

# hope grown here

The Medicinal Application of Marijuana:  
What's Legal and What's Not

**Amy Bjork, RPh**  
**CLINICAL PHARMACIST**



## Disclosure Statement

I have relevant financial relationships with the product(s) or service(s) described, evaluated, reviewed, or compared in this presentation.

Employed as a Clinical Pharmacist at LeafLine Labs





# Today's Agenda

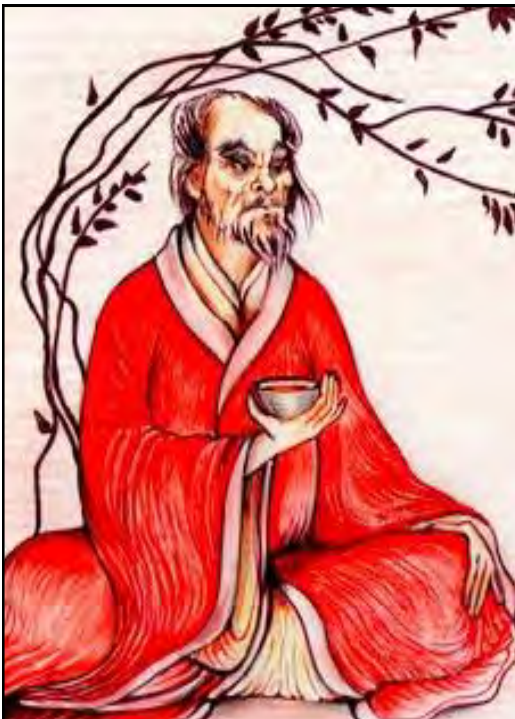
## Historical Overview

The Endocannabinoid System and  
Phytocannabinoids

Minnesota Medical Cannabis Program Overview

Legal Considerations

LeafLine Labs Overview



## 2700 BC

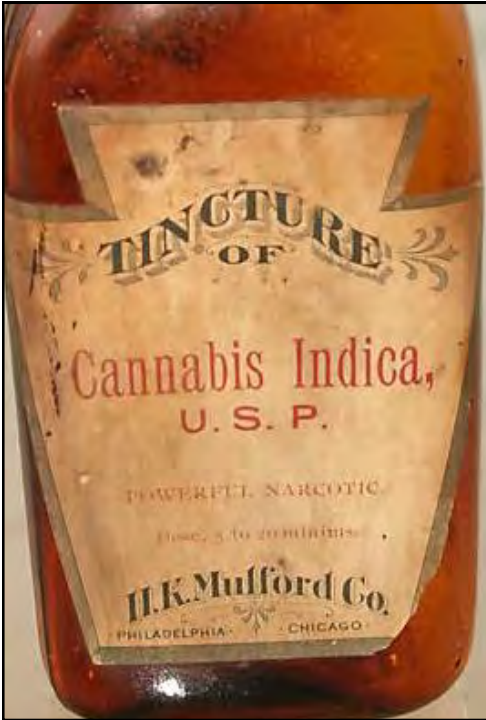
### EARLY USE

- Commercial purposes (e.g. textiles, clothing)
- Medicinal
- Recreational

### ANCIENT TEXT: *Pen Ts'ao* (Translation: *The Herbal*)

- Chinese herbal pharmacological book
- Depicts 350+ medicines derived from minerals, plants and animals

Abrams, "Medical Cannabis and the Endocannabinoid System."



## 1800s

Mid-1800s: Cannabis was added to the U.S. Pharmacopeia

### USED TO COMMONLY TREAT:

- Opiate withdrawal
- Incontinence
- Migraine
- Gout
- Pain
- Convulsive disorders
- Leprosy

Abrams, "Medical Cannabis and the Endocannabinoid System."

## 1930's: Anti-Marijuana Propaganda in the U.S.



## 1937: First US Legislative Action on Cannabis



**NOTE:** This tax did NOT make prescribing cannabis illegal.

### SCIENTIFIC FINDINGS

Anslinger wrote to 30 scientific experts.

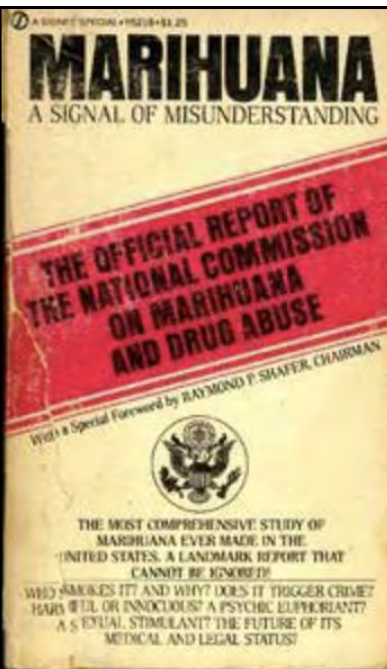
Of those experts, 29/30 wrote back asserting the medical value of cannabis

*Anslinger ignored these findings.*

### OCTOBER 1937: “Marihuana Tax Act”

- Taxed growers, sellers and buyers
- Resulted in significant decline in cannabis prescriptions

HISTORICAL OVERVIEW .....CANNABINOIDS & ECS ..... CANNABIS COMPOUNDS ..... LEAFLINE LABS ..... MN MEDICAL CANNABIS PROGRAM



## 1970: Shafer Commission Findings

### OFFICIAL COMMISSION FINDINGS

“Marijuana **DOES NOT** lead to physical dependency, although some evidence indicates heavy long-term users may develop psychological dependence on the drug.”

*The Shafer Commission, 1970*

### NIXON RESPONDS

“As you know, there is a Commission that is supposed to make recommendations to me about this subject; in this instance, however, I have such strong views that I will express them. **I AM against legalizing marijuana. Even if the Commission does recommend that it be legalized, I WILL NOT follow that recommendation...**”

*President Nixon, 1970*

HISTORICAL OVERVIEW .....CANNABINOIDS & ECS ..... CANNABIS COMPOUNDS ..... LEAFLINE LABS ..... MN MEDICAL CANNABIS PROGRAM





# Today's Agenda

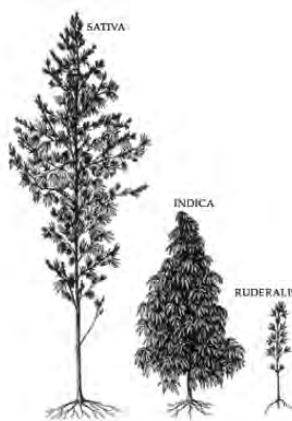
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• C. SATIVA, C. INDICA, C. RUDERALIS

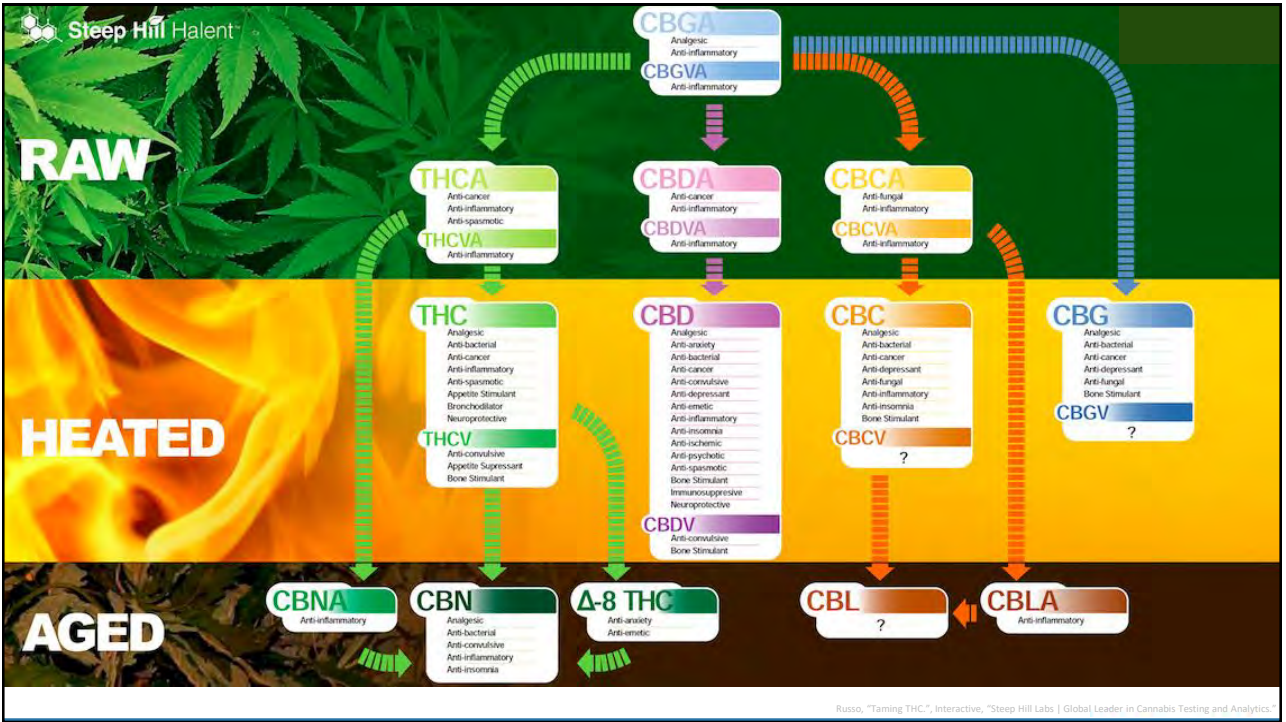
• OVER 60 113 COMPOUNDS CALLED **CANNABINOIDS**

• MOST COMMON CANNABINOIDS

- $\Delta$ -9-tetrahydrocannabinol (THC)
- CANNABIDIOL (CBD)



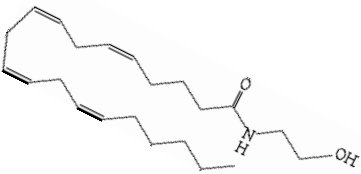
## CANNABIS PLANT



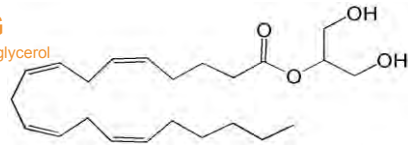
# Cannabinoids & The Endocannabinoid System

ENDOCANNABINOIDS (found and produced in the human body)

**Anandamide**  
N-arachidonylethanolamine

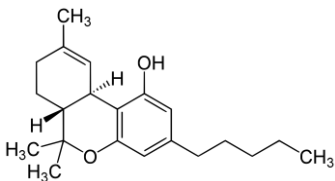


**2-AG**  
2-Arachidonoylglycerol

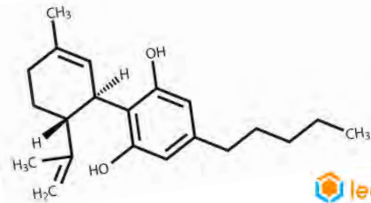


PHYTOCANNABINOIDS (found and produced in plants)

**9 THC**  
Tetrahydrocannabinol



**CBD**  
Cannabidiol

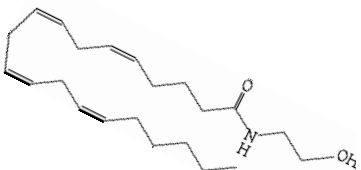


Bermudez-Silva et al., "The Endocannabinoid System, Eating Behavior and Energy Homeostasis."



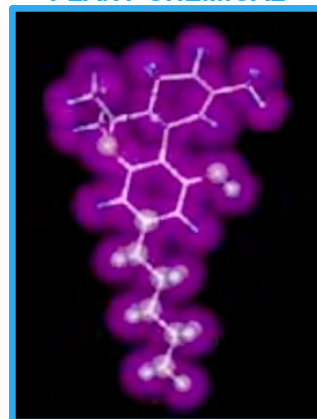
# Cannabinoids & The Endocannabinoid System

**Anandamide**  
N-arachidonylethanolamine



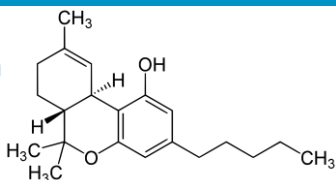
HUMAN CHEMICAL

PLANT CHEMICAL



**9 THC**

Tetrahydrocannabinol



Bermudez-Silva et al., "The Endocannabinoid System, Eating Behavior and Energy Homeostasis."

## The Endocannabinoid System (ECS)

### CB1 & CB2 RECEPTORS

#### CB1 RECEPTORS

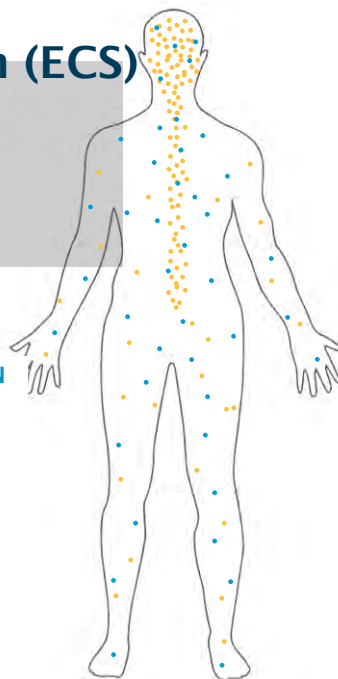
##### CANNABINOID EFFECTS ON CB1 RECEPTORS

- Decreased pain (analgesia)
- Decreased nausea and vomiting
- Increased appetite
- Increased muscle control
- Sleep aid
- Memory suppressant
- Anti-proliferic

#### CB2 RECEPTORS

##### CANNABINOID EFFECTS ON CB2 RECEPTORS

- Anti-inflammatory
- Increases immune function
- Decreased pain (analgesia)
- Anti-proliferic



Abrams, Medical Cannabis and the Endocannabinoid System



# Phytocannabinoids

## ACTIVE CANNABIS COMPONENTS

**Some Effects of THC**

- Decrease pain
- Stimulate appetite
- Analgesic
- Anti-emetic
- Sleep aid
- Psychotropic

**Some Effects of CBD:**

- Mitigation of psychotropic effects of THC
- Analgesic
- Anti-inflammatory
- **Anti-epileptic**
- Anxiolytic

# THC

Δ9-TETRAHYDRACANNABIDIOL

TARGETS BOTH  
**CB1 & CB2**  
RECEPTORS

CC1=C(C)C(=C(C=C1)O)C2=C(C3=CC=CC=C3C2)O

TARGETS PRIMARILY  
**CB2 RECEPTORS**  
*\*modulates other cannabinoids*

CANNABIDIOL

# CBD

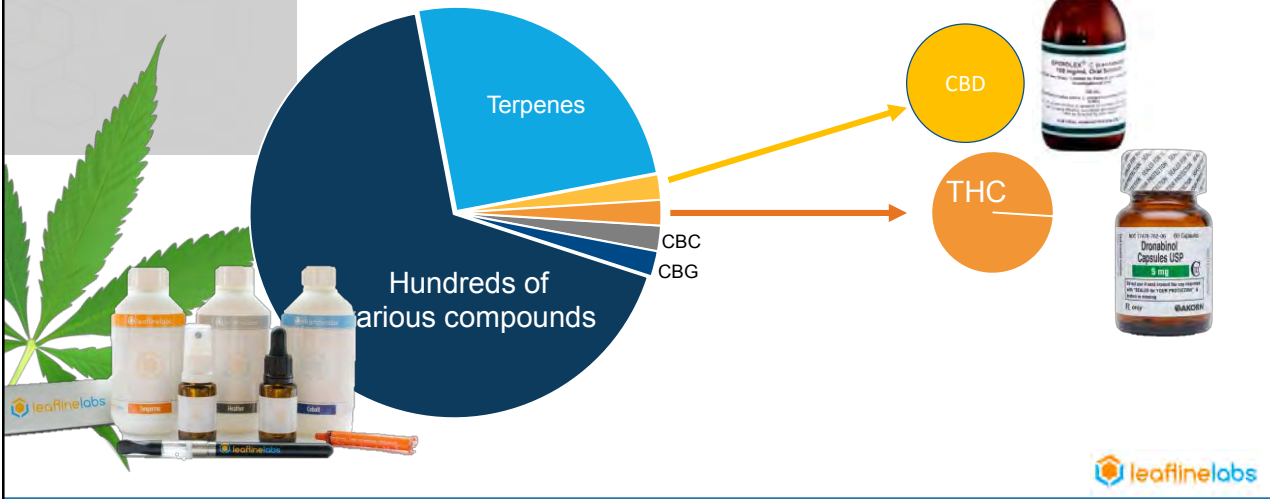
● CB1 Receptor  
● CB2 Receptor

# Terpenes

<p>Anti-inflammatory Anti-tumor</p> <h2 style="font-size: 1.5em;">β-Myrcene</h2> <p>Anti-insomnia Analgesic Increase BBB Permeability</p>	<p>Synthesis of Vitamin E/K</p> <h2 style="font-size: 1.5em;">Phytol</h2> <p>Anti-Oxidant</p>
<p>Anti-tumor Anti-bacterial</p> <h2 style="font-size: 1.5em;">Humulene</h2> <p>Anti-inflammatory Appetite suppression</p>	<p>Anti-inflammatory Immuno-regulating</p> <h2 style="font-size: 1.5em;">Citronellol</h2> <p>Anti-tumor</p>
<p>Anti-bacterial Antifungal Anti-septic</p> <h2 style="font-size: 1.5em;">Beta Caryophyllene</h2> <p>Anti-tumor Anti-inflammatory</p>	<p>Analgesic Sleep Aid Anti-Psychosis</p> <h2 style="font-size: 1.5em;">Linalool</h2> <p>Anti-Anxiety Anti-Epileptic</p>
<p>Anti-anxiety Anti-fungal</p> <h2 style="font-size: 1.5em;">Limonene</h2> <p>Anti-depressant Treat Gastric Reflux</p>	<p>Anti-tumor Anti-fungal</p> <h2 style="font-size: 1.5em;">Caryophyllene Oxide</h2> <p>Anti-Oxidant</p>
<p>Anti-biologic / Immune-Modulating Anti-oxidant</p> <h2 style="font-size: 1.5em;">Terpinolene</h2> <p>Anti-insomnia</p>	<p>Bronchodilator</p> <h2 style="font-size: 1.5em;">α-Pinene</h2> <p>Anti-inflammatory</p>



## Whole Plant Medicine vs. Synthetic Medicine WHAT'S THE DIFFERENCE?



### Medical Cannabis Special Considerations

#### Psychosis

- Limit use in those with history of psychosis

#### Use in Children & Adolescents

- Consider higher risks:benefits
- Potential impact on adolescent brain development
- Short term cognitive effects and possible negative academic impacts
- Unclear long term impacts on cognition

# Cannabis vs. CBD vs. Hemp Oil

Marijuana	Hemp	Hemp seeds (cannabis sativa seed oil)
produces tetrahydrocannabinol (THC) at 20%+ levels (the psychoactive compound that makes a person feel "high.")	has to be less than 0.3% THC to be sold legally	0% THC, trace amounts of CBD
produces CBD at 10%+ levels	produces CBD at 20%+	used as food such as hempseed milk, granola, and more
medicinal and therapeutic uses for chronic pain, mental health, and illnesses	stalks of the hemp plant can produce clothing, rope, paper, fuel, home insulation... (the list goes on and on)	cold-pressed for oil production that can be used in cooking, beauty products, and even in paint



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Historical Overview

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The Endocannabinoid System and Phytocannabinoids

**Minnesota Medical Cannabis Program Overview**

Legal Considerations

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LeafLine Labs Overview

# Minnesota Medical Cannabis Program

## SETTING A NEW STANDARD: DIFFERENTIATING FACTORS

**01** Healthcare provider must **CERTIFY** patient eligibility for program

**02** Extensive patient **registration & reporting process** through MDH

**03** 1<sup>st</sup> **smoke-free** cannabis program

**04** Personal consultation with specially **trained licensed pharmacists**

# Minnesota Medical Cannabis Program

## ROLE OF THE HEALTHCARE PRACTITIONER (HCP)

**DO**  
Assess and certify patients' qualifying conditions



HEALTHCARE PRACTITIONER

**Do NOT**  
*Prescribe, refer or recommend medical cannabis medications*



**CAN** Coordinate Care with LeafLine Labs care delivery teams



## Minnesota Medical Cannabis Program REGISTRATION PROCESS FOR PATIENTS



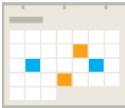
### 1. CONDITION CERTIFICATION

Have your medical condition certified by a healthcare provider



### 2. REGISTER WITH THE OFFICE OF MEDICAL CANNABIS (OMC)

- Receive certification confirmation email
- Register online
- Annual \$200 registration fee, or \$50 for those with SSI, SSD, MA, Medicaid or CHAMPVA



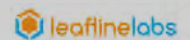
### 3. SCHEDULE YOUR INITIAL CONSULTATION

Call our patient care centers to schedule your initial consultation.



## Approved Indications in Minnesota

Intractable Pain	Cancer	HIV/AIDS	Seizures
Obstructive Sleep Apnea	Autism	PTSD	Tourette's Syndrome
Glaucoma	ALS	Muscle Spasms	Inflammatory Bowel Disease
	Terminal Illness	Alzheimer's Disease	



# What is “Intractable Pain”?



Intractable Pain

As defined by the state of Minnesota, *intractable pain* is a pain state where the cause of pain cannot be removed or otherwise treated. It is a state in which no relief or cure of the cause of pain is possible.

Primary causes of such pain include, *but are not limited to*:

- 1. Arthritis: rheumatoid
- 2. Arthritis: osteoarthritis
- 3. Cancer
- 4. Complex Regional Pain Syndrome
- 5. Crohn’s Disease
- 6. Disc (vertebral) herniation
- 7. Endometriosis
- 8. Fibromyalgia syndrome
- 9. Headache: migraine
- 10. Headache: other
- 11. Low back pain
- 12. Lupus
- 13. Multiple sclerosis
- 14. Muscular dystrophy
- 15. Myofascial pain
- 16. Myelopathies
- 17. Neck pain
- 18. **Neuropathy: diabetic**
- 19. **Neuropathy: HIV**
- 20. **Neuropathy: post-herpetic**
- 21. **Neuropathy: OTHER**
- 22. Parkinson’s
- 23. Phantom limb pain
- 24. Post-stroke pain
- 25. Postoperative pain
- 26. Sciatica
- 27. Spinal cord injury
- 28. Spinal stenosis
- 29. Trauma (including vertebral compression fracture)
- 30. Trigeminal neuralgia
- 31. Vascular disease
- 32. **OTHER**



**Table 1: Count (%) of Active Patients by Condition\* as of September 30, 2019**

Qualifying Condition	Patients Certified: N (%)
Glaucoma	118 (1%)
HIV/AIDS	188 (1%)
Tourette Syndrome	113 (1%)
ALS	36 (<1%)
Seizures	628 (4%)
Severe and Persistent Muscle Spasms	2,076 (12%)
Inflammatory Bowel Disease, Including Crohn’s Disease	538 (3%)
Cancer	1,399 (8%)
Terminal Illness	132 (1%)
Intractable Pain	11,527 (64%)
Post-Traumatic Stress Disorder	3,400 (19%)
Autism Spectrum Disorder	555 (3%)
Obstructive Sleep Apnea	854 (5%)
Alzheimer’s Disease	18 (<1%)
Total	17,961

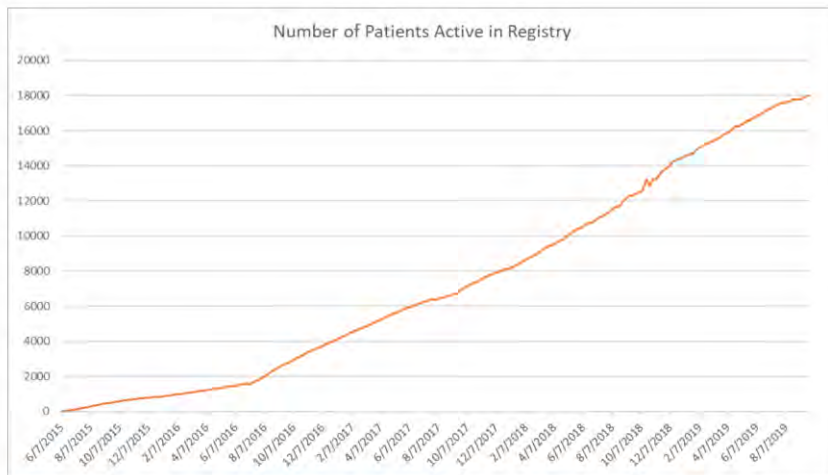


**Table 5: Breakdown of Registered Health Care Practitioners by Type, as of September 30, 2019**

Healthcare Practitioner Type	N (%)
Physician	1186 (74%)
Physician Assistant	121 (8%)
Advanced Practice RN	305 (19%)
Total	1,612



MN MEDICAL CANNABIS PROGRAM UPDATE, OCTOBER 2019



**Figure 2. Weekly number of patients enrolled and in active status in registry.**



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## THERAPEUTIC RESEARCH ACT; MEDICAL CANNABIS Subd. 6. MEDICAL CANNABIS

MINNESOTA MEDICAL CANNABIS LEGISLATION

- (a) "Medical cannabis" means any species of the genus cannabis plant, or any mixture or preparation of them, including whole plant extracts and resins, and is delivered in the form of:
  - (1) liquid, including, but not limited to, oil;
  - (2) pill;
  - (3) vaporized delivery method with use of liquid or oil but which does not require the use of dried leaves or plant form; or
  - (4) any other method, **excluding smoking**, approved by the commissioner.
- (b) This definition includes any part of the genus cannabis plant prior to being processed into a form allowed under paragraph (a), that is possessed by a person while that person is engaged in employment duties necessary to carry out a requirement under sections [152.22](#) to [152.37](#) for a registered manufacturer or a laboratory under contract with a registered manufacturer.



## THERAPEUTIC RESEARCH ACT; MEDICAL CANNABIS 152.23 LIMITATIONS.

- (a) Nothing in sections [152.22](#) to [152.37](#) permits any person to engage in and does not prevent the imposition of any civil, criminal, or other penalties for:
  - (1) undertaking any task under the influence of medical cannabis that would constitute negligence or professional malpractice;
  - (2) possessing or engaging in the use of medical cannabis:
    - (i) on a school bus or van;
    - (ii) on the grounds of any preschool or primary or secondary school;
    - (iii) in any correctional facility; or
    - (iv) on the grounds of any child care facility or home day care;
  - (3) vaporizing medical cannabis pursuant to section [152.22, subdivision 6](#):
    - (i) on any form of public transportation;
    - (ii) where the vapor would be inhaled by a nonpatient minor child; or
    - (iii) in any public place, including any indoor or outdoor area used by or open to the general public or a place of employment as defined under section [144.413, subdivision 1b](#); and
  - (4) operating, navigating, or being in actual physical control of any motor vehicle, aircraft, train, or motorboat, or working on transportation property, equipment, or facilities while under the influence of medical cannabis.



## THERAPEUTIC RESEARCH ACT; MEDICAL CANNABIS 152.33 VIOLATIONS.

- **Subd. 1a. Intentional diversion outside the state; penalties.**
  - (a) In addition to any other applicable penalty in law, the commissioner may levy a fine of \$250,000 against a manufacturer and may immediately initiate proceedings to revoke the manufacturer's registration, using the procedure in section [152.25](#), if:
    - (1) an officer, director, or controlling person of the manufacturer pleads or is found guilty under subdivision 1 of intentionally transferring medical cannabis, while the person was an officer, director, or controlling person of the manufacturer, to a person other than allowed by law; and
    - (2) in intentionally transferring medical cannabis to a person other than allowed by law, the officer, director, or controlling person transported or directed the transport of medical cannabis outside of Minnesota.
  - (b) All fines collected under this subdivision shall be deposited in the state government special revenue fund.





## 152.33 VIOLATIONS.

- **Subd. 2. Diversion by patient, registered designated caregiver, or parent; criminal penalty.**
  - In addition to any other applicable penalty in law, a patient, registered designated caregiver or, if listed on the registry verification, a parent or legal guardian of a patient who intentionally sells or otherwise transfers medical cannabis to a person other than a patient, designated registered caregiver or, if listed on the registry verification, a parent or legal guardian of a patient is guilty of a felony punishable by imprisonment for not more than two years or by payment of a fine of not more than \$3,000, or both.



## THERAPEUTIC RESEARCH ACT; MEDICAL CANNABIS 152.33 VIOLATIONS

- **Subd. 3. False statement; criminal penalty.**
  - A person who intentionally makes a false statement to a law enforcement official about any fact or circumstance relating to the medical use of cannabis to avoid arrest or prosecution is guilty of a misdemeanor punishable by imprisonment for not more than 90 days or by payment of a fine of not more than \$1,000, or both. The penalty is in addition to any other penalties that may apply for making a false statement or for the possession, cultivation, or sale of cannabis not protected by sections [152.22](#) to [152.37](#). If a person convicted of violating this subdivision is a patient or a registered designated caregiver, the person is disqualified from further participation under sections [152.22](#) to [152.37](#).



The CDPHE's Retail Marijuana Public Health Advisory Committee biennially publishes a comprehensive review of relevant marijuana research. The 2019 report found substantial evidence in the literature to support the following:

Recent marijuana use increases a driver's risk of a motor vehicle crash.

Less-than-weekly marijuana users exhibit meaningful driving impairment with THC levels of 2-5 ng/mL or ingestion of 10 mg or more of THC.

Combining marijuana and alcohol increases impairment and motor vehicle crash risk more than each alone.

Delaying driving for a minimum of six hours after smoking or 8 hours after ingesting allows THC-induced impairment to resolve for less-than-weekly users at 18 mg of THC.

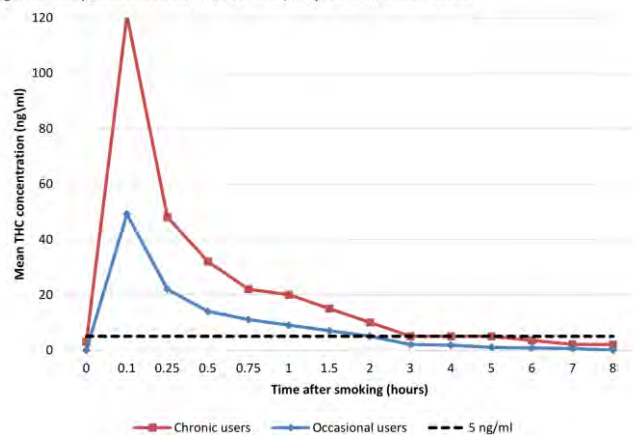
Research is lacking on marijuana and impairment in frequent users.

## Impaired Driving

- The Delta-9 THC level in blood decreases rapidly in the first hour after use, then gradually thereafter, making prompt testing critical.

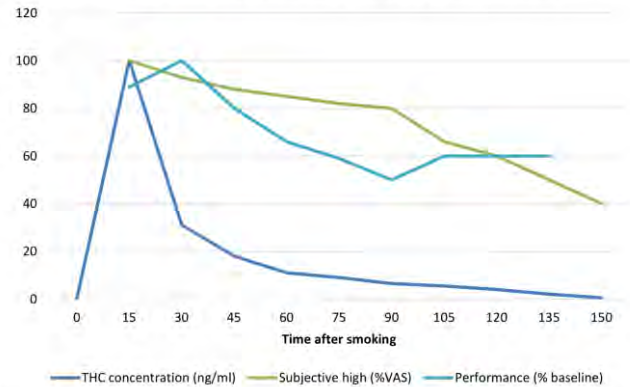


Figure 1. Dissipation of Delta-9 THC over time, adapted from Toennes et al.<sup>9</sup>



- Results from studies that examined Delta-9 THC concentration, subjective high, and performance of subjects show THC concentration peaks early, but the impairing effects on driving-related performance tasks and subjective high appear long after the peak concentration.
- This suggests that at there are performance deficits that follow the peak of THC concentration. Furthermore, high THC concentration in blood does not perfectly correspond to impairment.

Figure 2. Time course of Delta-9 THC concentration, subjective high, and performance



Source: Berghaus et al. (1998); Sticht and Käferstein (1998); and Robbe (1994) as cited in Compton (2017).

## UCSF Trial Confirms THC in Breath During Window of Peak Impairment



The latest clinical trial results from the University of California – San Francisco (UCSF) confirm that THC is detectable in breath for up to three hours after smoking marijuana. Beyond three hours, THC levels drop to virtually undetectable levels.



The three-hour timeframe is significant because research has shown that this is when people are most likely to be impaired. Other marijuana tests – urine, blood, oral fluid, hair – detect previous use that is well outside the window of peak impairment.

## Hound Labs Breathalyzer

### Key Features

- Fast Results**  
 THC test results are available in minutes and stored for future access. Testers can print results immediately.
- Compact & Portable**  
 Carrying case contains everything needed for lab-quality analysis on location.
- Durable**  
 The rugged HOUND BREATHALYZER withstands everyday use in the field.



- Secure & Encrypted Data**  
 Individual test data is encrypted on the cartridge. Multiple results are stored on the handheld unit and identified by a unique ID.
- Single-Use Cartridge**  
 Individually packaged cartridges ensure reliable results and a sanitary process.
- Temperature Controlled**  
 Automatic cooling and heating mechanisms ensure accurate and reliable performance across a wide temperature range.

A placebo-controlled study to assess Standardized Field Sobriety Tests performance during alcohol and cannabis intoxication in heavy cannabis users and accuracy of point of collection testing devices for detecting THC in oral fluid

- Conclusions Standardized Field Sobriety Tests were mildly sensitive to impairment from cannabis in heavy users. Lack of sensitivity might be attributed to tolerance and time of testing. SFST were sensitive to both doses of alcohol. The Dräger Drug Test® 5000 appears to be a promising tool for detecting THC in oral fluid as far as correct THC detection is concerned.
- Published: Psychopharmacology (2012) 223:439–446 DOI 10.1007/s00213-012-2732-y



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**Horticulture Operations**



 leafinelabs

**Laboratory Operations**



# LeafLine Labs

PATIENTS FIRST. ALWAYS.



HISTORICAL OVERVIEW..... CANNABINOIDS & ECS..... CANNABIS COMPOUNDS..... **LEAFLINE LABS**..... MN MEDICAL CANNABIS PROGRAM



## Patient Experience at Leafline Labs Patient Care Center



## LeafLine Labs Medications

- **Tangerine** → Formulation with higher THC/CBD ratio (>20:1)
  - Beneficial alone or in combination for various pain conditions, glaucoma, Tourette's, Cachexia, poor appetite, inflammatory bowel disease, muscle spasticity etc.
- **Heather** → Formulation with equal THC/CBD (1:1)
  - Beneficial for various pain conditions, muscle spasticity etc.
- **Cobalt** → Formulation with Higher CBD (CBD/THC >20:1)
  - Beneficial alone or in combination for Seizures, inflammation, potentially much more.



## What's Legal in Minnesota






# Minnesota Medical Cannabis Registry Verification Card

**Minnesota Medical Cannabis Patient Registry Verification Card - Patient/Parent Legal Guardian**


Patient ID: [REDACTED] Patient Name: [REDACTED] Patient DOB: [REDACTED] Enrollment Exp. Date: 2020-06-29

Parent/Legal Guardian Id: [REDACTED] Parent/Legal Guardian Name: [REDACTED]



mn.gov/medicalcannabis

This card is for information purposes only and satisfies MN Statute 152.27 Subd. 6e. All authorized individuals that can possess medical cannabis for a specific approved patient will have their name printed on the medical cannabis container label. The office of Medical Cannabis will not confirm or deny participation in the registry without a valid search warrant.




# Minnesota Medical Cannabis Registry Verification Card

**Patient Information** →

Parent, Legal Guardian or Spouse →

Date Sold →



Patient Name:	TCOT PATIENT	Patient Reg #:	P45G7890
Patient Address:	TEST 123	Patient DOB:	Jan 1 1977
Legal Guardian:	ST. CLOUD, MN 00000	Patient Caregiver/Test Caregiver:	
	TEST GUARDIAN	Caregiver DOB:	01/01/1977

**TANGERINE VAPORIZER OIL CARTRIDGE, 0.5 ML**

Product Amt: 0.50(ml)

Serial Number: 19002062-1

Use Instructions: Inhale 1 to 4 puffs up to 4 times daily as needed. Inhalations should be one second in duration.

Sell date: 10/09/2019  
Pharmacist: Amy Bjork  
Days Supply: 6

Registered Caregiver →

Product Dispensed →

Eagan 2795 Pilot Knob Road Eagan, MN 55121 651-846-9245	Hibbing 302 East Howard St. Hibbing, MN 55746 218-421-6350	Patients First Always. 844-LEAFLINE leafinelabs.com	St. Cloud 141 33rd Ave South St. Cloud, MN 56301 320-443-6250	St. Paul 550 Vandalia St. St. Paul, MN 55114 651-313-6733
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# Cannabis Delivery Methods Available in Minnesota

Vaporization	Oral Dosage	Oral Mucosal (Sublingual)	Topical
<ul style="list-style-type: none"> <li>Onset: 3 to 10 minutes</li> <li>Peak concentration: 15 minutes</li> <li>Duration: 2 to 4 hours</li> <li>Bioavailability 5% to 20% (varies based on technique)</li> </ul>	<ul style="list-style-type: none"> <li>Onset: 60 to 90 minutes</li> <li>Peak concentration: 1 to 6 hours</li> <li>Duration: 8 to 12 hours</li> <li>Bioavailability 10% to 20%                             <ul style="list-style-type: none"> <li>varies based on vehicle</li> </ul> </li> <li>Half-life 20-30 hours (highly variable)</li> </ul>	<ul style="list-style-type: none"> <li>Onset: 10 to 30 minutes</li> <li>Peak Concentration: 30 to 90 minutes</li> <li>Duration: 2 to 4 hours</li> <li>Bioavailability 20% to 40%</li> </ul>	<ul style="list-style-type: none"> <li>Onset: 15 minutes to 1 hour</li> <li>Duration: 2 to 4 hours</li> </ul>

## LeafLine Labs Medications DRUG DELIVERY METHODS



**Tangerine**  
(THC > CBD)

**Heather**  
(THC = CBD)

**Cobalt**  
(THC < CBD)



# LeafLine Labs Medications

## DRUG DELIVERY METHODS



**Tangerine**

(THC > CBD)

**Heather**

(THC = CBD)



# LeafLine Labs Medications

## DRUG DELIVERY METHODS



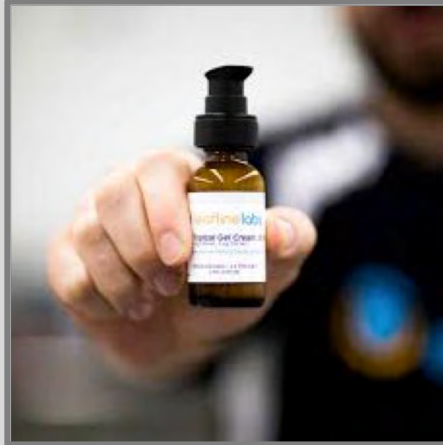
**Tangerine**

(THC > CBD)



# LeafLine Labs Medications

## DRUG DELIVERY METHODS



**Heather**

(THC = CBD)



Minnesota  
Medical  
Solutions

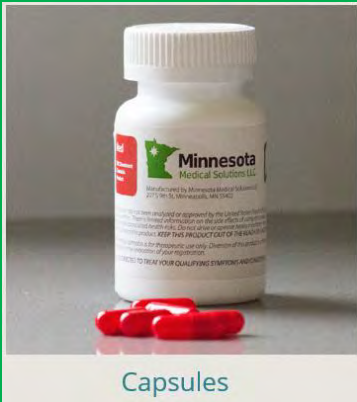


Vaporizers





# Minnesota Medical Solutions



Capsules



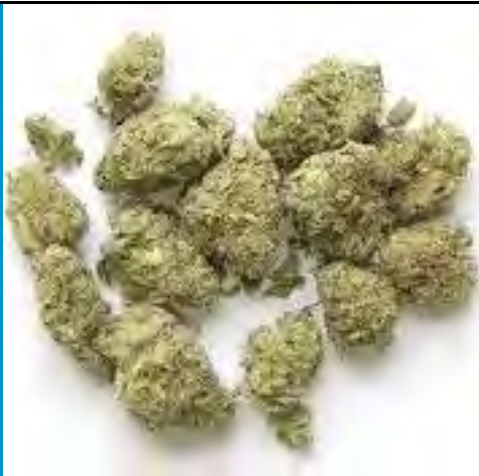
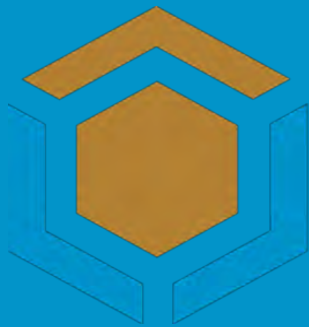
Tinctures & Oils

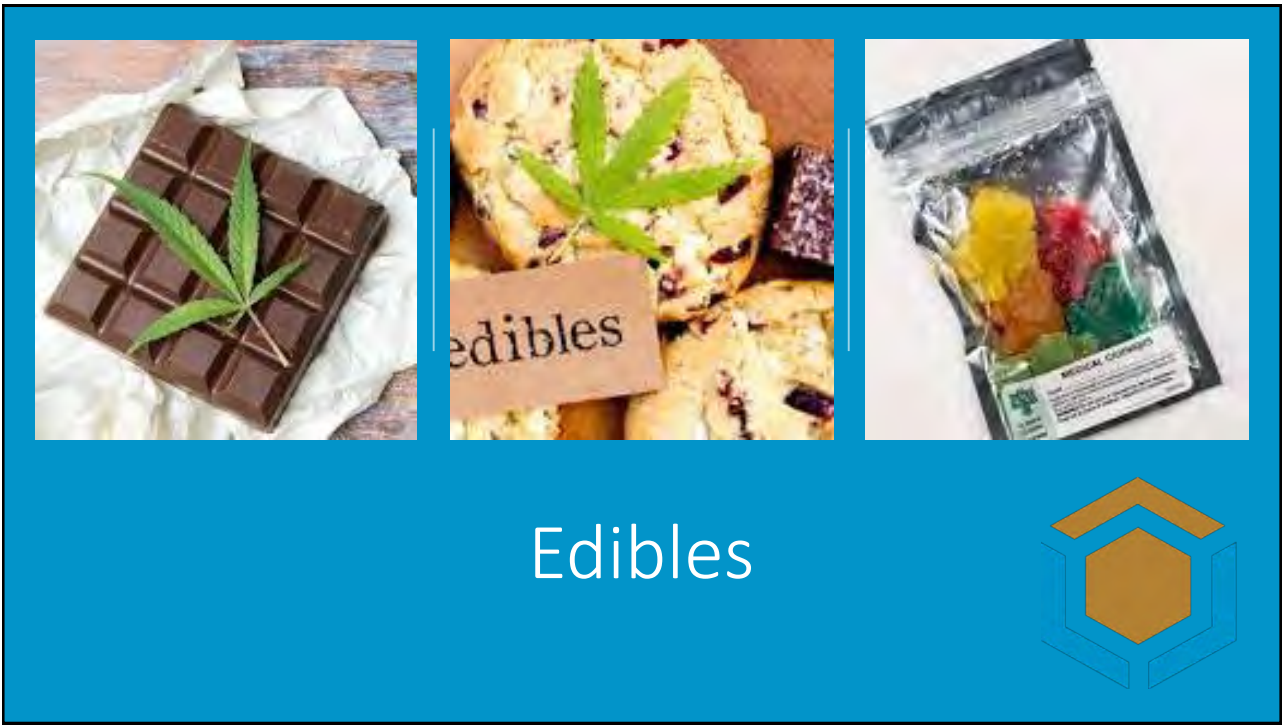
# Minnesota Medical Solutions

# What's **NOT** Legal in Minnesota



Plant Material  
(aka: "flower"/"bud")





# Edibles



Patients first. Always.

