



**PHARMACANN**

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*NATIONAL ACADEMIES OF SCIENCES • ENGINEERING • MEDICINE*

*THE HEALTH EFFECTS OF CANNABIS AND CANNABINOIDS:  
THE CURRENT STATE OF EVIDENCE AND RECOMMENDATIONS FOR RESEARCH*

*ADDRESSING BARRIERS TO POLICY, SURVEILLANCE, AND FUNDING*

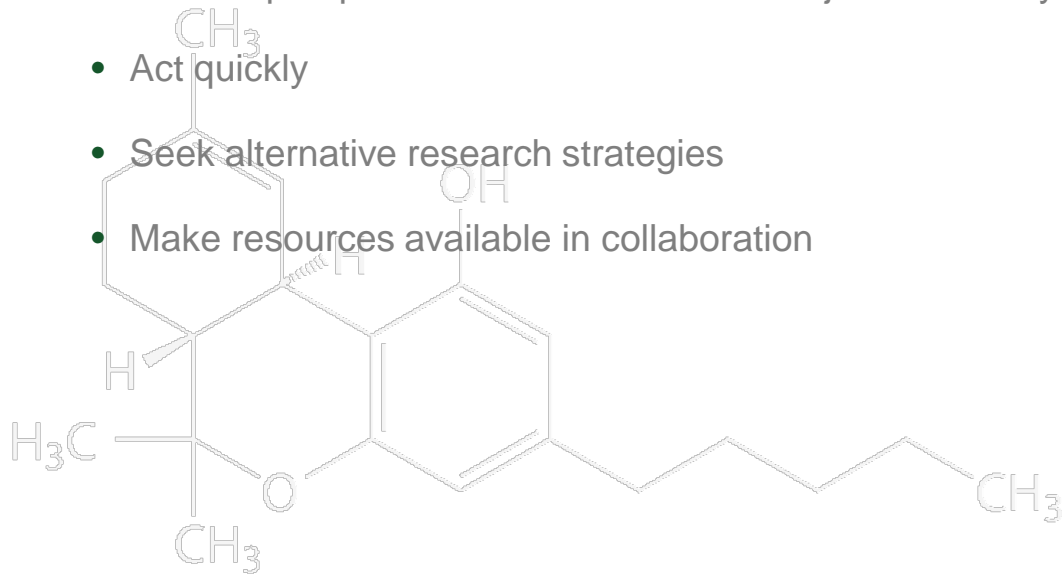
***TEDDY SCOTT, PH.D., J.D.***

***PHARMACANN LLC***

*FEBRUARY 21, 2017*

## Goals

- Participate in science-based research involving marijuana
- Promote the development of objective evidence-based policy for marijuana regulation
- Provide perspective from the medical marijuana industry
- Act quickly
- Seek alternative research strategies
- Make resources available in collaboration



# Personal Background

## Education

- University of Texas Southwestern Medical Center, Ph.D., Molecular Biophysics
- Northwestern University, J.D.

## Professional

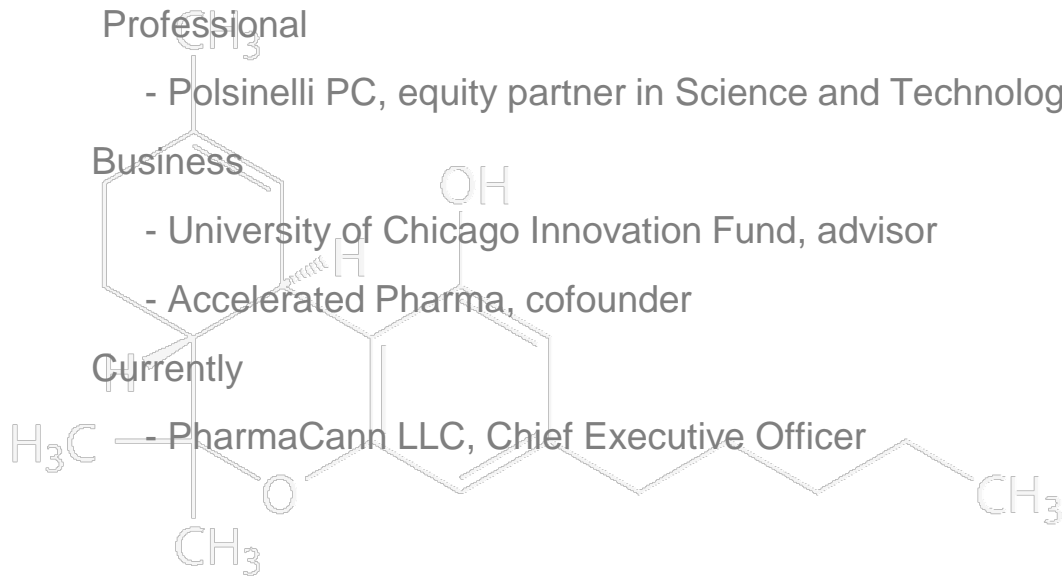
- Polsinelli PC, equity partner in Science and Technology

## Business

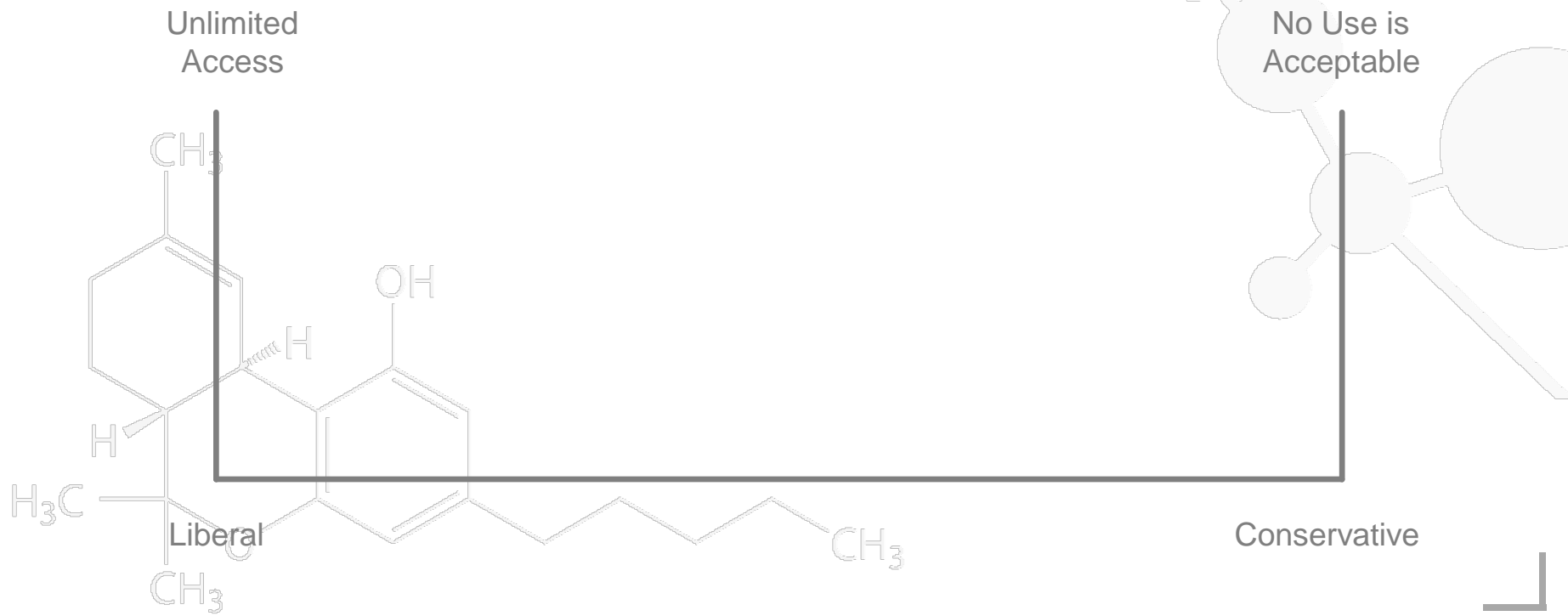
- University of Chicago Innovation Fund, advisor
- Accelerated Pharma, cofounder

## Currently

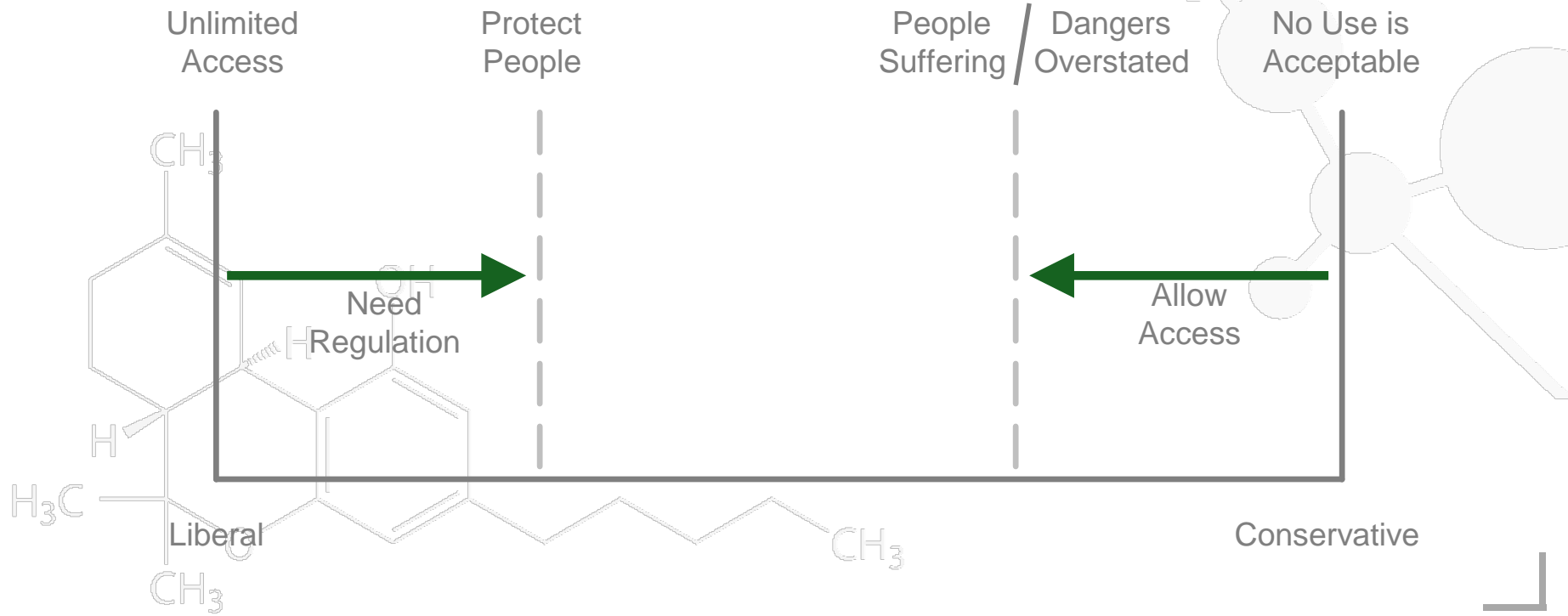
- PharmaCann LLC, Chief Executive Officer



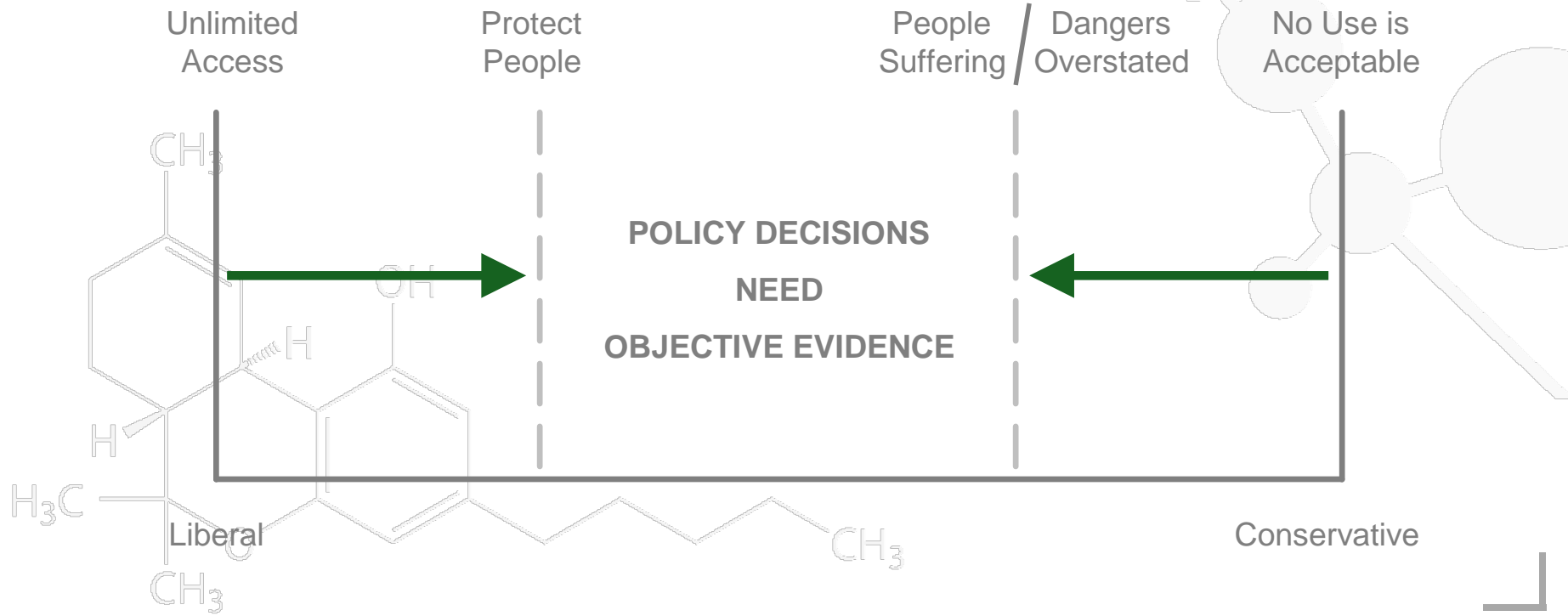
# Marijuana – Spectrum of Beliefs Driving Policy



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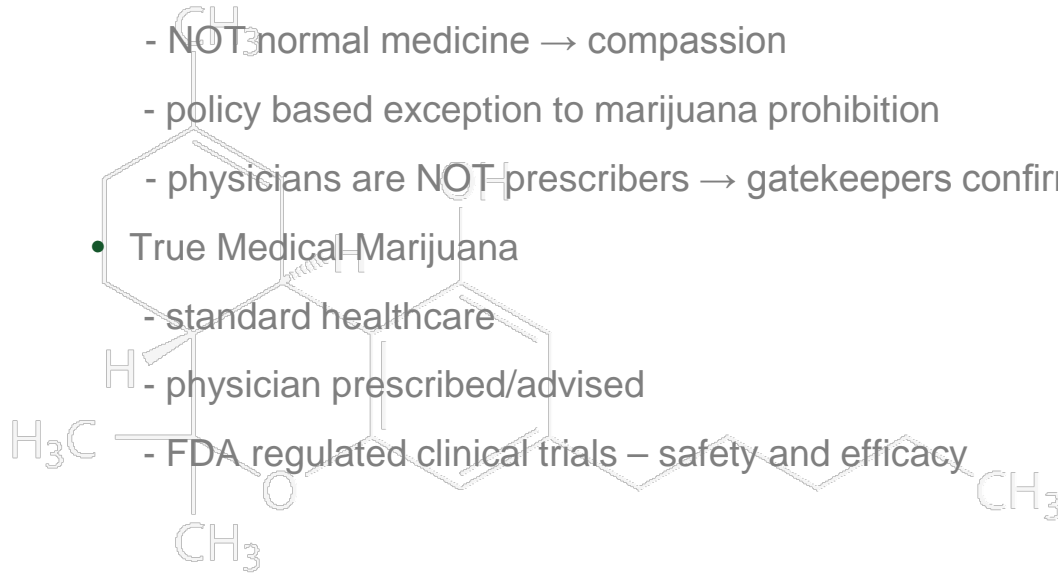


# Marijuana – Spectrum of Beliefs Driving Policy



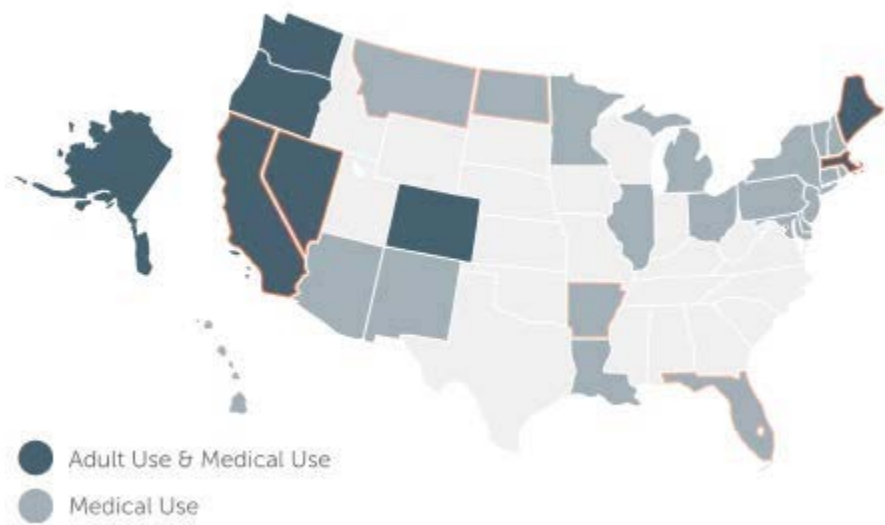
# Different Areas for Policy Decisions

- Recreational Marijuana
  - vice
  - lessons from tobacco and alcohol
- Medicinal Marijuana
  - NOT normal medicine → compassion
  - policy based exception to marijuana prohibition
  - physicians are NOT prescribers → gatekeepers confirming condition
- True Medical Marijuana
  - standard healthcare
  - physician prescribed/advised
  - FDA regulated clinical trials – safety and efficacy

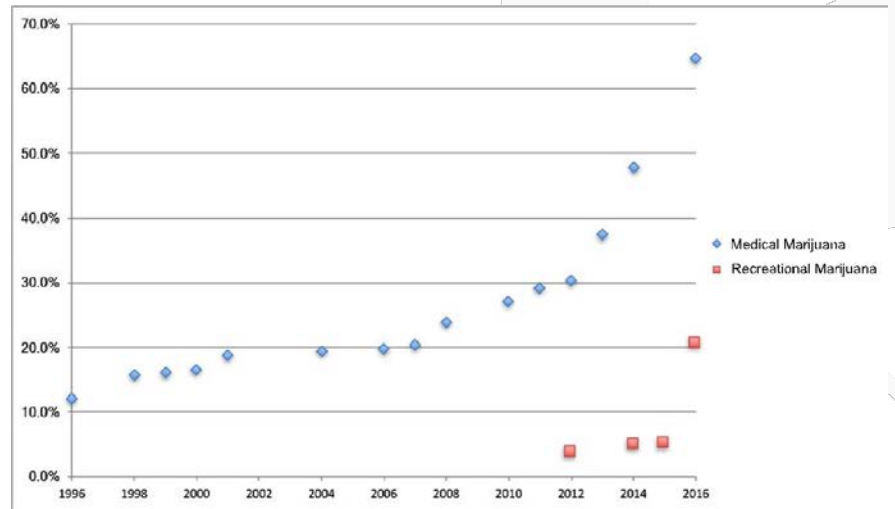


# Status of Marijuana Legalization

## States with Legal Marijuana



## Access to Legalized Marijuana





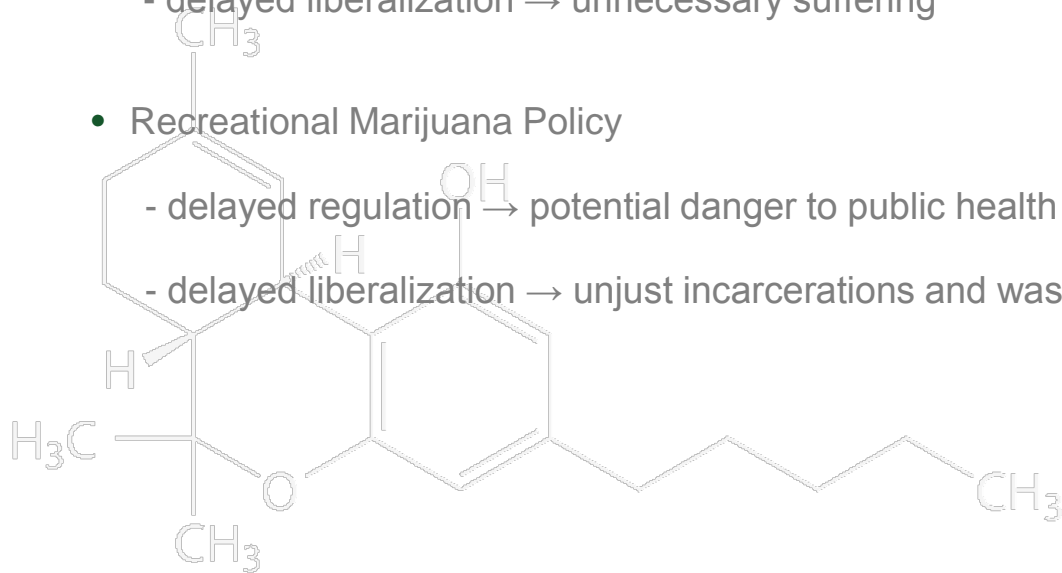
## Failure to Take Action Quickly

- Medicinal Marijuana Policy

- delayed regulation → potential danger to public health
- delayed liberalization → unnecessary suffering

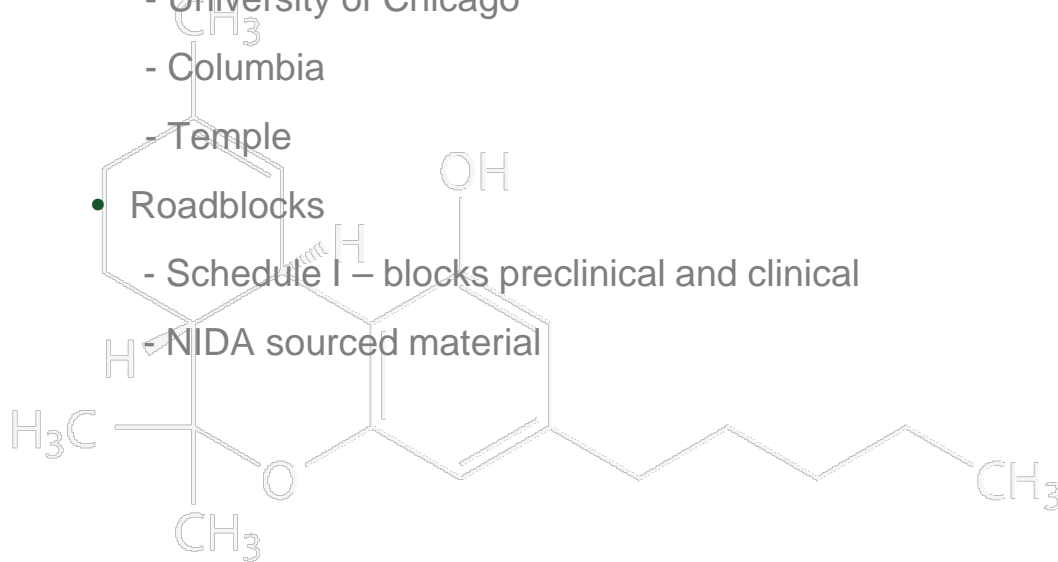
- Recreational Marijuana Policy

- delayed regulation → potential danger to public health
- delayed liberalization → unjust incarcerations and waste of resources for enforcement



# PharmaCann – Conventional Research and Development

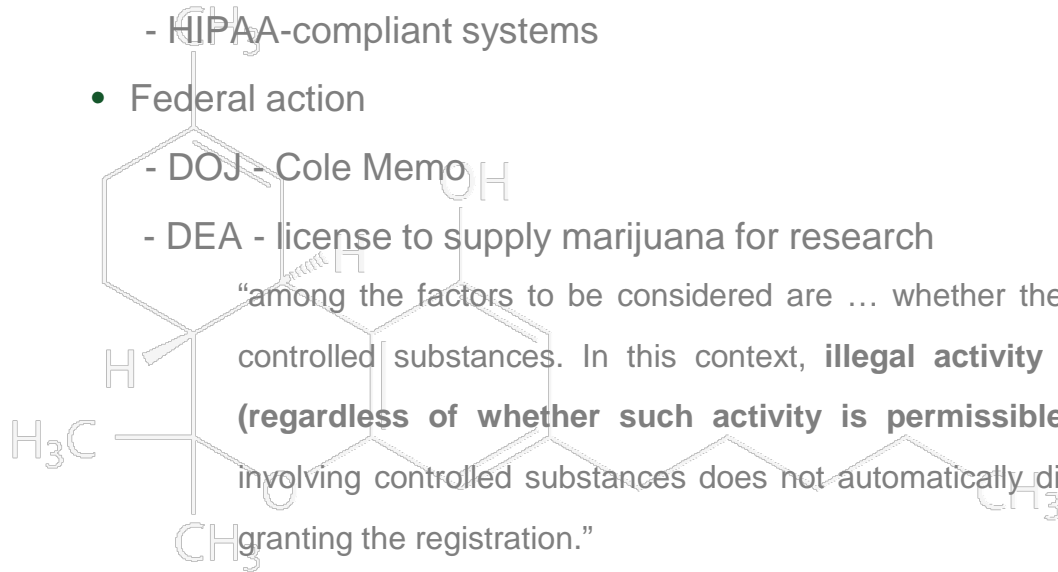
- Potential Collaborators
  - Stanford
  - Northwestern
  - University of Chicago
  - Columbia
  - Temple
- Roadblocks
  - Schedule I – blocks preclinical and clinical
  - NIDA sourced material



# Opportunity for Alternative Research Plans

- Resources of state-licensed medical marijuana providers
  - >1 million medical marijuana patients in US
  - product quality standards – testing for accurate cannabinoid levels
  - seed to sale software for collecting data
  - HIPAA-compliant systems
- Federal action
  - DOJ - Cole Memo
  - DEA - license to supply marijuana for research

“among the factors to be considered are ... whether the applicant has engaged in illegal activity involving controlled substances. In this context, **illegal activity includes any activity in violation of the CSA (regardless of whether such activity is permissible under State law)**... While past illegal conduct involving controlled substances does not automatically disqualify an applicant, it may weigh heavily against granting the registration.”



# PharmaCann Manufacturing Facility - Hamptonburgh, NY



H<sub>3</sub>

CH<sub>3</sub>

# Product Capabilities



# Testing of Products

Potency Test - SOP 801 v2.1

Test Date: 01/20/2017

Contaminant Results - SOPs 401 v1.0, 501 v1.0, 601 v1.0, 701 v1.1

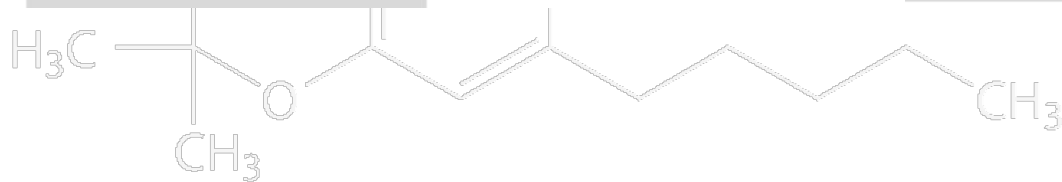
Test Date(s): 01/16/2017-01/18/2017

Cannabinoid	Wt%
CBD	ND
CBG	2.73%
CBD-A	ND
CBN	3.98%
THC	85.45%
CBC	0.81%
THC-A	ND
Total	92.98%

ND = Analyte Not Detected  
Detection Limit = 0.35%

Microbiological Test	Pass/Fail	Illinois Limit
Viable Aerobic Bacteria	Pass	10 <sup>4</sup> CFU/g
Total Yeast and Mold	Pass	10 <sup>3</sup> CFU/g
Total Coliform	Pass	10 <sup>2</sup> CFU/g
Enterobacteriaceae	Pass	10 <sup>2</sup> CFU/g
E. coli	Pass	0 CFU/g
Salmonella	Pass	0 CFU/g

Mycotoxin Test	Pass/Fail	Illinois Limit
Aflatoxin	Pass	20 ppb
Ochratoxin	Pass	20 ppb



# Data Collection Systems - BioTrack

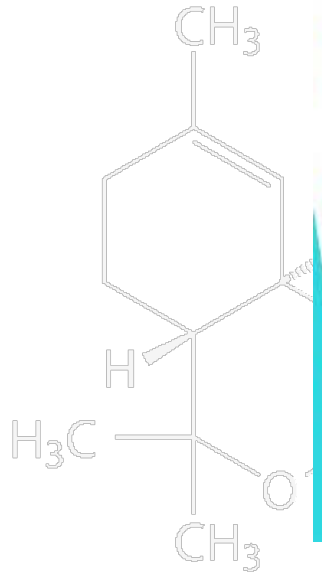
## Patient Profile and Management

- ▶ Manage all of your patients in an easy to use database
- ▶ Associate Patients with Caregivers
- ▶ Save patient documents such as MMJ Card, Dr. Recommendation, or Drivers License
- ▶ Instantly track patient order across multiple dispensary locations
- ▶ Automatically enforce state and patient limits
- ▶ Purchase history, ailments, ICD 9, & patient specific notes
- ▶ Patient check in records average wait time to assist with staffing needs

The screenshot displays the BioTrack software interface. On the left, the 'New Customer' section shows a search bar and a 'Basic Info' tab. The patient's name is 'Johnny Kushit'. Other details include: Last Name: Kushit, First Name: Johnny, Middle: , Phone: 954-213-0494, Birthday: 05 / 14 / 1973, Email: johnny@email.co, Cell: 954-253-3799, Carrier: ATT, MMJ Card: AZL 000 2355 25 Exp: 12 / 12 / 2021, DL #: ALXXXXXXXXXX Exp: 12 / 2099, Referral: Mr. Saed, Member: Standard, Discount: 10%, Since: 4 / 19 / 2014. Below this is a 'History' table with columns for 'Item' and 'Quantity'.

Item	Quantity
Afgan Goa 1	3.000
Afgan Goa 1	5.000
Nitro Green	6.000
Afgan Goa 1	4.560

On the right, the 'Documents' section shows a document viewer for a 'Florida Medical Marijuana Registry ID' card. The card includes a photo of the patient, a signature, and a barcode. A 'WARNING' section is visible at the bottom of the document viewer.



## Takeaways

- Do we want to participate prospectively or retrospectively?
- Opportunity to Take Action Quickly
  - Thousands of current patients available for collecting data
  - Unlimited number of product SKUs with validated specifications
  - “Seed to Sale” systems – track patient data and product information
  - Recommend for DEA to approve “regulated” medical cannabis providers
- Understand differences between recreational, medicinal and true medicine
- Potential to coordinate through additional Federal guidelines – DEA, DOJ and FDA

