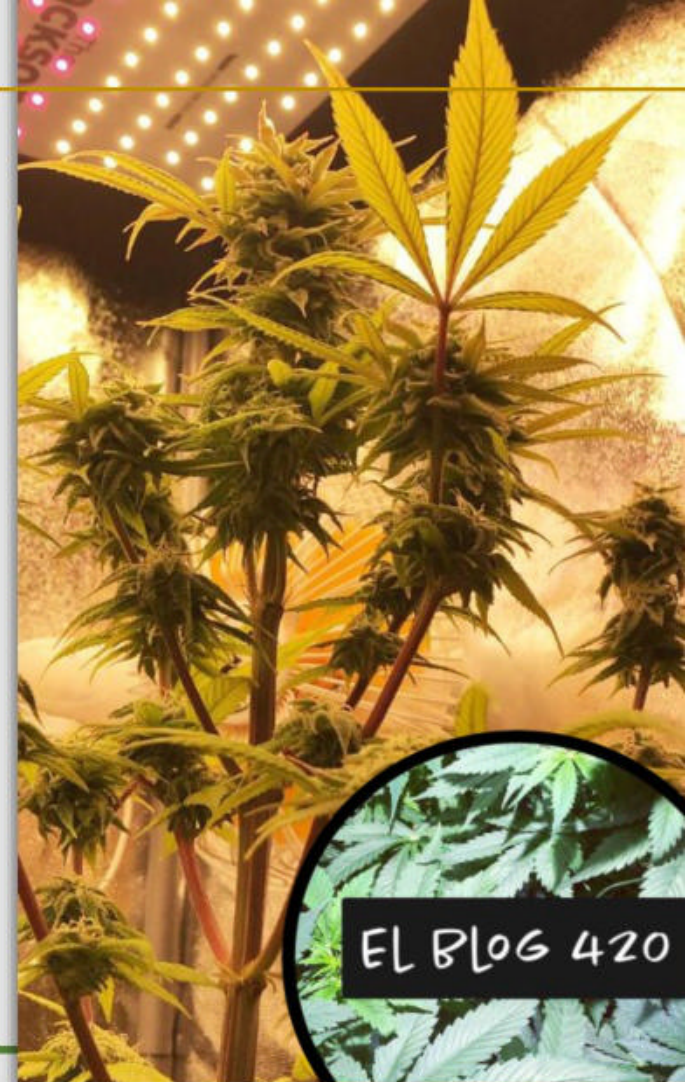
**David Fajardo**  
**Vida420**





## Blog 420

He is a young man who resides in Spain. He discovered the cannabis plant fourteen years ago, and now it is one of his hobbies. This activist grows indoor crops today. On the other hand, he stopped growing outdoor crops a few months ago. He started in this work, little by little, with the support of professionals in the sector. He is backed by the Dutch company Gen1: 11, who aid him with his crops and monitoring. Blog420 is dedicated to the protection and growth process of the cannabis plant. He is always taking care of all the details so that the crop has a successful result. According to its founder (who wishes to remain anonymous): "As an interesting project, we are creating a rather peculiar variety. We are looking for a certain aesthetic. We want to achieve a natural reproduction, acclimatizing better each generation".



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Language: Spanish  
Bogota, March 18 - modality: synchronous classes and on-site practices.  
Santa Marta, May 6 - modality: on-site classes



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## Certified Courses in Colombia

Pharmacology University, an American company with more than fourteen years of experience in the educational industry about the benefits of medical cannabis, is joining forces once more with the Jorge Tadeo Lozano University of Colombia to carry out two diploma courses this first semester in Spanish.

In 2022, the institutions present two educational proposals that respond to the diverse needs of the students.

**1. VIII Edition of the Cannabis Certified Course: Regulations, Cultivation, Transformation Processes, and Pharmaceutical Applications- Universidad Jorge Tadeo Lozano (Bogotá) and Pharmacology University**

**Methodology:** Live online classes with experts and On-site classes.

**Start date:** March 18 to July 2, 2022

**Duration:** 15 weeks | **Total Hours:** 108 H

**Classroom hours:** 19H | **Virtual hours:** 89H





**Target audience:** The course is aimed at the public interested in learning about medical cannabis, either as a patient, grower, extractor chemist, health professional, entrepreneur, investor, etc.

✓ **PAYMENT METHODS BY CLICKING HERE:**

<https://www.utadeo.edu.co/es/link/educacion-continua/53376/formas-de-pago>

✓ **Registration:** <https://cutt.ly/VlqFTDi>

✓ **Program link:** <https://www.utadeo.edu.co/es/continuada/educacion-continua/53376/cannabis-medicinal-normativa-cultivo-procesos-de-transformacion-y-aplicaciones-farmaceuticas>

**II Edition of the Cannabis Certified Course: Legal Context, Cultivation Techniques, Biochemistry and Uses of Cannabis - Universidad Jorge Tadeo Lozano (Santa Marta) and Pharmacology University**

**Methodology:** On-site classes

**Start date:** May 6 to July 9, 2022

**Duration:** 10 weeks | **Total hours:** 90 H

**Characteristics:**

The course is divided into three modules, offering a comprehensive view of the industry's current state. The modules are Legal, Cultivation Techniques, Biochemistry, and Medical Use.

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# Synthetic Cannabinoids

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an Alternative to  
Cannabinoid **Production?**





**S**ynthetic cannabinoids, in simple words, are those compounds created in laboratories that simulate the behavior of phytocannabinoids applied to medicine. For example, there is **Dronabinol**, a drug used to treat nausea in cancer patients and other pathologies, and the adult-use product **Spice**, a mixture of herbs combined with synthetics that generates strong psychoactive effects. These synthetics interact with the endocannabinoid system producing a wide variety of effects.

Research on these compounds dates back to the 1980's, according to ([unodc.org](https://www.unodc.org), s. f.) “: "it began when molecules with similar behavior to Δ9-tetrahydrocannabinol (THC) were examined. A synthetic THC analog, 'HU-210', was first synthesized in Israel in 1988 and is considered to have a potency of at least 100 times that of THC. Due to a chemical structure similar to THC, 'HU-210' is considered a 'classic cannabinoid' and has been found in synthetic cannabinoids sold in the United States and other countries."

Nowadays, many people involved in the cannabis industry, especially pharmaceutical companies, have set their sights on laboratory-produced molecules, to be

cultivated in large areas. The main reason is that although phytocannabinoids are promising, they tend to be unstable and break down in contact with high temperatures. However, synthetic cannabinoids can be stabilized and avoid losses translated into economic issues.

The **EPM Group Inc.** is a pharmaceutical group that develops prescription drugs based on synthetic cannabinoid acids to meet the needs of patients, is on a mission to produce cannabinoid compounds in a more scalable, reproducible, and robust manner. The director of the Precision Nanomedicine Laboratory at Tel Aviv University and a member of EPM's scientific advisory board, Professor Dan Peer explains: "It is much smarter to use synthetic molecules because they are highly reproducible. And producing small molecules costs less than creating plants. You can achieve scalability, reproducibility, and robustness"([israel21c.org](https://www.israel21c.org), 2021)

The industry may optimize at a lower cost and perhaps more reliably and safely. It is attractive for investors and pharmaceutical companies to implement this drug product based on "cannabinoid compounds." However, how synthetic cannabinoids interact



and what effects they may produce in the long term are still being studied. Dr. Raphael Mechoulam, along with Peer, discovered that the compound EPM301 has unique anti-inflammatory properties, which can be used to treat irritable bowel syndrome.

In economic terms, besides a scientific and pharmacological review, it is better to create the molecules in laboratories and leave aside the cultivation processes. Since it can take longer to obtain the phytocannabinoids because in stationary zones it could be harvested once a year while in tropical zones up to 3 times, considering that it is in the open air, without mentioning the difficulties that can occur due to plagues and diseases that decrease the amount of extract. Given the reasons above, it is more tedious to cultivate than to create substances for the same purpose.

Many variables come into play, there is a lot of scientific evidence of the damage caused by

the consumption of synthetic cannabinoids; such as the study of (Wacht et al., 2018), which talks about the abuses and evidence of toxicity and side effects of synthetic cannabinoids, which lead people to emergencies. However, with Botanical compounds, despite their difficulties in extracting them, there have not been serious repercussions on the patients' health. The facts to consider are the cost-benefit and, even more, the safety of reliable drugs to treat different pathologies.

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## *Interview with Diogo Maciel, Health Law Specialist and Legal Director of Cannabis Farma Brasil*

**Development, translation, and editing:** Jennifer Salguero Londoño

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The Cannabis World Journals team is pleased to speak with attorney Diogo Maciel, legal counsel for Cannabis Farma Brazil, pioneer, and advocate for access to medical cannabis through the national health system by patients who, to alleviate the symptoms of their diseases, require compounds derived from the plant during their treatment.

**CWJ:** Hello Diogo. First of all, it is a pleasure and an honor for the Cannabis World Journals team to have you here with us.

**DM:** Hello everyone, I am doing very well, I appreciate this encounter. Thanks for the opportunity to talk a bit about my work. Initially, I would like to introduce myself: My name is Diogo Maciel, I am a lawyer and specialist in Rights Applied to Health Services. I also work in the criminal law area. My focus is precisely the accountability of health plans in the drug supply, the release of treatments, and therapies, working tirelessly on the supply of cannabidiol by SUS (Brazil's single health system). Currently, I am the lawyer in the state of Paraná with the most authorizations for patients to grow their cannabis. I am also the Legal Director and founder of the company Cannabis Farma.

*"I believe in the evolution of medicine through science. International studies demonstrate the therapeutic efficacy of medical cannabis treating numerous pathologies. We seek to make a difference in the lives of Brazilian families."*

## *In the Expert's Room:*

**Interview with  
Diogo Maciel  
Legal Director of  
Cannabis Farma Brasil**

Cannabis Farma is a Start-Up that connects patients with the largest medical cannabis laboratories in the world. I founded this company precisely because



I realized that it was very difficult for people to have access to their medication. I have been working with medical cannabis since 2017, even long before the RDC 327/2019 law, which regulates the commercialization of cannabis-based products. I understand that DRC 327/2019 is not the best legislation the country could have. However, it represents a start for us to begin working with medical cannabis and provide this product to patients. So, I appreciate the opportunity to talk a little about my work. I am here to answer anything you would like to know.

**CWJ:** Of course, thank you very much for your willingness and knowledge. We find your work very important. You are a lawyer who chose to fight for a cause, for which few, due to lack of information and prejudices, will fight, especially in the legal and juridical field. But first, we would like to know how you came to the medical cannabis industry? How did you learn about the subject, and how did you consolidate as a company or Start-Up? What are your functions as a medical cannabis advocate?

**DM:** In 2017, I received a patient in the office seeking information about how she could access cannabidiol through the health plan. At that time, I was participating in a study group of Medical Law at the Bar Association of the State of Paraná. Subsequently, I took a postgraduate course in Law Applied to Health Services, and in my first case for the provision of cannabidiol by the health plan, I won the lawsuit. From there, the patient's mother started telling other people that I was the "Cannabis lawyer", from then on many other clients came seeking administration of cannabidiol through the health plan.

My second cannabis case was a patient who wanted to grow his own. For this, we filed a lawsuit in Federal Court, I was successful in this lawsuit as well. From then on, we succeeded and began to work more often with authorizations for cannabis cultivation. Because

of this, everyone started to say that I was the "Cannabis advocate." I realized how difficult it was for patients to acquire the drug, even with a doctor's prescription. As a result of that, I had the idea of creating Cannabis Farma, a company that carries out all the procedures that the patient needs to acquire the medicine without any bureaucracy.

Cannabis Farma is a Start-Up. We do everything that the patient needs to buy the medication and it is delivered to the patient's home without any inconvenience. From the moment I saw the difficulty of these patients, I invited a close friend to be part of this company. I explained to him the idea, and he liked it. We started to operate with Cannabis Farma. We located a doctor, a cannabis prescriber, and we worked with all the authorization and importation parts. We developed the entire commercial relationship between the patient and the laboratory abroad and from there, he can buy the product arriving at the patient's home without any inconvenience.

Recently, we were able to inaugurate imports of natural cannabis flowers for vaporized use. Therefore, we became the first Start-Up to import fresh flowers of medicinal cannabis. Now we have more than 40 associated laboratories, more than 800 products available to the Brazilian population, whatever the type of product: cannabis oil, sprays, chewable gums, ointments for topical use, and including flowers also for vaporized use. I even have one here that is mine, this is a Diesel Spectrum in CBD. I am a patient authorized to buy and import this product that is delivered to my home via FedEx, without any problem. That is precisely the mission of the company, to connect patients with the largest laboratories in the world, facilitate access to medicinal cannabis-based medicines and make a real difference in the lives of these people as a reliable, integral, sustainable, innovative, and committed company with quality products and affordable prices.



**CWJ:** Regarding patient access to CBD, I noted that the cost is very high, and especially now with the legislation in Brazil, it seems to be advancing, but at the same time there are obstacles. What is this experience like? For example, how a patient without resources can access it for free through the SUS (Brazilian public health entity) system?

**DM:** Currently, the national product has a very high value by Brazilian standards. Cannabis Farma does not work with the national product. We understand that it does not meet the needs of the Brazilian people since imported products are even 80% cheaper. Therefore, we also educate doctors not to prescribe this product to the Brazilian people, that is precisely our mission at the company level, to make medical cannabis affordable and real for the population's pocket. To help all Brazilians have access to the products. Today, we work with the largest laboratories in the world, therefore Cannabis Farma under no circumstances will work with the national industry for now, as it does not meet these needs. It is disrespectful to the Brazilian people to offer a product at such a high price when there are products in other countries with much more accessible costs for Brazilians. We only intend to work with the national product when it offers affordability to the population.

**CWJ:** What has your experience been like as a company about the challenges presented by Brazilian legislation? And you as a lawyer, how do you see the industry today? What have been the main obstacles and what is your opinion on the current legislation?

**DM:** Regarding the company Cannabis Farma, I understand that DRC 327/2019 is not the best legislation, but, it is a starting point.

It allows us to start our work. It is not the law I would most like to have in Brazil, but it gives us a direction to serve our customers to make that medicine accessible to the Brazilian people. Brazil has been opening up on the subject of medical cannabis, not at the speed we would like. We have more and more decisions from the courts in the states where they impose responsibility for the supply of cannabis, either by

the health plan or by the SUS. It should be emphasized that we lack regulation allowing people to grow their cannabis.

As a lawyer, I defend the wide access to cannabis as a patient's decision, either by direct purchase, provided by the health plan, by SUS provision, or even if the patient can grow their cannabis. I believe that in the next few years we will have a legislative breakthrough. Concerning the law PL 399/2015, it is also not the legislation that we would like, but it helps us push for other entrepreneurs to come to work with the plant. We also reached other branches of cannabis entrepreneurship such as self-cultivation or large-scale cultivation for supply to the pharmaceutical industry.

Perhaps, from this moment on, we could include a national medicine with a much lower cost. Precisely, we are advocating the patient's autonomy to choose how to access their medical cannabis. Whether the patient buys directly from the big laboratories, is supplied by the SUS or by his health plan, and the possibility of cultivation. Personal cultivation is very interesting not just for the patient but also for the State. By authorizing the patient to grow his own medicine, it fulfills its constitutional duty to provide health to the citizen, and most importantly: it does not affect the public coffers. I do not see anyone going to their health dispensary asking for boldo tea.

For example, people grow their medicinal plants in their homes. That is why I defend the broad access to cannabis, and the patient's autonomy to choose how to have access to his medicine. This is my main working philosophy: Patient autonomy.

**CWJ:** And how does the patient seek someone like you, a legal advisor to defend their rights and thus access the medication. We have seen that there can be a lot of obstacles. How does a patient make this request?

**DM:** Currently, my office is the only one



specialized in cannabis access, as I said before, either by cultivation, through the health plan, or the SUS public health system. My office does both in-person and virtual consultations, consultations are by appointment and can be scheduled via email or by WhatsApp.

The patient contacts me, and schedules his appointment. On the day and time of it, I will be mindful of the patient. I will consult with him on how he intends to access the medicine. We have to keep in mind that growing cannabis is not easy, not all patients have the availability to do it. So, this form of access, sometimes, does not apply to many patients, since the patient leaves early for work, only comes back in the evening, and cannot give the plant the attention it needs. In this case, the patient should have his cannabidiol or the necessary medical formula through the health plan or SUS.

We have to understand what the patient's need is, how he intends to have access to cannabis and from there develop a legal strategy according to his needs. For example, for patients who have health insurance, perhaps cultivation is not of interest to them because the health plan is responsible for providing the medicine. Also, it may be much better for them to receive industrialized medication at home by mail than to grow their cannabis.

On the other hand, I have other patients who prefer to self-cultivate to take their medication.

In that sense, the processes are a little more complex because the patient, in addition to having medical documentation, also needs to demonstrate knowledge about the cultivation of the plant and the ways of extracting the oil, this type of process being a little more complex. But as I said, there are several ways to access and what we need in the beginning is to identify the patient's needs and understand how they want to access your product.



Having a health plan is more viable for a patient to depend on the plan than to grow the crop himself. Each patient expresses his or her interests. What I am looking for is precisely that, to open ways for the patient to access his or her medication in the best way. This will always be the starting point: *understanding the patient's need and creating legal strategies for access to cannabis*.

**CWJ:** What about the current legal situation in Brazil? How do you see this issue?

**DM:** The legislation may not be the most ideal, but despite that, it already allows us to work with cannabis. There is legal advancement, the Superior Court of Justice is increasingly attributing these supply responsibilities not only to the health plans but also to the SUS itself. In Rio de Janeiro, in the municipality of Búzios, we had cannabidiol included in REMUME, which is a list of medicines provided by the municipality. Now, we have in Brazil, the first municipality that included cannabidiol in its supply list. I think this will be very interesting for cannabis entrepreneurs and the general population. They now will be able to access this very high-quality medicine in the Unified Health System. The



legislation is not yet what we want, but it allows us to work with medical cannabis. Patients have more and more access to the plant's substances, either through the supply of prepared medicines or through their cultivation.

**CWJ:** While we're on the subject of patients, we were concerned when you mentioned "I am a cannabis patient", stating that you use it. Could you tell us about it? We like to consider the human side, the personal experience. Because to get to this industry you also need to be knowledgeable. Sometimes the person sought cannabis for medical purposes or simply embraced a relevant cause such as access to cannabis. Could you comment on this, please?

**DM:** I suffer from chronic pain. I suffered from chronic pain for many years because of an extruded herniated disc in the S1 and L5 vertebrae. I have been trapped countless times, I have been admitted to hospitals several times with back pain. I have used every medication you can think of for chronic pain, and none have given me the result I was hoping for. From the moment I learned about cannabis, went through a doctor's office, did all the paperwork, and started my cannabis treatment. I have been using cannabis for years.

Since I started using cannabis I have improved my quality of life. I no longer suffer from back pain, I can work every day sitting comfortably. Cannabis has given me back my dignity in life, it has given me back the quality not only in my personal life but also in my professional life. I started practicing my profession as a lawyer, sitting in my armchair, without back pain. Today, I work comfortably every day, so, for me, it was the best medicine I could have tried. Besides, I am also a smoker. I use cigarettes. I have smoked for about 15 years, and at the most recent appointment with my doctor, we discussed the harm reduction policy. She understands that cigarettes are much more harmful to my health than cannabis. Smoking is related to anxiety. I have a lot of anxiety, so my doctor prescribed cannabis "in natura", so I can combat smoking and at the same time work on my anxiety. I am doing my treatment with plants to stop being a

smoker and improve my quality of life by getting rid of this habit. This is the biggest problem I have and I am looking at cannabis for this treatment to stop smoking cigarettes.

**CWJ:** It is amazing to see how cannabis provides so many benefits. It is a millenary plant, but unfortunately, it has been very stigmatized, and this makes us wonder why is still branded as a drug. We want to educate, inform. Lawyers, doctors, and people must have a broad knowledge of the subject, thus spreading information and defending causes. Because it is also necessary to defend cannabis. What is your opinion about this?

**DM:** Adding to that, legally, I no longer accept that cannabis is classified as a drug. We have DRC 156/2017 recognizing the cannabis plant as a medicinal plant. In no case can we associate cannabis with drugs, when it is identified by the National Health Surveillance Agency as a medicinal plant. Lawfully, this has many consequences, especially as far as Criminal Law is concerned. I understand that people caught commonly commercializing the plant known as "marijuana", under no circumstances, should be accused of drug trafficking.

They must answer for the crime against public health. We have the principle of specialty in Criminal Law and Art. 273, it establishes that the commercialization of products for therapeutic purposes is a crime against public health, and in no way the behaviors related to cannabis should be seen through the perspective of drug law. We have to completely get rid of the idea that cannabis is a "drug". It is not.

Cannabis is a medicinal plant, if someone is caught selling this plant, they must answer for the crime against public health and not for drug trafficking, where the penalty is very high, 5 to 15 years imprisonment. In crimes against public health, we have a very light penalty of 1 to 3 years. I understand that the behaviors related to the commercialization of cannabis itself, of marijuana itself, are more in line with Art. 273 of



the penal code than Art. 33 of the drug law or the famous drug trafficking. Legally, we have to take the plant out of the criminal law perspective. We must consider the plant from the constitutional right to health perspective. These are parameters that we must differentiate so that society begins to see cannabis in a new light, that is not a drug. It is a medicinal plant. It is not me saying it, it is the National Health Surveillance Agency through the RDC 156/2017.

**CWJ:** We would like to know if you have had any patient case that has marked you or left any learning during your work. If you can share any experience with us.

**DM:** I have many experiences with patients whose access to medicines is through health insurance, even patients who grow cannabis. I maintain a strong bond with these patients, they always tell me about the evolution of their treatment, the growth of their plants. My most recent patient is a 7-year-old boy from the city of Londrina. His parents were allowed to grow cannabis to make medicine to treat his autism. We become like another family member to these patients. They always tell us about their improvement, their evolution, their cultivation. It is a common thing that I get pictures of plants and my patients embracing their plants; but, most importantly, a positive report about the efficacy of their treatment. This impresses and moves me. I am a parent, and my son is a healthy child and does not need cannabidiol at all, but not all parents have been lucky enough to have healthy children. Today those parenting figures do everything for their children, even risking their freedom to take care of their health.

I think a lot about my child when working with a patient who is a kid. I say, "Thank God my child doesn't need it." But, I will always be willing to give my best for these families, for that patient who needs this medicine to give him back his dignity, his quality of life. I often say that when a patient has access to cannabis, we not only restore the dignity of one patient, we give it back to a whole family. When a child has a seizure or a problem that disrupts their

development, it affects both parents. The moment they see their child get better, it also gives that sense of relief to the whole family. That's the main point.

**CWJ:** That is something extraordinary, and as you mention, we as professionals or parents see stories like this frequently, and this struggle moves us. Also, this is an issue that revolves around many drugs that are synthetic and have side effects, for example, for the treatment of certain diseases, and still affect the patient's quality of life.

**DM:** As for autism, we have Risperidone, and if we look at the list of side effects of this drug compared to medical cannabis, we see that with cannabis, there are practically minimal or no effects. I don't understand how a doctor starts treating a child with Risperidone and not medical cannabis. We have to give this idea to the doctor that medical cannabis should be used as a first choice and not as a last resort. Medicinal cannabis as a first option, as a natural treatment to then work with chemicals, which can be harmful to human health. Also, we have to think constantly about the quality of life of human beings. Now that we are going through pandemic times, many people are suffering from psychological diseases, stress, anxiety, sleep disorders, and cannabis has emerged to work on these pathologies that affect thousands of Brazilians who have not yet started their treatments due to prejudice. Today, medical cannabis in Brazil is not a scientific problem; it is a matter of educating people about it.

**CWJ:** And now, talking a bit about your company, how did Cannabis Farma Brasil come about?

**DM:** Cannabis Farma came into existence in 2018; as soon as we heard about the rumors of RDC 327/2019, we had already started preparing to establish it. On March 10, 2019, RDC 327 came into effect, and on March 12, 2019, Cannabis Farma was already up and running. This company is a startup that



Connects patients with the largest medical cannabis laboratories in the world. We do everything necessary for the patient to acquire their medicine. Meaning that we work from the location of a cannabis prescribing doctor, and we carry out all the development of the business relationship between the patient and the laboratory abroad so that they can receive the medicine at home, without any inconvenience.

Based on my knowledge about Brazilians' difficulty accessing this type of product, we decided to open the company. Today, we have more than 500 patients treated, and we are pioneers in the importation of cannabis flowers for vaporized use. The expectation is that we will be able to serve up to 80% of the Brazilian market in the next five years. Right now, we are a reference in terms of access to medical cannabis and pioneers in the importation of cannabis flowers for vaporized use.

This factor has given us some international notoriety. We made the news with this scoop in several countries. Brazil managed to import the first cannabis flower through the assistance of Cannabis Farma, and we believe that this was a historic milestone for the country since we revolutionized access to cannabis, taking it to a new level. We need to understand that the use of the flower is also medicinal and Brazilians no longer need to limit themselves only to oil, gummies, and sprays. Today we have all the options of cannabis-based products, always considering the doctor's prescriptions. The doctor is one of the protagonists of this treatment. From the moment the doctor defines which product will be cannabis-based, at Cannabis Farma, we make these products available so that the patient can acquire them without any bureaucracy.

**CWJ:** How do you see this industry within the Brazilian outlook in the coming years?

**DM:** This industry is constantly growing, still at a slow pace, and as I said before, we do not have the legislation that we legal professionals would like, but at least we have a law that allows us to

work. Now it is just a matter of moving forward, of improving the legal aspect, so that more and more patients can have access with peace of mind. And the most important thing: always respecting the patient's autonomy. The patient should be able to acquire his medication in the way that suits him best. Whether by cultivation, through SUS, through health plans, or even by direct purchase.

**CWJ:** From your point of view as a lawyer and entrepreneur: What advice would you give to people who want to get started in the cannabis world?

**DM:** To get started in the cannabis world as a patient, you have to go through a doctor's office and have your prescription. From there, you can have access to cannabis-based medications.

And for those who want to be entrepreneurs in the cannabis industry to actually explore this market. It is an almost untapped market. We still don't have committed and serious people operating in it. I observe that there is speculation from plant hobbyists and not from entrepreneurs. What we need in this industry are committed entrepreneurs who develop serious and concrete solutions for the cannabis market, and that is how Cannabis Farma has been working in the country. Our primary mission is precisely to create solutions to facilitate access to cannabis-based medicinal products.

**CWJ:** From what I have been following on social media, there are many associations, but generally, they are initiatives of patients who need cannabis. We can see that what they want is to educate, and it is still common to see that the main complaint is the lack of preparation of doctors in this area and that there are not many lawyers specialized in the legal issue, which complicates it.

**DM:** Currently, 2% of Brazilian doctors are cannabis prescribers. There is also a shortage of lawyers specializing in Health Law. My office is the first and only one in Brazil specialized in authorizations for cannabis cultivation and supply of medicines by health plans and SUS. I,



for example, did not even have Medical Law in college. I had to look for extension courses to specialize in this branch. And today, I am a specialist in Applied Health Law, and I own the only office in Brazil that specializes in cannabis. I serve patients from all over Brazil, not only for their own cultivation but also for the supply of cannabis through their health plans, and I even intend to open an office in the State of Santa Catarina in 2022, and, by 2023, our goal is to open more locations to create spaces to serve these clients.

**CWJ:** First of all, I congratulate you on this achievement. It must be a great satisfaction to provide such information and assistance to the Brazilian population facing many difficulties in breaking this taboo regarding medical cannabis. It is excellent news! To conclude, I would like to know about the importance of digital platforms. For example, we are on different social networks as Cannabis World Journals, but we have also seen other platforms. You also have your personal account and that of your company. In your opinion, what is the importance of digital media in this area?

**DM:** We still have to improve in this aspect because if you search on social networks with the word "medical cannabis", Instagram and Facebook usually exclude us. My first Instagram account was deleted; I lost an account with thousands of followers. I couldn't get it back and had to create a new account. If you look closely, my Instagram is recent.

recent. That already happened with Cannabis Farma as well, having its account deleted from social networks. But we believe that social networks and the world are opening paths to cannabis. Despite these barriers imposed on us by digital platforms, we continue to work on them. We offer quality and reliable information about the cannabis plant, but we are subject to having our accounts deleted at any time due to the exclusion policies of the networks. I think we need to improve in this regard and accept talking more naturally about medical cannabis. Our gaze should be directed towards science and not prejudice. I appreciate this a lot in my networks, not only in the company I work for but

also in my personal account. Therefore, it is essential to transmit serious and quality information to show how patients have access to medical cannabis so that other people identify with these problems and seek these solutions. As I already mentioned, Cannabis Farma's mission is to create serious and concrete solutions for the access of cannabis-based products.

This philosophy also applies to my office, where we work to obtain authorizations for cannabis cultivation and with various actions to supply the plant and medicines by the health plan itself.

**CWJ:** You are very kind, and again, thank you very much. We will keep in touch. Thank you for the precise and detailed explanation of all your knowledge because we know there is a barrier when it comes to medical cannabis. It is a great satisfaction to know that there is a professional of the highest level in this industry.

**DM:** Cannabis only came into my life by the simple fact of living the difficulties to access the law. I am referring to the situations linked to the emergence of Cannabis Farma. And in the first half of 2022, we intend to virtually open the first medical cannabis dispensary in the country. We will not have a physical store yet, but we will have a virtual store so that the patient can imagine entering our company. We will be applying metaverse technology, and in the coming months, we will have great news as the first virtual dispensary of medical cannabis in the country. We will work with virtual reality, in which patients use virtual glasses, enter, and walk around the store to make their purchases. The product will reach their homes without any problem and from now on it is a matter of adapting the technology to our company to meet people's needs. That is our goal now.

**CWJ:** That is very interesting. It is a unique type of access and very significant in times of pandemics. The Cannabis World Journals team thanks you for your time, contribution, and willingness. Thank you very much.



# MALTA *Legalizes* Cannabis



**M**alta has presented itself to the world as the first country of the European Union to legalize cannabis for adult use, opening the door for the other members to advance in their bills to make cannabis legal.

In this edition, we will talk a little bit about this tiny Mediterranean island that has impressed the world, setting a precedent for the opening of new markets and possibilities during 2021.

## REGULATION

In 2018, the parliament of Malta passed a law allowing the use of cannabis by medical prescription.

In December 2021, Bill 241 was passed, allowing the use of cannabis for adult use.

## ACCESSIBILITY

The parliament of this tiny Mediterranean island has authorized the possession of a maximum of seven grams of cannabis and the cultivation of four plants per person. This measure applies only to those over 18.

Cultivation or possession of more than the allowed amount generates a fine, and consumption in public places or in front of a minor is also restricted; this last scenario can lead to a fine ranging between 300 and 500 euros.

## CONSUMPTION

Through the approval of this new law, the government intends to present a greater control with consumption, which is only allowed in private spaces or specific



places destined for this purpose. That's why it foresees the creation of non-profit associations, with a maximum of 500 people, which would be allowed to produce and sell cannabis to their members.

## WHAT TO EXPECT IN THE FUTURE

2022 is shaping up to be a very productive and encouraging year for progress in cannabis legalization worldwide.

Germany, Switzerland, and Luxembourg are some of the countries that have been working since 2021 on bills that will lead to the complete legalization of cannabis. These countries are currently governed by EU regulations; however, the laws are ambiguous and do not present the necessary clarity for the growth of this industry.





# *Banking for the Cannabis Industry in the United States*

***Banking is the next step in legalizing the U.S. cannabis industry.***

Among the various bills being considered for 2022, there are undoubtedly two that have created the greatest expectation by trying to regulate the relationship between banks and cannabis at the federal level. These are the SAFE Banking Act and the CAO Act (Cannabis Administration and Opportunity Act).

The first is quite attractive to banks as it seeks to ensure that regulators do not take adverse action against banks that service state-legal cannabis businesses. It also aims to have the Federal Financial Institutions Examinations Council develop uniform guidelines for evaluating cannabis banking programs. This bill is expected to reach the Senate floor this year for approval.

Today, the cannabis industry continues to grow steadily, with U.S. revenues expected

to exceed \$30 billion this year, but federal prohibition persists.

Currently, 35 states have legalized the use of medical cannabis to some degree. However, as the federal prohibition continues, any banks that have contact with money from cannabis-related activities may be considered laundering and expose the bank to significant legal risk.

We must also consider the number of people involved in the industry, such as growers, suppliers, vendors, owners, retailers, employees, and all indirectly linked third parties. This only increases the legal risk for banks involved in the market and often makes it difficult to avoid contact with the industry.

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As long as this gap between federal and state laws continues, banks will be in a situation of uncertainty, and people who want to enter such a booming industry will be limited by not being able to access traditional banking options such as credit, for example.

### ***An Unavoidable Reality:***

*As has been the case with the cannabis industry, three steps forward are taken every day for every step backward. As with the market, which eventually self-regulates and proves unstoppable, laws will have to adjust to an inevitable reality. This year, parties in the U.S. will be responsible for recognizing an industry that provides welfare, jobs for millions, and a new economic reality for a country emerging from a financial crisis along with the rest of the world.*





# Spain

## Expects a Proposal on Medical Cannabis Regulation in 2022

There are many expectations for the cannabis industry in Spain for this new year since the European country has several movements in favor of regulating cannabis in the medical field. In this sense, according to the Sociological Research Center, 90% of the population supports legalizing the use of the plant for therapeutic purposes. "We are late. It is essential to move forward. Cannabis has anti-inflammatory properties, and it is a muscle relaxant. It helps with nausea and vomiting. It is effective with chronic pain and, above all, with the side effects of chemotherapy," explains Joan Carles March, professor at the Andalusian School of Public Health.



***Spain plans to join the list of the successful cannabis industry***

In March 2021, the Minister of Health, Carolina Darias, said that the government requires "scientific evidence" through a "clinical trial." On the other hand, José Carlos Bouso, a health professional in pharmacology specializing in the therapeutic properties of cannabis, believes

that the Minister may err in her argument. "Cannabis improves the life quality of many patients, which is the most subjective aspect of a disease. It is key in chronic pain. It is proven to be safer and has fewer side effects than many medications," Bouso said. In the same way, he asserted that a law "will



reduce the risks associated" with the consumption of patients who now access cannabis through the black market, "in a stigmatized way, hidden." He mentions that a regulated market will prevent any adulteration of the product.

Considering the above, it is expected that 2022 will be when the government decides to regulate the medicinal plant. According to the major socialist group in the Congress, the subcommittee created to analyze the legalization of the therapeutic use of cannabis in Spain could have its conclusions ready in the next session that ends in the middle of the year.



On the other hand, the subcommittee, established last October in the Health and Consumer Affairs Commission, that it will work on it in February when parliamentary activities resume in Congress during the new session. In the same way, to safeguard the proposal, they indicate that International organizations support the medicinal uses of cannabis after scientific advances have given it a positive assessment of its benefits; and above all, in countries such as Portugal, France, or Germany, its regulation has been approved.

***Spain plans to end the black market through regulation.***







*COMPANY OF THE MONTH*

**NORML<sup>®</sup>**

*Interview with Deputy Director*

**PAUL ARMENTANO**



## Cannabis World Journals sits down with NORML's Deputy Director Paul Armentano, a milestone in the cannabis industry's journey.

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**Cannabis World Journals had the pleasure to sit down with Paul Armentano, Deputy Director for the NORML organization (National Organization for the Reform of Marijuana Laws) and talk about his experience being part of changing the cannabis industry's history.**

**CWJ:** Thank you again, Mr. Armentano, for joining us today. Can you initially tell us a little bit about yourself, what your position is and what do you currently do at the NORML organization?

**PAUL ARMENTANO - NORML:** Sure. Well, I have worked professionally in the United States on marijuana policy for about 25 years. There's not many of my peers that have the institutional memory that I have and who had seen the radical changes in both public opinion and in public policy that have occurred over the last two and a half decades. Quick anecdote I like to give audiences, that really illustrates how much cannabis policy and the dialogue surrounding cannabis has changed in America is this one:

When I first came to Washington DC, one of the only discussions taking place in Capitol Hill among members of Congress with respect to marijuana policy was a piece of legislation that had been introduced, whose desire, if it had passed, was to impose the death penalty for certain marijuana crimes. That is what Congress, what federal lawmakers in America, twenty-five years ago, we're talking about when it came to cannabis, if they were talking about it at all. They were discussing whether it was sound public policy to kill people who violated the nation's marijuana laws.

Fast forward to today, most U.S. states allows for the medical access to marijuana. That's been the case in some states now for more than 20 years. And in 18 states, or about roughly 40 to 43 percent of the total population of the United States, now lives in a jurisdiction where adults, over the age of 21, can legally possess cannabis, and in most those jurisdictions can purchase marijuana at retail. For the bulk of these 25 years, I have been with NORML, the National Organization for the Reform of Marijuana Laws. I have worked in several different capacities at NORML, but for the last decade and a half or so, I've served as the organization's Deputy Director. I also serve as the chair of Science and the Faculty at Oaksterdam University in Oakland, California. I've been with Oaksterdam since 2010. I'm also the author of several different publications specific to cannabis policy, including the book "Marijuana Is Safer. So why are we driving people to drink?" That book was published in 2007, and it literally was the blueprint. It was the foundation for the 2012 campaign in the state of Colorado, when Colorado became the first state in America where voters decided in favor of legalizing the possession, cultivation, and sale of marijuana for adults. As I mentioned earlier, 17 states have followed suit since then, but



Colorado was the first, and they used the game plan that myself and my co-authors laid out in that publication.

**CWJ:** Can you tell me more about how the organization began and its motivations and objectives?

**NORML:** NORML is the United States' oldest grassroots organization specific to advocating for changes in cannabis policies. NORML was founded in 1970, under the notion that the marijuana consumer needed to have an organization that was standing up for their rights. There was a belief at that time, that was correct, that millions of people were using cannabis, but nobody was speaking on their behalf. Nobody was advocating on their behalf, and there needed to be a consumer interest group and lobby to represent them. That founding principle continues to guide NORML's mission today. We're in a very different environment now, 51 years later, than we were when NORML was founded. There are several other organizations that exist now that did not exist then, but many of these organizations that have come to this issue as of late don't necessarily represent the interests of the individual cannabis consumer.

Many of these organizations represent the interests of industry groups of corporations or commercial entities in this space, and they're advocating, as it is their right to do so, for policies and changes that are in the best interest for them, for the commercial cannabis industry. Those interests are not always overlapping with the interests of the individual consumer. **For instance, there have been instances here in the United States where corporate lobbyists have advocated for policies that do not allow the individual consumer the legal right to cultivate cannabis in their own home. We think that is a poor public policy.** We think just as individuals who drink alcohol or drink beer can brew small personal use quantities of alcohol at home, they should have those same

legal rights to grow personal use amounts of cannabis. We want to see ease of access of cannabis to be as widespread as possible under common sense regulations. For instance, NORML doesn't support an arbitrary cap on the number of licenses for a commercial entity that can participate in the cannabis market or on the number of retailers. We want to see those individuals who wish to access cannabis have easy above ground safe access to it. So again, in my opinion, **NORML's mission, its strength, is the fact that it is unique in representing the individual consumer.** This isn't about how much money we can raise in new tax revenue. It's about expanding the freedoms and civil liberties of the individual who uses cannabis. It's about ending the criminalization, discrimination, and stigmatization of those individuals who use cannabis responsibly. And that's what NORML was founded to do, and that's what we continue to do today.

**CWJ:** You compared the cannabis industry to the alcohol industry. Why compare the two?

**NORML:** I think there's a lot of practical reasons why, you know, certainly here in the United States, when we talk about how to regulate cannabis, there are several different tracks one could take. One can say, cannabis has therapeutic utility, let's regulate it like a medicine. But that would ignore a significant portion of the people who use cannabis for non-medical reasons.

It would also impose very strict narrow regulations upon cannabis that do not currently exist now in legal markets. Look, when we talk about treating cannabis as a medicine, I sometimes get very concerned because Americans' view of medicine is very narrow. People take medicine when they're sick. They don't take medicine prophylactically. They don't take medicine for their overall health. They take medicine when they're sick.

And then when they are no longer sick, they no longer take medication. People purchase medicine from a pharmacy in the United States. That's the only place one can legally obtain their medicine. Any product available in a pharmacy must be regulated and approved by the U.S. Food and Drug Administration and must be prescribed by a physician. That is a level of heavy-handed regulation that I would argue is unnecessary and isn't practical for cannabis.

So, regulating cannabis as traditional medicine, doesn't work. By contrast, we could regulate cannabis as a dietary supplement. Dietary supplements in the United States do not have to go through FDA approval. In fact, the U.S. government only gets involved in those supplements if after they've been brought to market, they've been shown to cause significant harm to those who use that. Then the federal government gets involved. That's certainly one practical way we could treat cannabis, though I think very few people have advocated for that policy because they see it as too unregulated. So then that brings us back to things like alcohol and tobacco. Both of those substances share some similarities with cannabis. They also share quite a bit of difference with cannabis. Regarding tobacco, I would dare say that tobacco is regulated in a way that's far more stringent than the way cannabis and legal markets is regulated, and I think that's appropriate.

When it comes to alcohol in this country, I do think there is a strong case to be made that the existing way alcohol is regulated in America is a model that cannabis can follow. The main reason I say that has to do with the history of the way alcohol is regulated in America. There was a time in America's history where the federal government outlawed it. They prohibited the possession of alcohol. The federal government eventually reversed course on that position. They did so when 10 states on their own opted out or defied the federal government and said, we don't care if alcohol is illegal federally, within

our state, we're not going to enforce that federal law.

Right now, whether we wanted it this way or not, we have this same patchwork system for cannabis. We have 50 states and 50 very different cannabis policies. When and if the federal government of this country, much like it did almost 100 years ago with alcohol, repeals marijuana prohibition at the federal level and simply gets out of the way, it's going to be the states that are the primary deciders on how to treat and regulate cannabis within their borders. And that's why I think that parallel is probably the most appropriate one.



**CWJ:** There's a lot of hope that these upcoming years, at a federal level, cannabis is going to be legalized. Do you think that's going to be possible soon?

**NORML:** So, one of the things I think is very important to have and we had this discussion is we really define our terms. The notion that the federal government of the United States might legalize cannabis, I think a much more accurate way to put this is that the federal government would repeal the existing federal prohibition of cannabis because again if we're to go back to the example with alcohol when the federal government repealed the alcohol



prohibition, it did not demand or mandate that the individual states change their alcohol policies.

I think again, we'd see a very similar pattern to what we saw with the repeal of alcohol prohibition in this country. Over time, eventually, every state would lift its own prohibition, but that wouldn't happen all at once. Several states would be first. And states would continue to evolve their policies in very different ways, and states would learn from one another which policies are best practices and which policies are not preferable.

**CWJ:** One of the hopes for this industry, is that It's going to be a more inclusive industry. How do you view that part of the industry?

**NORML:** NORML supports an inclusive market. We would like to see a market that embraces and includes those who have been disproportionately adversely impacted by these former policies, these policies of prohibition. That said, despite these sorts of lofty goals, you are correct that this is at the end of the day, a commercial market. And what that market looks like is going to be dictated by several factors, including state-specific factors, the way politicians of a particular state want that market to look and the regulators that they appoint. I think what we're seeing already is that there are certain jurisdictions in the United States, where lawmakers and regulators really value the idea of an inclusive market and are using tools available to that, to try to influence that market, to look, and to be in a more inclusive manner. You're going to see other jurisdictions, no doubt, where politicians place less emphasis on the importance of an inclusive market. Again, in those instances, I think consumers are going to be the ultimate arbiters. They're going to decide which market is more important to them based on their behaviors, based on which types of businesses they choose to patronize.

**CWJ:** What is NORML's agenda for 2022 right now? What does it look like?

**NORML:** Well, of course, there's a short-term agenda and there's a longer-term agenda.

Our short-term agenda is to focus on state politics because in the United States, in the majority of states their political leaders meet between now January to about April or May, and that's when they decide on laws and policies for their individual states. It's a very busy time for us because again, there are 50 states in the United States.

They have 50 very divergent marijuana policies, and we work to make those policies better in each of those states. Now is our window of opportunity to do so.

Obviously, we also will be focusing on the federal level and trying to advance several different pieces of federal legislation that we are backing and working with the supporters of. But again, the longer-term agenda is in states that have already legalized these markets, whether for adult use or for medical use, is to make those markets work more effectively to make sure that patients don't just have access to one or two types of formulations of cannabis, but to have access to a variety of formulations of cannabis to make sure in markets where they may be able to purchase cannabis that retail, that they also have the ability to grow marijuana at home to make sure that in these markets, where one can possess and use marijuana for adult purposes or medical purposes, that those same individuals who do so aren't discriminated at their job or they're not denied medical treatment like organ transplants.

So again, ending the discriminatory practices, ending stigmatization is a very important long-term battle. As someone like your former guest would know (referring to Steve DeAngelo), in California, one of the reasons some of these statewide markets haven't transitioned as much as folks would like isn't just because of high taxes, which in some cases keep the price artificially high. But it's because dozens and dozens, in some cases more than half of the localities in these states have passed local moratoriums, saying marijuana may be legal in this state but is not legal in our town. That's a

local battle that now we must begin engaging it because the only way to disrupt the illicit market is to make sure there is the option of having a legal market in it in such a way that local people have access to it. And in many states, that's not happening, even in these legal states.

**CWJ:** Now, you mentioned that part of your agenda is also at a federal level. Can you explain a little bit more about the MORE act that we hear so much about?

**NORML:** The More Act stands for the Marijuana Opportunity Reinvestment and Expungement Act. It is a piece of legislation that is sponsored in the U.S. House of Representatives. There are two legislative bodies in the American government the U.S. House of Representatives and the Senate. The House of Representatives is a much larger body. There are several hundred members of Congress in that body. And about 25 percent of them, slightly more than 100 members, are co-sponsors. They are supporters of this piece of legislation. What the legislation would do is, among other things, it would deschedule, it would remove marijuana from the Controlled Substances Act. It would also provide for the expungement or the clearing of the criminal records of certain individuals who have passed marijuana crimes. And it would provide some inducements for the states to engage in some of their own practices regarding expunging state-specific marijuana crimes. It would provide some investment for states to try to design a more inclusive industry. It would provide an excise tax or a nominal federal tax on cannabis policies to help provide some of the funding for those efforts. And in addition, it would allow, or it would essentially direct a handful of federal agencies that had some oversight with regards to some of these federal issues that would continue to exist, such as matters involving interstate commerce, testing of the product, marketing of the product. It would essentially lay out again a framework very similar to sort of the dual federal state system with alcohol. It would set up a similar system for marijuana. But again, to be clear, the MORE Act, even if it were to

pass tomorrow, would not legalize marijuana in all 50 states. No piece of pending federal legislation in America would do that. And that is because, again, America possesses this federalist system where the states tend to set their own state policies, not the federal government.

**CWJ:** Can you tell me a little bit about what the banking for cannabis is looking forward to in 2022?

**NORML:** So, because marijuana is illegal federally, there is a concern among certain banks, particularly the very large corporate banks, who tend to be quite risk-averse, that if they were to partner with businesses, state-licensed businesses that engage in marijuana as their business, that they will be committing a federal crime, that they will be engaging in money laundering. They will be taking ill-gotten gains from these businesses and then laundering them by allowing those deposits in their bank and then distributing the money elsewhere. So, for that reason, many financial institutions, not all, but most financial institutions in America, shy away from working with these businesses.

Now, as anyone can imagine, if you're running a business and you don't have access to banking, you can't take credit cards, you can't set up payroll, it's going to be very difficult for you to do business. It's going to be very difficult for your business to be competitive with other businesses that have access to these traditional services. So there has been an acknowledgment among a majority, I would dare say at this point, of members of the federal government in this country that this is an untenable situation and that whether you think marijuana should be legal, the fact is these businesses exist.

Legislation has been introduced and in fact passed by the U.S. House of Representatives on five separate occasions to allow banking



with the cannabis industry. Unfortunately, this legislation has never advanced in the United States Senate. In fact, it has never even been debated in the United States Senate. If it were to be, I think the votes are there. But that's a question of leadership and the leadership bringing this issue to a vote in the U.S. Congress. Literally, a handful of members two three four members of Congress can literally decide what the entire body hears and votes upon. And unfortunately, despite having support among a wide swath of politicians, without support from those two or three key people, your legislation simply doesn't get heard not just cannabis legislation, just legislation in general. And right now, safe banking, for whatever reason, does not have the support of the two or three people in the leadership that it needs to have support from.

**CWJ:** What do you think is the easiest way or the most common way to break down the different stigmas in the industry? Sometimes education doesn't seem to be enough.

**NORML:** One of the amazing things that I've seen during my tenure is how rapidly public opinion has changed in favor of legalization. Look, in the 1970s, only about 20- 25 percent of the American public thought marijuana should be legal. In the early 1990s, when I began on this path that hadn't changed. Today, about seven in 10 Americans say marijuana should be legal. **What changed?** Well, what changed is that marijuana legalization went from theory to practice. This became something tangible. We didn't have to talk about what might happen if cannabis was legalized. We didn't have to point to faraway places in other countries like say, well, this is what happened in the Netherlands. Now, Americans can see that you can successfully legalize marijuana and they sky wouldn't fall, because in many parts of this country, we successfully legalized marijuana and the sky didn't fall.

That's the lesson learned. The more states legalize marijuana, the greater public support we have for legalizing marijuana. If these policies were a failure, if they were leading to the sort of adverse events our opponents claim, we would see public support falling. People would be running away from the legalization of marijuana. The question is, what kind of system do we want? One where marijuana use and marijuana users are in the shadows and where they're stigmatized, and where they're criminalized and punished or one where it is out in the open and it's regulated? And **Americans are making their choice.**

**CWJ:** Thank you so much for that brilliant answer. Do you have any words or a message from NORML or yourself that you'd like to tell our readers.

**NORML:** Well, I want to thank you, obviously, for this opportunity to go in-depth on some of these issues, have these conversations. I think they're terribly important. I think it's important to know what sort of the motivations our guiding principles behind these policies were. I think it's also important to remember that a group like NORML and other advocacy groups, advocate for what we call **evidence-based marijuana policies**. The evidence is there, and one of the things that's been very important to me working at NORML, that's been very important to the NORML organization, is providing that evidence to the public. There is this notion that is persistent that says we don't know enough about cannabis to change public policy. We don't know enough about cannabis to go forward with legalization policies because we just don't know what might happen. **That is a false narrative.** Marijuana has been part of societies for thousands of years, giving us a unique historical perspective and providing us with ample empirical data to inform us with respect to exactly what will happen when marijuana use is permitted to take place in a regulated manner in a society. In addition, we have real world examples now in different parts of the world and in different states of America.



How will society respond? What are the health and safety effects when cannabis is legalized and regulated? We know the answer to those questions, and with respect to questions about marijuana and health, we have ample scientific evidence. **We have nearly 40.000 peer reviewed studies available in the international scientific literature, informing us on the health and safety aspects of cannabis.** We can make informed decisions about cannabis. We can make evidence-based policies about cannabis because the information is there. The evidence is there. And this is about shedding light on that evidence and making sure that evidence is the guiding, driving force behind the new policies that we're going to set. And I think that is something that I'm very proud to have been a part of and what it involves. It's important to remind folks that there are very few outstanding questions about cannabis. **We, in fact, have the answers.**

It's a matter of making sure those answers are included in our ongoing political dialogues and included among the dialogues we're having amongst one another.

**CWJ:** Thank you so much for that answer. And, again, thank you so much also for giving us the opportunity to have such an amazing interview with you.

**NORML:** Thank you for having me, it has been a pleasure.

*\* **Note:** This is an edited interview, to see the full version please check out our YouTube channel Cannabis World Journals.*



# ILLINOIS, the Star Cannabis State

2021 was a year of constant change and progress for the cannabis industry in the North American global power, the United States. Many states within the territory took a step towards legalizing the medical use, adult-use, or both, of cannabis or any of its derivatives, creating new ventures, new job offers and consolidating a new community of customers. In addition, businesses in states that had legalized cannabis in 2020 began to see success, particularly in Illinois.

Named multiple times in monthly reports, Illinois legalized consumption for adult use in 2019, and the law became effective in January 2020. By 2020 cannabis sales in the state equaled \$669 million. However, by 2021 sales doubled to a total of \$1.4 billion. About 67% of purchases were made by in-state

residents, with the remainder by out-of-state visitors.

Illinois broke sales records for several months in 2021, closing the year on a high with daily sales of \$4.4 million in December, for a total of \$137.9 million in the final month of the year.

Indeed, the momentum of the cannabis market at the regional level in Illinois is a sign of improvement and growth that can translate to any other region of the country, continent, or the world. As the industry continues its expansion and legalization, Illinois is a good starting point to study and learn about the opportunities in this sector, remembering that during 2022 the cannabis market is expected to outperform the previous year regionally and nationally.





# Cannabis in the Stock Market

2021 was a year of significant progress for companies that are part of the cannabis industry, which encloses companies engaged in the research, development, production, distribution, and sale of medical and recreational cannabis. However, there are still enormous expectations for the new year 2022 due to possible legalizations in different regions and more scientific research.

Therefore, we mention some of these companies and their performance in the stock market during 2021.

In the list, there are some of the most well-known and prominent companies worldwide

- **Tilray Inc.** Canadian company with a presence in the United States, Australia, New Zealand, Germany, Portugal, and Latin America, dedicated to the research, cultivation, and production of medical cannabis products.
- **Trulieve Cannabis Corp.** Like Tilray, it is a Canadian company that grows and produces all of its products for distribution in dispensaries in Florida. Additionally, it has cannabis products such as dried flowers, edibles, and accessories that

people can purchase in a physical store or home delivery.

- **Aurora Cannabis.** It is one of Canada's fastest-growing cannabis companies. Its growth strategy focuses on serving: a) the medical cannabis market in Canada and the United States; b) the recreational cannabis market in Canada; and c) the hemp-derived CBD market in the United States.

On the other hand; Investopedia, one of the leading financial content portals based in New York, analyzed and highlighted the companies with the best value, that is, with the best price-to-sales (P/S) ratio; among which the following stand out:



○ **HEXO Corp.** Canadian company offering products for medicinal and recreational purposes.

○ **High Tide Inc.** Is a Canadian-based manufacturer and retailer of cannabis accessories. The company recently announced an agreement to acquire 80% of NuLeaf Naturals LLC, a producer and distributor of full-spectrum cannabinoid products.

○ **Cresco Labs Inc.** It is dedicated to the cultivation, manufacture, distribution, and packaging of cannabis products. The company operates in 10 U.S. states, including production facilities and dispensaries.

The portal also ranked the fastest-growing companies, but first, keep in mind that sales growth can also be misleading and detrimental if the company does not have a plan to achieve profitability.

○ **Verano Holdings Corp.** The company produces a wide range of cannabis products for medical and recreational use that sells through its portfolio of brands.

○ **Jushi Holdings Inc.** The company is engaged in cannabis retail, distribution, cultivation, and processing operations. Its brands include a wide range of services, such as plant genetics and cultivation; products and concentrates for vaporizers; manufacture of hemp-based CBD products formulated by doctors; production of THC medicinal products, among others.

○ **Ayr Wellness Inc.** It is a cannabis company dedicated to cultivating, manufacturing, and distributing cannabis and cannabis-derived products. Its products include dried flowers, tinctures, edibles, and vape products under Kynd, Origyn, Stix Preroll Co., among others

Although the information above is reliable, it should be considered informational only, not investment advice.

# Cannabis & **Technology** in 2022

As we start a new year, expectations begin to form around the cannabis industry and the advances we will see this year. One of the main drivers of development and change in the industry has been technology. Implementing automated systems throughout the entire production chain has made many processes more efficient and has increased the market's supply and variety of products. Here are some of the areas expected to grow the most during 2022, thanks to technological advances.

## **New Extraction Technology**

By 2022, we expect extraction technologies to advance to become safer, more efficient, and, above all, more sustainable. Companies such as Boulder Creek Technologies are already developing technologies such as static vapor extraction, a type of extraction that does not require solvents and has become increasingly prolific. As extraction technology advances, so do market preferences for safer and more efficient concentrates for consumers

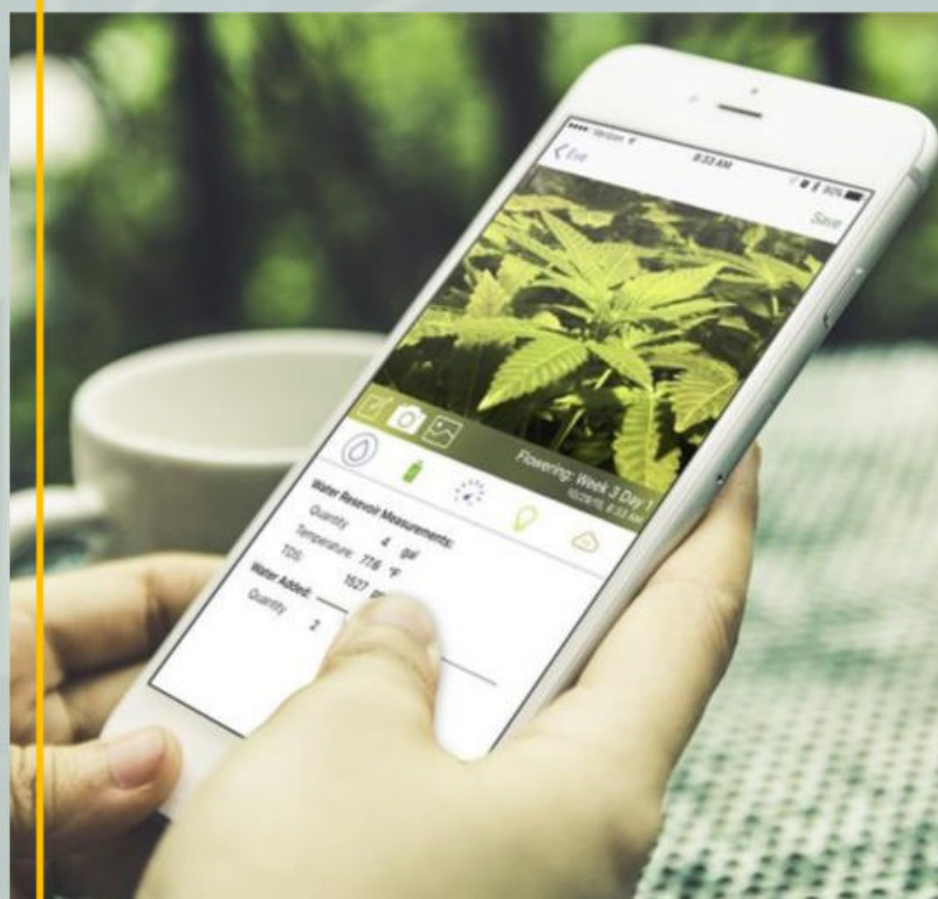
## **Online Shopping**

Buying cannabis online has been a reality for several years now, but this trend is becoming increasingly global.

As in many other sectors of the economy, the sales approach is transforming, requiring less and less face-to-face interaction or people going to a physical location to purchase products.

As part of this new approach to sales automation, many dispensaries have implemented vending machines and software that track products from seed to retail. While these purchasing options are becoming more viable for consumers, there are still people who prefer to go to a dispensary, have someone to ask questions and be able to see the products.

However, the goal of many dispensary owners is that eventually, these consumers will become informed and more active consumers who do not have the need to attend a physical store.





## ***Subscriptions***

Online sales could take it a step further - by 2022, subscriptions for cannabis products could become one of the most popular forms of consumption in legal markets. Subscriptions involve the recurring delivery of frequently consumed products, which may be especially important for medicinal users, who will not have to worry about renewing their prescriptions regularly. However, laws must evolve along with technology for this to be possible.



## ***Data Analysis***

Data analytics software allows marketers to understand better what their customers are looking for and generate promotions specific to the types of products that certain consumers want. This type of marketing is developing rapidly and will undoubtedly grow much more this year.

This approach could also be adopted in physical stores over the next few years. A consumer could scan an ID that allows in-store menus to be activated to present products and promotions that the shopper most likely will want.

Technology is the crucial sector driving the development of the industry, generating more profitable products, automated processes, and personalized recommendations. All these aspects benefit companies and consumers by diversifying and enriching the offer of cannabis products during 2022.





# **New Trends** in the Cannabis Industry for **2022**





The year is beginning, and the expectations surrounding the cannabis industry are pretty high, especially when a market growth of \$45 billion is predicted by 2025 in the United States alone. With such a rosy outlook, what are the trends pointing in that direction for this new year? We present a compilation of elements that should not be lost sight of:

**1. Mergers and acquisitions will continue with greater strength:**

A behavior gaining strength at the end of 2021 will expand this year, with more small deals to cover more geographic space inside and outside the United States. Investor confidence in the industry's future will, of course, play a role. As more players enter the industry, competition becomes fiercer, and consolidation will allow the more astute to grab a bigger slice of the market.

**2. Brand growth in all sectors:**

Cultivation, retail, and innovative product development, such as the THC beverages currently in vogue. Of course, this will demand that growers cultivate strains that keep up with the competition. It won't be surprising to start seeing more cannabis-infused products in the food industry, skincare, medicine, or even fashion.

**3. E-commerce growth:**

With the expansion of demand and supply in the market, marked by the drastic changes generated by the pandemic, the migration to digital solutions is growing. Many brands already have their own apps or digital sales platforms. The expansion of legalization at the state level has increased the popularity of CBD, and more and more people are interested in trying this new medicine.

**4. Normalization:**

2021 saw a breakthrough in the normalization of cannabis use, leaving behind much of the stigma surrounding this plant and its derivatives for years. The United States and Europe made great strides, but much remains to be done. However, normalization is a key trend for the industry to move into its next growth phase. We expect more initiatives from Germany and Malta, and Japan may even review its cannabis policies this year. Stephen Murphy, co-founder and CEO of Prohibition Partners said, "The taboo around cannabis is no longer as strong as it was five or ten years ago... But there is still this lack of understanding regarding the separation, the purpose of medical use, and adult use. That slows down how quickly change can happen."



# *Cannabis Sativa:*

## **Beyond $\Delta$ 9-tetrahydrocannabinol**

Cannabis sativa is one of the most widely used and cultivated plants since ancient times. It has more than 500 compounds, including cannabinoids, terpenes, fatty acids, and flavonoids. Phytocannabinoids (known as cannabis-derived compounds) have presented medical and industrial importance in the last decades as one of the fastest-growing and expanding businesses in the world market.  $\Delta$ 9-tetrahydrocannabinol (THC) and cannabidiol (CBD) are the most relevant phytocannabinoids for their therapeutic characteristics. However, recent concerns

about the psychoactive effects of THC have caused an enormous interest in other compounds (which do not present psychotropic effects) produced by this plant as an alternative for the treatment of different diseases and psychological problems, such as CBD and Cannabidivarin (CBDV). These compounds are lipophilic molecules, meaning they have an affinity for lipids, commonly known as fatty compounds. They are metabolized mainly by cytochrome P450 (CYP450) enzymes, which play a fundamental role in the metabolism of certain substances in the organism.





Currently, there are studies and scientific evidence on the pharmacodynamics (effects of a drug on the organism) of CBD by interacting with various molecular targets, such as cannabinoid receptors and other important receptors that function as key transcription factors in metabolism and the generation of specific cellular responses.

Considering its medicinal properties, several clinical trials are underway to study the efficacy of CBD and CBDV in different pathologies, such as neurodegenerative diseases, epilepsy, autism spectrum disorders (ASD), and pain relief. Investigations also demonstrated the anti-cancer properties of CBD through various preclinical studies on different types of tumor cells.

Although less studied, CBDV, a structural analog of CBD, has been receiving attention in recent years. CBDV exhibits anticonvulsant properties, and clinical trials are currently underway to treat ASD. This review



summarizes the therapeutic advances of CBD and CBDV. It explores some aspects of their pharmacokinetics (processes that a drug undergoes from the time it is administered until its complete elimination from the body), pharmacodynamics, and possible interactions. Additionally, it also

highlights the therapeutic potential of CBD and CBDV in different medical issues and their clinical applications.

## ***CBD and CBDV Therapeutic Activity***

CBD is the most studied non-psychoactive phytocannabinoid, recognized for its anti-inflammatory, neuroprotective, anti-epileptic, analgesic effects, and anti-tumor properties. Although less well known, CBDV has recently been investigated mainly for its anti-epileptic action, its potential benefits in ASD, and more recently, for its anti-inflammatory properties. It has been shown to be effective in treating inflammatory bowel diseases, such as Crohn's disease and ulcerative colitis. Its efficacy in treating lung diseases is also under study. In addition to exploring its potential actions in inflammatory bowel disease (IBD), in a murine model of colitis, CBDV decreased inflammation by reducing neutrophil infiltration and pro-inflammatory cytokine production and restoring intestinal permeability. Likewise, in colon biopsies from children with ulcerative colitis, CBDV also reduced cytokine production.

In the last decades, several studies have highlighted the anti-inflammatory, antioxidant, anticonvulsant, analgesic, and neuroprotective actions of CBD, properties that are useful for the treatment of different diseases. Preclinical studies have also demonstrated the anti-tumor, anti-invasive and anti-angiogenic effects of CBD in various types of cancer.

The commercialization of different CBD-based drugs and the growing number of clinical trials under development on various medical problems highlight the therapeutic interest of CBD. Moreover, continued research in parallel with evidence of its medicinal properties may lead to the discovery of new potential clinical applications. In the case of CBDV, although



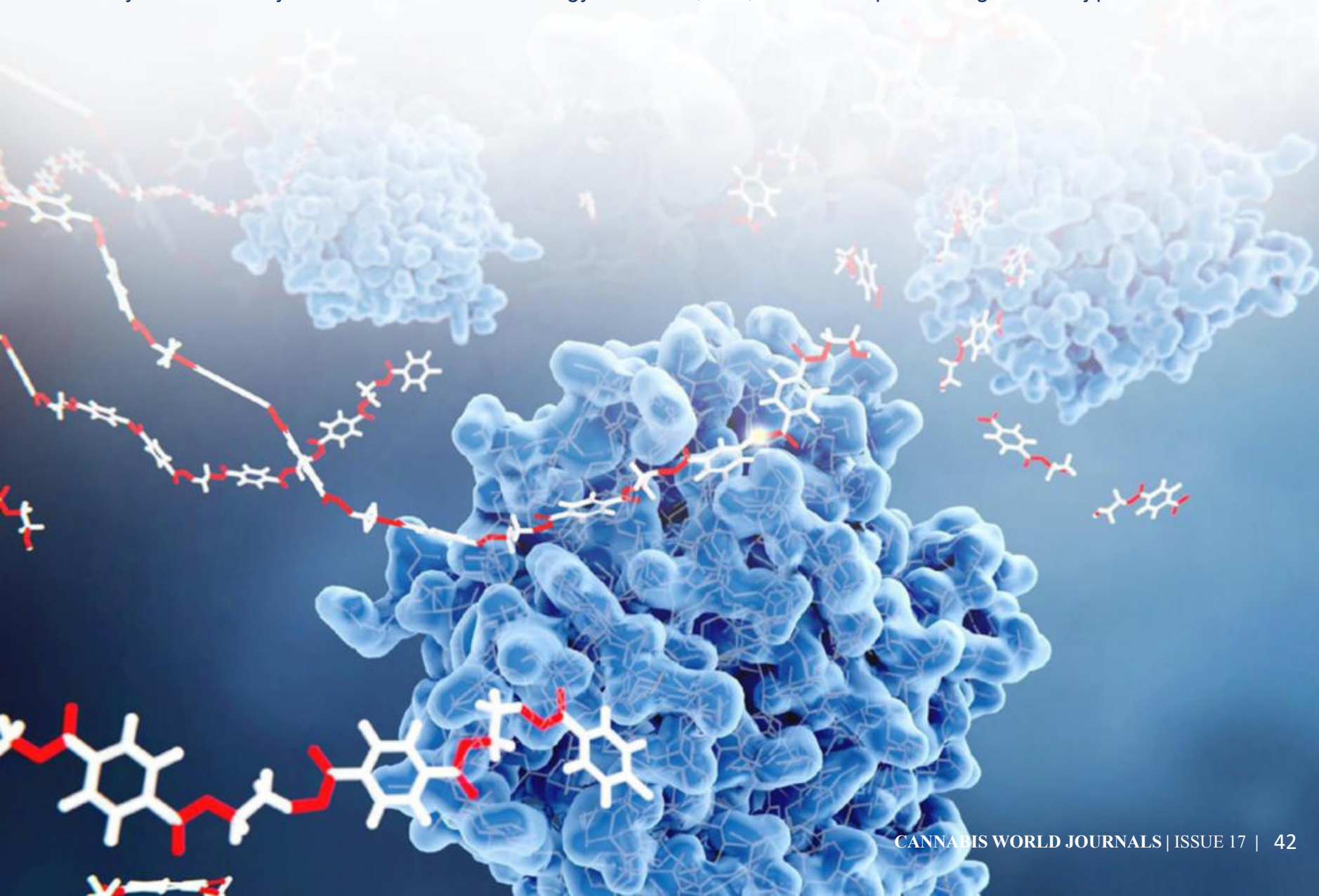
preclinical and clinical studies are recent, there is relevant therapeutic interest in this molecule, particularly for epilepsy and ASD. However, its anti-inflammatory action in IBD has recently been reported; given an emerging interest in the medicinal use of cannabinoids, the elucidation of future vital features at the treatment level may highlight the clinical potential of CBDV.

On the other hand, it is essential to highlight the potential interactions when using phytocannabinoid formulations. CBD and CBDV can interfere with CYP450 enzymes and efflux transporter proteins, altering plasma concentrations of cannabinoids or conventional drugs when administered together, thus decreasing drug efficacy or even causing toxicity. It is necessary to

elucidate their medicinal properties' mechanisms to expand knowledge and discover promising new therapeutic perspectives.

Therefore, CBD and CBDV phytocannabinoids seem to be a promising strategy to overcome the lack of efficient conventional treatments in several pathologies, such as neurodegenerative diseases, epilepsy, chronic pain, and cancer. It is also necessary to understand the possible consequences of their long-term use by deepening pharmacokinetic and pharmacodynamic studies, especially in the case of more sensitive population groups, such as children and pregnant women.

**Analyzed article:** Alves, P., Amaral, C., Teixeira, N., & Correia-da-Silva, G. (2020). Cannabis sativa: Much more beyond  $\Delta^9$ -tetrahydrocannabinol. *Pharmacology Research*, 157, 104822. <https://doi.org/10.1016/j.phrs.2020.104822>.







# The Therapeutic Benefits of Using Medical Cannabis, Patient Perceptions

**Analyzed article:** Luque, J. S., Okere, A. N., Reyes-Ortiz, C. A., & Williams, P. M. (2021). Mixed methods study of the potential therapeutic benefits from medical cannabis for patients in Florida. *Complementary Therapies in Medicine*, 57, 102669. <https://doi.org/10.1016/j.ctim.2021.102669>

As many know, medical cannabis is currently a treatment option for patients with chronic and neuropathic pain, spasticity, multiple sclerosis, and inflammatory diseases. Health professionals recommend its use for better life quality of patients, even though there is a lack of consensus on its use.

To better understand the perceptions and therapeutic benefits of using medical cannabis, 196 participants were surveyed in different social media groups in the state of Florida, United States. The age range was between 19 and 77 years; 69% were women and 31% men, belonging to different ethnicities or races: 87% white, 6% African American, 6% Hispanic, and 2% Asian. Concerning annual income, it ranged from U\$41,000 to U\$60,000

The surveys showed that 89% of the participants had a significant medical improvement, reducing anxiety, eliminating the use of opioids, improving sleep, pain,

and post-traumatic stress, and stimulating appetite. Regarding the frequency of use, 59 people use it 2-3 times/day, 46 participants 6 or more times/day, 42 patients 4-5 times/day, and 10 people, only one use per day. They did so through different routes of administration, such as vapor or inhalation being the most common, followed by topicals, concentrates, pills, oils, tinctures, and edibles.

The preferred strains are Cannabis sativa and Cannabis indica, specifically with the variety "9-pound hammer" with THC levels between 18 and 23% and beneficial effects for insomnia, appetite, and headache. There was variation in the length of time patients had been using medical cannabis, from one to two years (36%) to more than five years (16%), and the main obstacle to accessing medical cannabis is the cost, which varies between U\$200 and U\$300 per month. Most of the patients stated that the cannabis formulation was on the



recommendation of their regular physician. Most of the improvements were evidenced in: depression, chronic pain, arthritis, nausea, spasms, and migraine, followed by anxiety, insomnia, post-traumatic stress disorder, and irritable bowel syndrome. However, 64% of the participants commented that the symptoms returned when they stopped using medical cannabis. According to the survey responses, age is negatively related to patient benefits, meaning that the relief or help provided by medical cannabis is less in patients with more severe symptoms or possible comorbidities, thus decreasing the efficacy of cannabis.

On the other hand, the survey found that young people showed an improvement in spasms or tremors. The participants reported that they noticed a certain stigma towards the perception of the use of medical cannabis by health professionals other than their regular doctor since they only shared the use of this plant with family and trusted friends. Finally, the excellent attitude and willingness of the participants to answer the surveys were evident, and many of them were involved in advocating for the use of medical cannabis.





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