



# Psychedelic Medicine: A Journey into the History, Cultural Roots, Science, Therapeutics and Potentials

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INTERNATIONAL RESEARCH  
CONGRESS FOR INTEGRATIVE  
MEDICINE & HEALTH

CLEVELAND, OH

APRIL 12, 2024

10:45 am-12:00 pm



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# Speakers

- **Justin Laube, MD: UCLA Center for East-West Medicine & Consultant**
- **Thais Salles Araujo, MD: UCLA Palliative and Hospice Care**
- **Leslie Mendoza Temple, MD: Endeavor Health, University of Chicago Pritzker School of Medicine**
- **Mikhail Kogan, MD: George Washington University, GW Center for Integrative Medicine**
- **Erika Steinbrenner, MD: Imagine Healthcare, Epiphany Wellness, Symetria Recovery**

# OVERVIEW

- Arriving and nesting psychedelics within integrative medicine (Justin) 10 min
- Historical and cultural context of psychedelic substances (Thais) 10 min
- Broad overview of psychedelics from conventional medicine viewpoint (Leslie) 10 min
- Psilocybin case presentation (Misha) 10 min
- Ketamine case presentation (Erika) 10 min
- Ethics, Safety - 5 min (Leslie)
- Live Questions & Answers - 15-20 min



# Disclosures



## **Leslie Mendoza Temple, MD**

**Scientific Advisory Board Member**

**Ashford International, an independent lab testing and consumer platform for CBD hemp products.**

## **Mikhail Kogan, MD**

**Royalties, Medical Marijuana Book, 2021 and 2023,  
Penguin Random House**



# Part 1: Psychedelics within integrative health; their definitions, ancient history & cultural roots

Justin Laube, MD  
Thais Salles Araujo, MD



National Center for Complementary and Integrative Health

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psychedelics



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<https://www.nccih.nih.gov/news/events/nih-psilocybin-research-speaker-series---june-10-2021-lecture>

Description 12:30–1:00 p.m. ET — **Psychedelics** in Headache Medicine: Historical...of Medicine 1:40–2:15 p.m. ET — **Psychedelic** Medicine and Ethics Paul S. Appelbaum...

[NIH Psilocybin Research Speaker Series \(May 2021\) | NCCIH](#)

<https://www.nccih.nih.gov/news/events/nih-psilocybin-research-speaker-series---may-2021-lecture>

Patient's Perspectives on the Uses of **Psychedelics** in Medicine Erica Rex, M.A., Journalist...

[NIH Psilocybin Research Speaker Series - June 7, 2021 Lecture | NCCIH](#)

<https://www.nccih.nih.gov/news/events/nih-psilocybin-research-speaker-series---june-7-2021-lecture>

...and Anti-Inflammatory Effects of **Psychedelics** in Rodent Preclinical Models Charles...

<https://www.nccih.nih.gov/about/offices/od/director/past-messages/including-spirituality-into-a-fuller-picture-of-research-on-whole-person-health>

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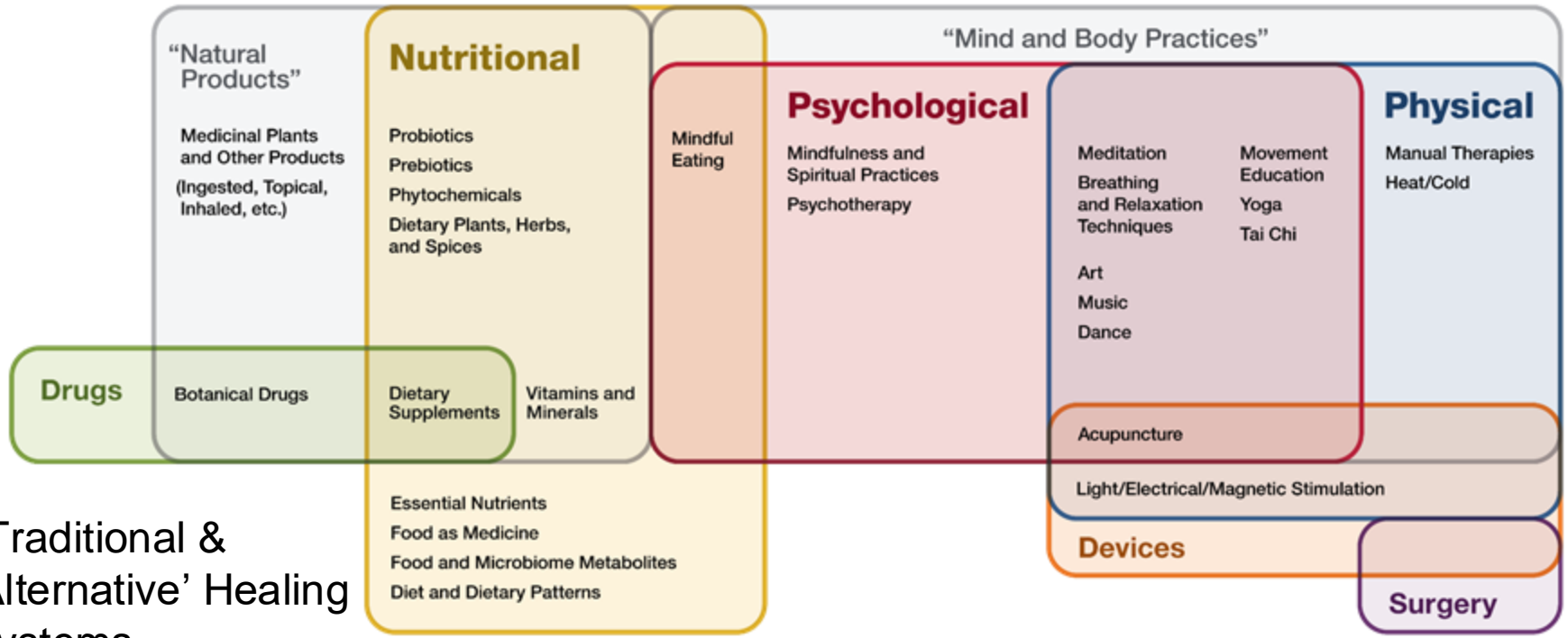
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# Why? Federal legal status Fear Silo

...

# Where do psychedelics fit?



\*Traditional & ‘Alternative’ Healing Systems

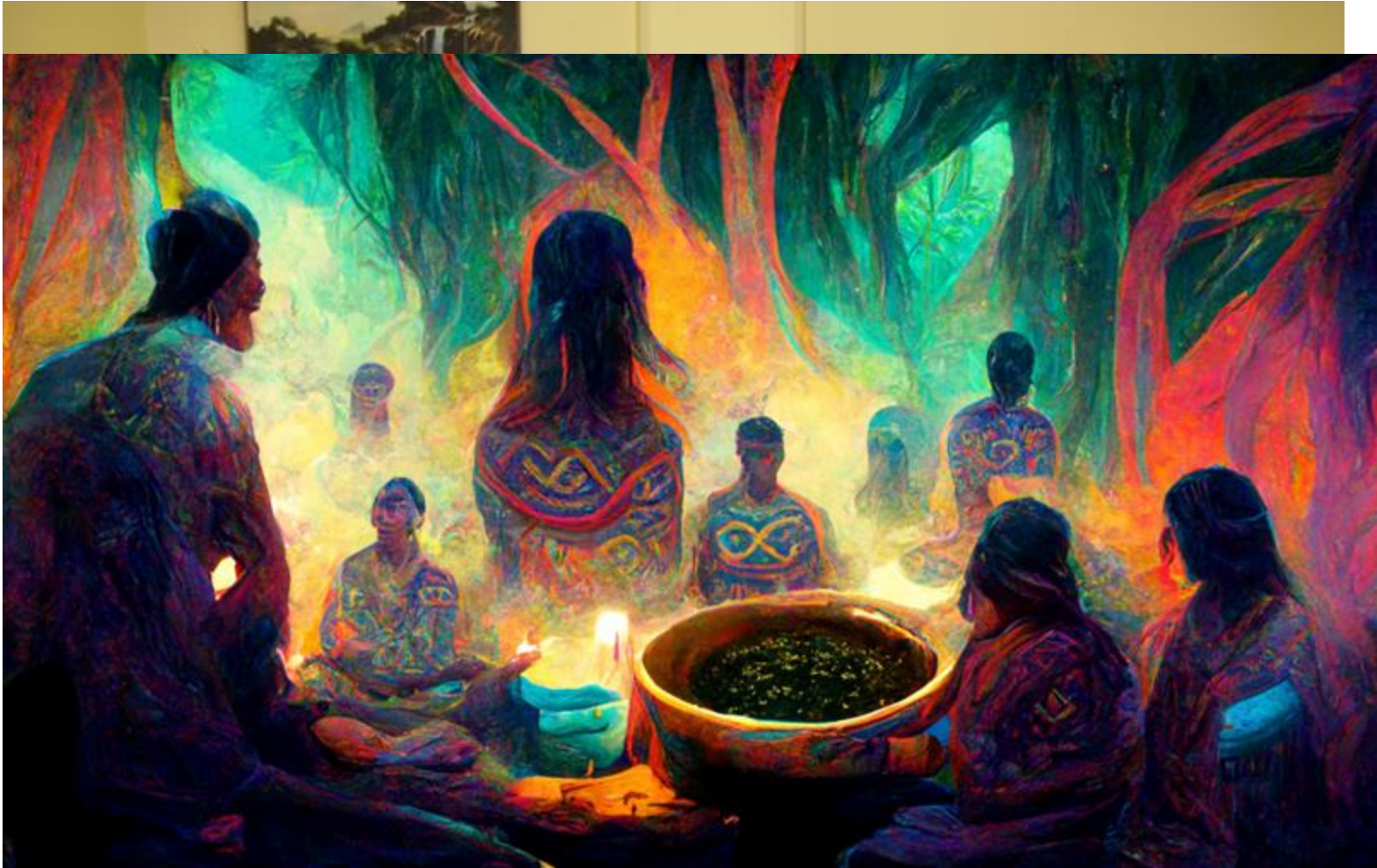


# Psychedelic Assisted Therapy - Medical Model

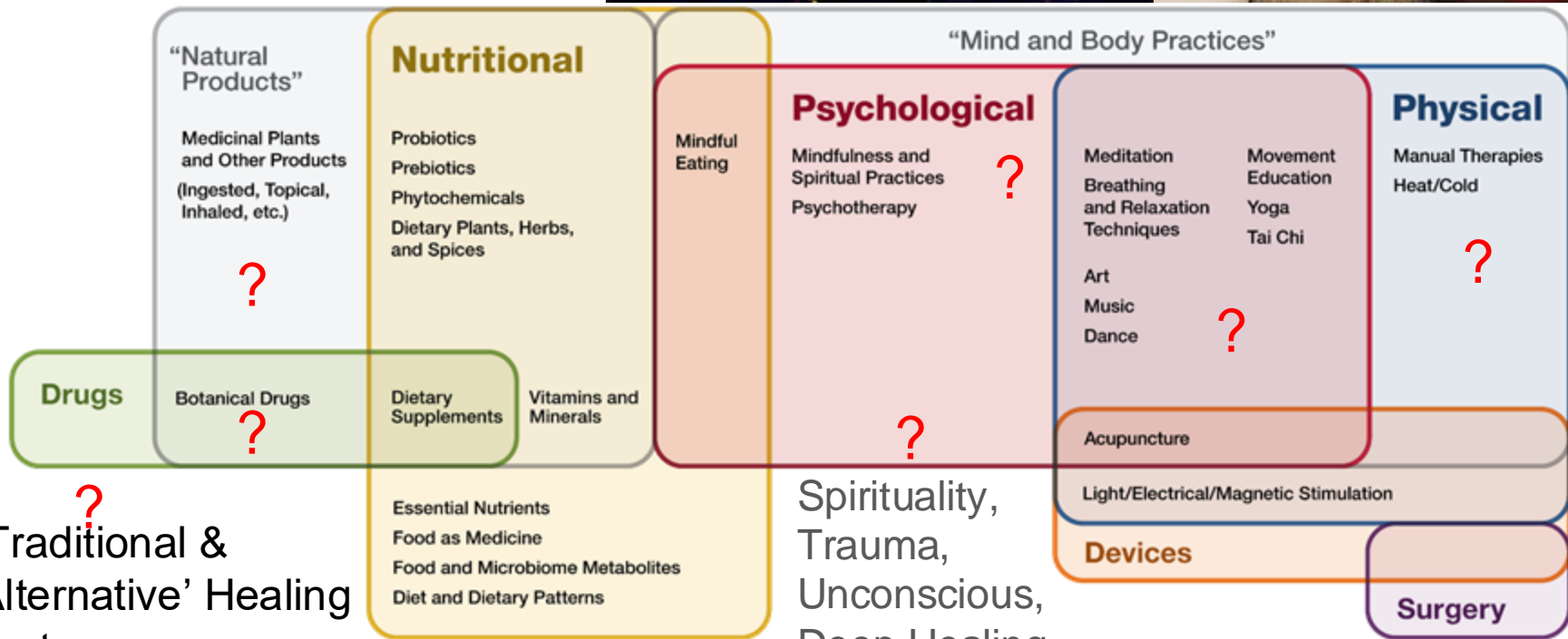
This is an example of the “Treatment Phase”

Set & Setting

Prep & Integration



# Where do psychedelics fit?



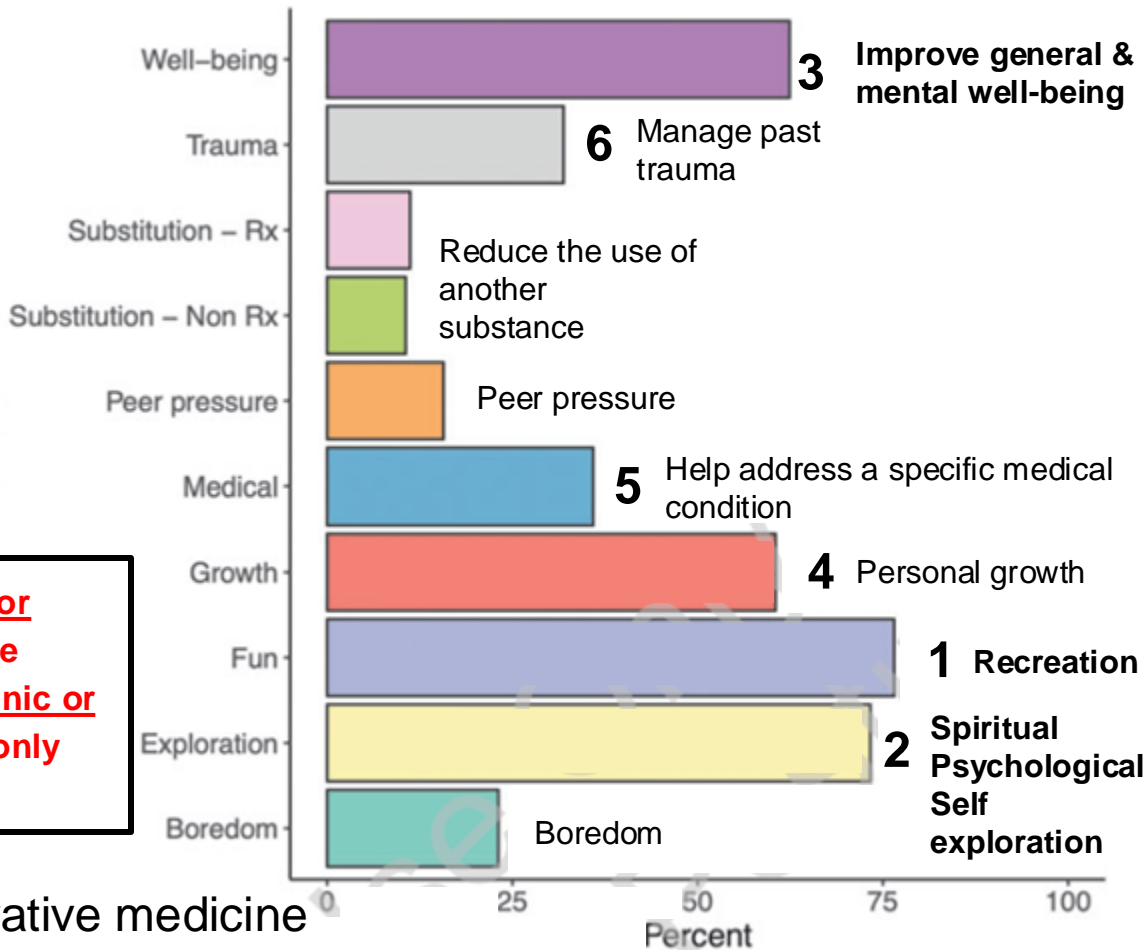
\*Traditional & 'Alternative' Healing Systems

**Fig. 1.** Self-reported motivations for using psychedelic drugs among Canadian Psychedelic Survey respondents ( $n = 2036$ ).

**Mean age = 38.4 years; 56% female**

**\*\*50% reported their favored or preferred source, if were to be available, would be from a clinic or health care professional yet only 5% accessed them this way.**

Motivation



Where might our integrative medicine patients fit in all of this?

# Remembering our Roots as an IM field - “the Wild West” of Healing and Commitment to our patients

1992

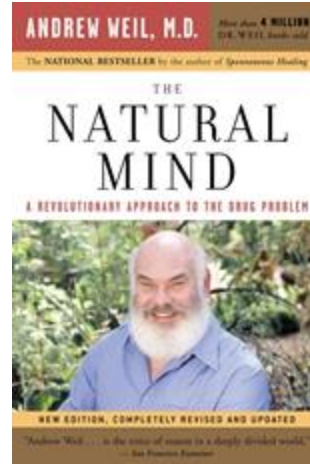
1978

Dr. Norm Shealy  
Current Age 91



Dr. Gladys  
McGarey  
Age 103!

“We realized we had to bring the ‘spirit’ of healing back into medicine”



1972 - LSD  
Dr. Andrew Weil



1998



1999



**“Integrative & Holistic medicine and Psychedelic Medicine come from the same shared roots, share principles core, speak to the same demographic and I think this is a marriage that needs to be supported and encouraged.”**

**-Scott Shannon, MD**



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# Psychedelics definition

Psychedelics are psychoactive substances able to induce ***altered states of consciousness*** marked by significant shifts in perception, mood, and thought patterns. Commonly reported experience include an increased sense of **interconnectedness**, **transcendence** of time and space and a felt sense of **sacredness**.



# Psychedelics definition

These substances have been used for millennia for **ceremonial and therapeutic** purposes, and over the past century, have gained **scientific medical interest**.

Nichols DE. Psychedelics. *Pharmacol Rev.* 2016 Apr;68(2):264-355. doi: 10.1124/pr.115.011478. Erratum in: *Pharmacol Rev.* 2016 Apr;68(2):356. PMID: 26841800; PMCID: PMC4813425.





# Psychedelics definition

Psilocybin  
mushrooms



Ayahuasca  
(DMT)



Peyote  
cactus  
(Mescaline)



## Classic

- Primarily serotonin receptor

## Non classic

- Other mechanisms

LSD



Ibogaine



MDMA



Ketamine



# Evolving terminology



## Hallucinogens

- 1600's
- Latin root "Mind journeying"



## Psychedelics

- 1956
- Greek origin "Mind manifesting"



## Entheogens

- 1979
- Greek "entheos", god or divine – "Assessing the divine within"

# Ecopsychology: Psychedelics and human evolution



Worldwide  
distribution



Evolution selection

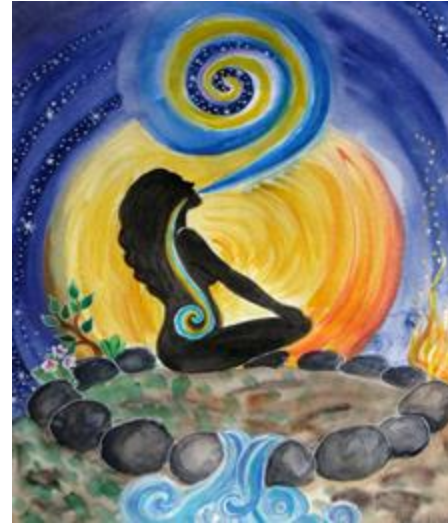
# Shamanism - religion and medicine roots



Maria Sabina -  
Curandera



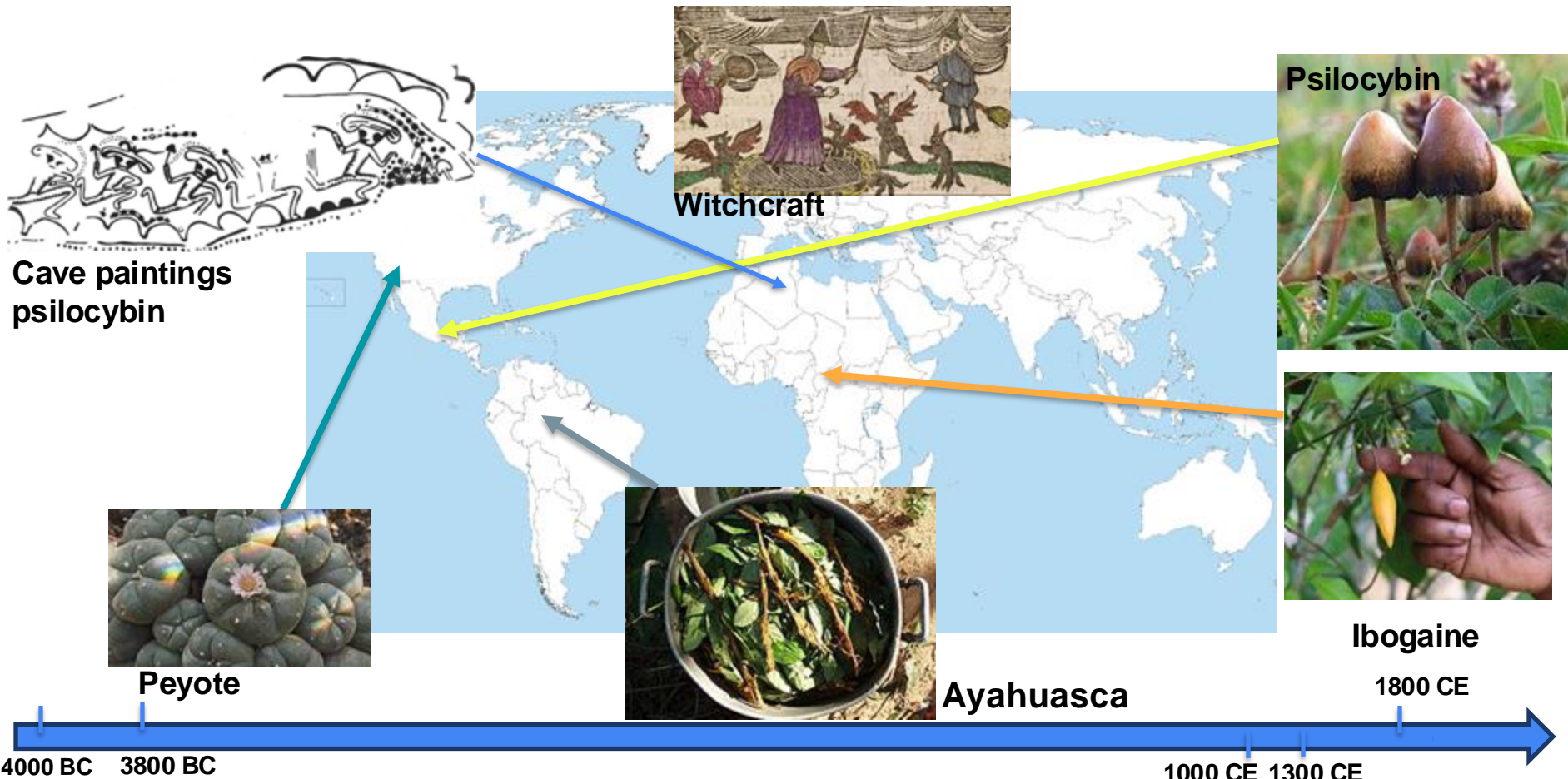
Pajé - “wizard” in  
tupi-guarani



Breathwork, chanting, dancing, drumming



# 6000 + years of psychedelics history around the world



# Psychedelics – Newer biomedical history



1912



1938



1971



2000'



1898



1957



1962



2023

Kyzar EJ, Nichols CD, Gainetdinov RR, Nichols DE, Kalueff AV. [Psychedelic Drugs in Biomedicine](#). Trends Pharmacol Sci. 2017 Nov;38(11):992-1005.

# Part 2: Broad overview of psychedelics from conventional medicine viewpoint

## Psilocybin & Ketamine Case Presentations

Leslie Mendoza Temple, MD

Mikhail Kogan, MD

Erika Steinbrenner, MD



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# Broad overview of many, but not all psychedelics

- Mescaline from Peyote, San Pedro and Peruvian Torch cacti
- DMT and Ayahuasca
- 5-Methoxy-DMT or “The Toad”
- Ibogaine
- LSD
- MDMA
- Kratom\*
- Psilocybin (Mikhail Kogan)
- Ketamine (Erika Steinbrenner)

\*not a psychedelic substance



# Mescaline: Peyote, San Pedro & Peruvian Torch Cacti

**MOA:** Serotonin receptors

**Route:** Oral- fresh or dried cactus; ingest powder or boil as a slurry to drink

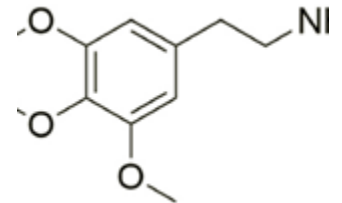
**Onset:** 30-60 min for pure mescaline; 2-4 hours for cactus ingestion

**Duration:** Long duration-12-14 hours

**Effects:** Euphoria, increased tactile sensation; Reduced anxiety, depression, PTSD, and alcoholism; Increased spiritual openness; Used for medicinal purposes as well.

**Side effects:** nausea, vomiting, diarrhea

**Considerations:** Peyote is only legal for use in the Native American Church for religious ceremonial purposes, revered like the Eucharist is for Christians. Overharvested; Peyote can take 15-20 years to mature.



# DMT (DiMethylTryptamine) & Ayahuasca

Ayahuasca is a combination of two plants from the Amazon basin- a leaf containing DMT and a vine containing an MAO inhibitor.

**MOA:** Serotonin and Sigma-1 receptors; DMT occurs naturally in animals & humans. MAOI component prevents DMT deactivation in gut.

**Route:** Oral drink (Ayahuasca); smoked leaf (DMT)

**Onset:** Oral 30-60 min; peak at 2-3 hours

**Duration:** 4-6+ hours

**Effects:** Visual patterns, contact with 'beings', euphoria, heightened perception; provide access to normally invisible and immaterial worlds

**Side effects:** "The purge": vomiting, diarrhea; increase BP, HR

**Considerations:** Ayahuasca is used ceremonially; Has most potential drug interactions due to MAO activity.



A member of Brazil's Huni Kui tribe prepares ayahuasca to use in a healing ritual. The psychoactive plant preparation is indigenous to the peoples of the Amazon basin. PHOTOGRAPH BY LUNAE PARRACHO, REUTERS



# 5-MethOxy-DMT: “The Toad” or 5-MeO-DMT

Parotid gland secretions of the Sonoran Desert Toad and the *Anadenanthera* bean of the Amazonian basin

**MOA:** Serotonin receptor activation

**Route:** Smoked, vaporized or nasal insufflation

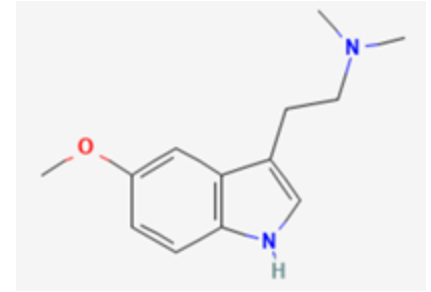
**Onset:** Rapid onset & peaks 2-6 minutes (smoked)

**Duration:** 30-60 min

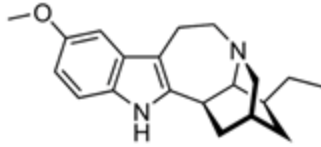
**Effects:** Ego-dissolving, intense mystical experience; potential long lasting positive effects on life satisfaction, depression and anxiety

**Side effects:** Flashbacks, panic attacks

**Considerations:** 5-Methoxy-DMT is about 10 times as potent as DMT. Environmental impact on toad population is significant.



# Ibogaine



Tryptamine derived from the African shrub, *Tabernanthe iboga*; origin: Bwiti spiritual tradition in Gabon, Africa.

**MOA:** Serotonin, opioid, NMDA receptors

**Route:** Oral

**Onset:** Slow: 1-3 hours

**Duration:** 24 hours, with prolonged 'afterglow' for weeks

**Effects:** Potential anti-addiction properties for alcohol, cocaine, methamphetamines, opioids, nicotine; profound spiritual experiences/revisit repressed memories

**Side effects:** Cardio: prolonged QT interval; Neurologic/GI: ataxia; nausea, vomiting

**Considerations:** Multiple Ibogaine-related deaths have occurred in non-medical settings likely pre-existing cardiac.

Supply is threatened.



# LSD: LySergic Acid Diethylamide or “Acid”

**MOA:** Serotonin activity, maybe some dopamine influence

**Dosing:** Almost always orally as LSD-saturated blotter paper

**Onset:** 15-45 minutes; **Peak:** 3-6 hours

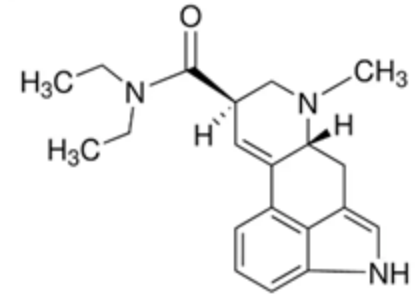
**Duration:** 12 or more hours

**Effects:** sensory enhancement (taste/smell), visuals, profound life-changing spiritual experiences or personal revelations; connectedness to universe

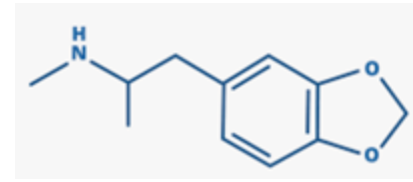
**Side effects:** acute anxiety

**Considerations:** long duration makes application of LSD challenging to apply in clinic setting

**Notes:** No known lethal dose



# MDMA (Ecstasy, Molly): 3,4-Methylenedioxymethamphetamine



Psychedelic and stimulant effect. FDA just approved a new drug application for PTSD in association with specific therapy.

**MOA:** Increases serotonin, norepinephrine & dopamine by increasing release and decreasing reuptake.

**Onset:** Oral- 45 minutes onset; peaks 15-30 min later.

**Duration:** 3 hours acutely; can have effects for days afterwards.

**Effects:** Energizing effect, distortions in time and perception, enhanced enjoyment from sensory experiences. Enhances pro-social skills; can increase self-awareness and empathy.

**Side effects:** high blood pressure, jaw-clenching, faintness, panic, hyperthermia, water overload, high-risk sexual behavior, reduced driving safety/motion perception

**Considerations:** Contamination of MDMA may be found with stimulants, bath salts, caffeine, ephedrine, cocaine, heroine, methamphetamine, and others.



# Kratom (not psychedelic)

Southeast Asia (Thailand); A.k.a. thang, kakuam, thom, ketum, and biak.

**MOA:** multiple opioid (mu, delta, K) receptors affected;

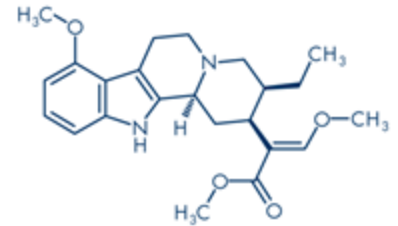
**Effects:** Potential help with opioid dependence, pain management; Low dose: Stimulating. High dose: Sedating. Perceived as a cheaper, more “natural” alternative to opioids.

**Side effects:** Addiction potential; contamination concerns;

**Considerations:** Overdose looks like an opioid toxidrome and is treated similarly.



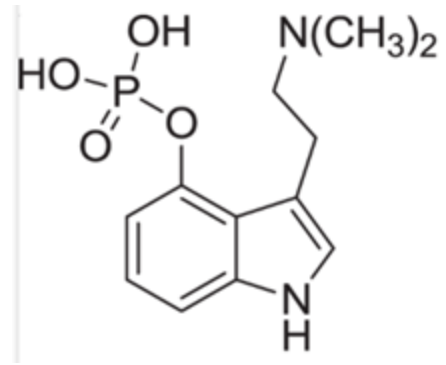
On DEA's “Drug of Concern” List



1. Eastlack SC, et al. Kratom-Pharmacology, Clinical Implications, and Outlook: A Comprehensive Review. *Pain Ther.* 2020 Jun;9(1):55-69.
2. Gorelick DA. Kratom: Substance of Abuse or Therapeutic Plant? *Psychiatr Clin North Am.* 2022 Sep;45(3):415-430.

# Psilocybin (Mushrooms)

- **MOA:** Serotonin receptor agonist, particularly targeting 5-HT<sub>2A</sub> receptors
- **Route:** Typically oral, consumed in dried mushroom form or as an extract (note most trials to date use injection of pure extract)
- **Onset:** 20-40 minutes after ingestion
- **Duration:** Effects last 4-6 hours, with possible after effects lasting up to 24 hours
- **Effects:** Euphoria, altered perception of time and space, visual and auditory hallucinations, introspection, spiritual experiences
- **Side Effects:** Nausea, anxiety, paranoia, increased heart rate, pupil dilation, derealization or depersonalization
- **Contraindications:** History of psychosis or psychotic disorders, severe cardiovascular disease, pregnancy
- **Combining with SSRIs/SNRIs:** May diminish effects due to serotonin receptor competition; potential for increased risk of serotonin syndrome, use caution





# Case: Psilocybin

44 year old woman with fibromyalgia (headache, neck, back), anxiety, insomnia, severe childhood trauma due to abuse and abandonment.

Anxiety so severe unable to function at least few days/month.

No response to therapy, 2 SSRIs landed her in the ER with severe side effects including dizziness, nausea, and severe restlessness.

Stellate ganglion block failed for anxiety.

Integrative approach: acupuncture, B complex, fish oil, CBD - helped minimally

Patient decided to participate in a small group psilocybin retreat with her husband.

1 weekend 1:1 patient:trained therapist ratio. 1 day prep before experience including yoga, meditation, group/individual expectation settings, and half day processing after 6 hour psilocybin experience. Individual 1 hour therapy session 1 week after the retreat. Total individual/group therapy time about 12 hours.



## Reflection written for the retreat sponsor (1 week after the retreat)



“This weekend was intense! Full of gifts, teachings, and insights. I am still deeply processing, and I am sure more will unfold from here. I can already say that I feel incredible gratitude and healing. Words really do fail, but I'd approximate the experience to all three levels of my Reiki trainings/attunements all boosted at once?”

I have some guesses about why a single experience can be so long-lasting. I have strong memories that I'm sure I'll come back to again and again. I felt intensely loved, supported, grounded, guided -- a true sense that there are answers and signs and signals all around. Because the memories feel emotional and embodied, I believe they will last.”



[JAMA Psychiatry](#). 2021 May; 78(5): 1–9.

PMCID: PMC7643046

Published online 2020 Nov 4. doi: [10.1001/jamapsychiatry.2020.3285](https://doi.org/10.1001/jamapsychiatry.2020.3285)

PMID: [33146667](https://pubmed.ncbi.nlm.nih.gov/33146667/)

## Effects of Psilocybin-Assisted Therapy on Major Depressive Disorder

A Randomized Clinical Trial

Alarcon

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The effect sizes were large at week 5 (Cohen  $d = 2.5$ ; 95% CI, 1.4-3.5;  $P < .001$ ) and week 8 (Cohen  $d = 2.6$ ; 95% CI, 1.5-3.7;  $P < .001$ ). The QIDS-SR documented a rapid decrease in mean (SD) depression score from baseline to day 1 after session 1 (16.7 [3.5] vs 6.3 [4.4]; Cohen  $d = 2.6$ ; 95% CI, 1.8-3.5;  $P < .001$ ), which remained statistically significantly reduced through the week 4 follow-up (6.0 [5.7]; Cohen  $d = 2.3$ ; 95% CI, 1.5-3.0;  $P < .001$ ). In the overall sample, 17 participants (71%) at week 1 and 17 (71%) at week 4 had a clinically significant response to the intervention ( $\geq 50\%$  reduction in GRID-HAMD score), and 14 participants (58%) at week 1 and 13 participants (54%) at week 4 were in remission ( $\leq 7$  GRID-HAMD score).

ORIGINAL ARTICLE  
Imatinib or Ibrutinib in  
Advanced or Refractory Chronic  
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ORIGINAL  
Trial of Bere  
(B-VEC) for  
Epidermolysis

ORIGINAL ARTICLE

## Trial of Psilocybin versus Escitalopram for Depression

Robin Carhart-Harris, Ph.D., Bruna Giribaldi, B.Sc., Rosalind Watts, D.Clin.Psy., Michelle Baker-Jones, B.A., Ashleigh Murphy-Beiner, M.Sc., Roberta Murphy, M.D., Jonny Martell, M.D., Allan Brimming, M.Sc., David Erritzoe, M.D., and David J. Nutt, M.D.

(2 doses of 25mg 3 weeks apart plus daily placebo) and 29 to the escitalopram group. The mean scores on the QIDS-SR-16 at baseline were 14.5 in the psilocybin group and 16.4 in the escitalopram group. The mean ( $\pm$ SE) changes in the scores from baseline to week 6 were  $-8.0\pm 1.0$  points in the psilocybin group and  $-6.0\pm 1.0$  in the escitalopram group, for a between-group difference of 2.0 points (95% confidence interval [CI],  $-5.0$  to  $0.9$ ) ( $P=0.17$ ). A QIDS-SR-16 response occurred in 70% of the patients in the psilocybin group and in 48% of those in the escitalopram group, for a between-group difference of 22 percentage points (95% CI,  $-3$  to  $48$ ); QIDS-SR-16 remission occurred in 57% and 28%, respectively, for a between-group difference of 28 percentage points (95% CI,  $2$  to  $54$ ). Other secondary outcomes generally favored psilocybin over escitalopram, but the analyses were not corrected for multiple comparisons. The incidence of adverse events was similar in the trial groups.

## **Psilocybin produces substantial and sustained decreases in depression and anxiety in patients with life-threatening cancer: A randomized double-blind trial**

**Roland R Griffiths<sup>1,2</sup>, Matthew W Johnson<sup>1</sup>, Michael A Carducci<sup>3</sup>,  
Annie Umbricht<sup>1</sup>, William A Richards<sup>1</sup>, Brian D Richards<sup>1</sup>,  
Mary P Cosimano<sup>1</sup> and Margaret A Klinedinst<sup>1</sup>**



*Journal of Psychopharmacology*  
2016, Vol. 30(12) 1181-1197  
© The Author(s) 2016



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DOI: 10.1177/0269881116675513  
[jop.sagepub.com](http://jop.sagepub.com)



“Participants, staff, and community observers rated participant moods, attitudes, and behaviors throughout the study. High-dose psilocybin produced large decreases in clinician- and self-rated measures of depressed mood and anxiety, along with increases in quality of life, life meaning, and optimism, and decreases in death anxiety. At 6-month follow-up, these changes were sustained, with about 80% of participants continuing to show clinically significant decreases in depressed mood and anxiety. Participants attributed improvements in attitudes about life/self, mood, relationships, and spirituality to the high-dose experience, with >80% endorsing moderately or greater increased well-being/life satisfaction.”

# What about psilocybin microdosing?

SCIENTIFIC  
REPORTS  
nature research

Sci Rep. 2021; 11: 22479.

PMCID: PMC8602275

Pub

5334

The present study describes microdosing practices, motivations and mental health among a sample of self-selected *microdosers* ( $n = 4050$ ) and non-microdosers ( $n = 4653$ ) via a mobile application. Psilocybin was the most commonly used microdose substances in our sample (85%) and we identified diverse microdose practices with regard to dosage, frequency, and the practice of *stacking* which involves combining psilocybin with non-psychedelic substances such as Lion's Mane mushrooms, chocolate, and niacin. Microdosers were generally similar to non-microdosing controls with regard to demographics, but were more likely to report a history of mental health concerns. Among individuals reporting mental health concerns, microdosers exhibited lower levels of depression, anxiety, and stress across gender. Health and wellness-related motives were the most prominent motives across microdosers in general, and were more prominent among females and among individuals who reported mental health concerns. Our results indicate health and wellness motives and perceived mental health benefits among microdosers, and highlight the need for further research into the mental health consequences of microdosing including studies with rigorous longitudinal designs.

## Back to our case



Pt started taking 250 mg of dried mushroom once every 3 days in combination with Niacin and Lion's Mane mushroom in addition to her ongoing integrative care.

Weekly virtual 30 min therapy sessions

8 weeks follow up - anxiety mostly resolved as insomnia. No lost working days, feels more at peace and much more hopeful going forward.

Fibromyalgia with some improvement; Pain around periods still severe, Headache was slightly better.

Concerns with microdosing or frequent use of Psilocybin, LSD, and others?



Open access



Review article

First published online January 12, 2024

## Microdosing psychedelics and the risk of cardiac fibrosis and valvulopathy: Comparison to known cardiotoxins

[Antonin Rouaud](#), [Abigail E. Calder](#), and [Gregor Hasler](#)   [View all authors and affiliations](#)

[Volume 38, Issue 3](#) | <https://doi.org/10.1177/02698811231225609>

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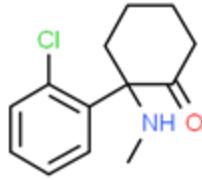
Metrics &amp;

### Abstract

Though microdosing psychedelics has become increasingly popular, its long-term effects on cardiac health remain unknown. Microdosing most commonly involves ingesting sub-threshold doses of lysergic acid diethylamide (LSD), psilocybin, or other psychedelic drugs 2–4 times a week for at least several weeks, but potentially months or years. Concerningly, both LSD and psilocybin share structural similarities with medications which raise the risk of cardiac fibrosis and valvulopathy when taken regularly, including methysergide, pergolide, and fenfluramine. 3,4-Methylenedioxymethamphetamine, which is also reportedly used for microdosing, is likewise associated with heart valve damage when taken chronically. In this review, we evaluate the evidence that microdosing LSD, psilocybin, and other psychedelics for several months or more could raise the risk of cardiac fibrosis. We discuss the relationship between drug-induced cardiac fibrosis and the 5-HT<sub>2B</sub> receptor, and we make recommendations for evaluating the safety of microdosing psychedelics in future studies.



# Ketamine



**MOA:** NMDA-receptor antagonist

**Route:** IV, IN, IM, SL, oral

**Onset/Duration:** variable depending on route

**Effects:** deep sense of relaxation, geometric patterns, dilation of time, dissociation, “birds’ eye” view of one’s life

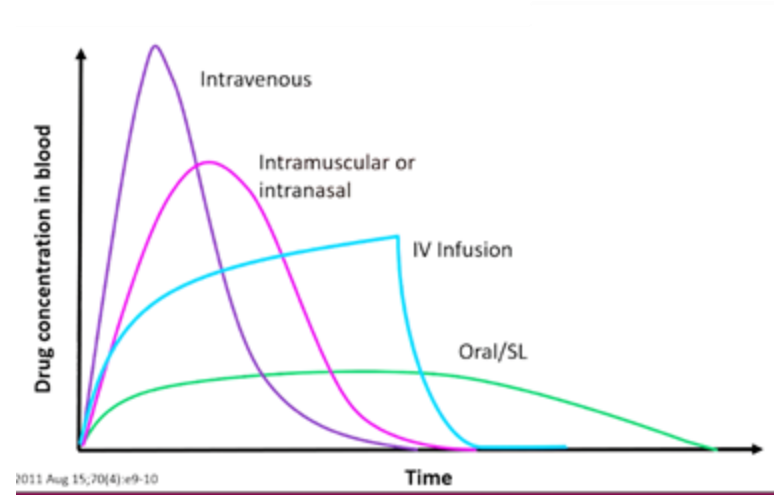
**Side effects:**

Acute: Mild and transient ↑ in BP/HR, Nausea, Vertigo

Chronic: LUTS, liver toxicity

**Contraindications:** Active mania/psychosis, acute alcohol intoxication, uncontrolled HTN

**Medical clearance:** Hx aortic dissection, ICH, aneurysms, arrhythmia, cystitis, pregnancy



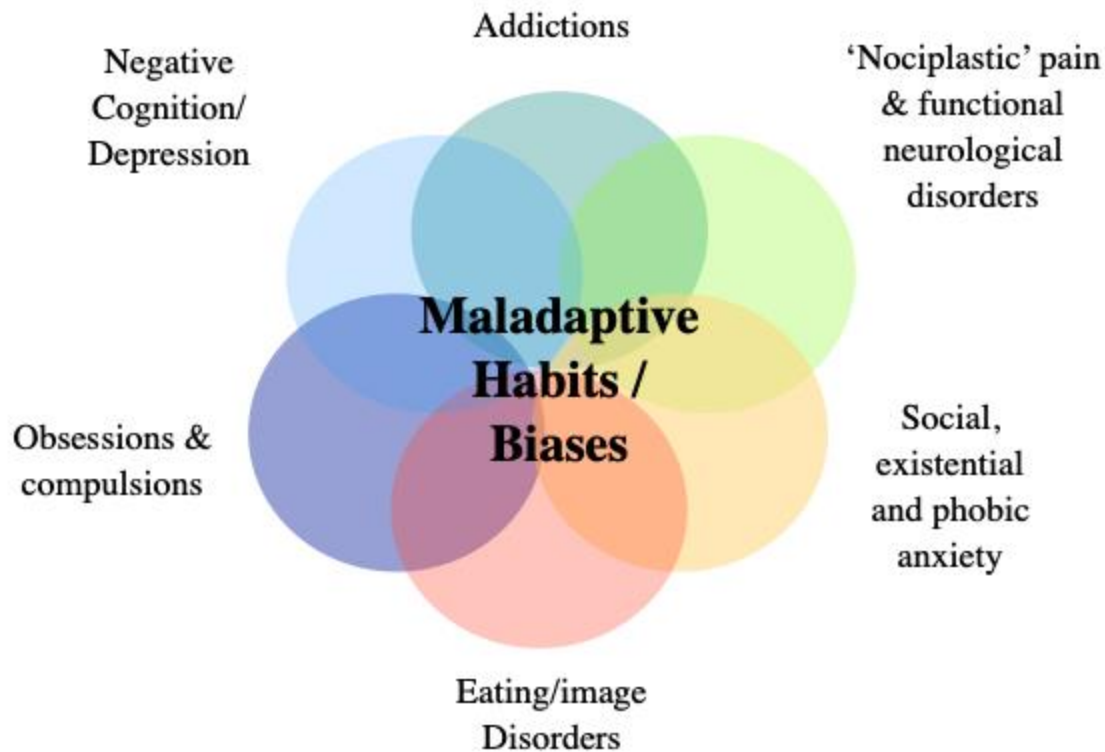


# Ketamine: NMDA-antagonism

## SIMILARITIES

- Disruption of Default Mode Network
- Consciousness Expansion
- Neuroplasticity → Catalyst of Change
- Set, Setting, Skillset, Support all influence outcome

# Common Factor in Mental Illness?





# Ketamine: Legality, Access

- Schedule III Controlled Substance (legal)
- Doses for mental health lower than for anesthesia
- **ONLY** intranasal form (Spravato) FDA-approved for mental health:
  1. Treatment-Resistant Depression
  2. Acute SI
- Still frequently given from a purely biological/medication standpoint



# Ketamine vs Spravato

## Ketamine for the treatment of major depression: a systematic review and meta-analysis

Stevan Nikolin,<sup>a,b,\*</sup> Anthony Rodgers,<sup>d</sup> Andreas Schwaab,<sup>c</sup> Anees Bahji,<sup>e,f</sup> Carlos Zarate, Jr.,<sup>g</sup> Gustavo Vazquez,<sup>g</sup> and Colleen Loo<sup>a,b,d</sup>

- “Our findings suggested that effect sizes for depression severity, as well as response and remission rates, were numerically greater for racemic ketamine than esketamine.”
- Differences were evident in initial effects, ongoing treatment, and lasting effects after the final dose.



# Ketamine for Depression

- Response rate ~55%\*
- Antidepressant **effects are rapid but transitory**
- In most patients who respond well to a single dose of ketamine, the benefits disappear within two weeks
- Study found maintenance ketamine treatment to be effective up to 5 years\*\*
- Tachyphylaxis, cognitive impairment, addiction, and serious renal and urinary problems seem uncommon.

\*Ketamine vs ECT for Nonpsychotic Treatment-Resistant Major Depression." Anand A, et al. NEJM (2023).

\*\*\*Maintenance ketamine treatment for depression: a systematic review of efficacy, safety, and tolerability." Smith-Apeldoorn, S. Y., Veraart, J. KE., Spijker, J., Kamphuis, J., & Schoevers, R. A. *The Lancet Psychiatry*,(2022).



# Ketamine for SI

## Ketamine for suicidality: An umbrella review

Ahmad Shamabadi<sup>1,2</sup> | Ali Ahmadzade<sup>1</sup> | Alireza Hasanzadeh<sup>1,2</sup>

- IV Ketamine **can significantly reduce suicidal ideation (SI) within 40 minutes**
  - Several studies showed efficacy at 2, 4, and 24 hours post-treatment
- **Temporary** - Effect may last up to 10 days
- Mixed results regarding esketamine efficacy.



# Ketamine: Other Applications

## Ketamine for the treatment of mental health and substance use disorders: comprehensive systematic review

Zach Walsh\*, Ozden Merve Mollaahmetoglu\*, Joseph Rootman, Shannon Golsof, Johanna Keeler, Beth Marsh, David J. Nutt and Celia J. A. Morgan

- Less robust evidence but still positive and short-lived benefits in bipolar disorder, social and generalized anxiety, obsessive–compulsive disorders, post-traumatic stress disorders, substance use disorders (alcohol, opiate, cocaine), and eating disorders
- Research from clinical use of KAP and qualitative studies in the field suggest that sufficient preparation before the experience, a clinical and professional setting, and trusting and supportive relationships with staff is crucial
- Given findings that ketamine's therapeutic benefits can be extended with psychological therapy, it is advisable to provide ketamine treatment alongside a psychological therapy





# Ketamine: Patient Case- Brief Vignette

34 Y F with history of MDD

Current Meds: Desvenlafaxine 50 mg/day

Prior Meds: citalopram, fluoxetine, sertraline, bupropion, lamotrigine, methylphenidate

Prior Admissions: 2016 - SI

Therapist: sees weekly

PHQ9

21 → 17 → 10 → 4 → 3 → 3

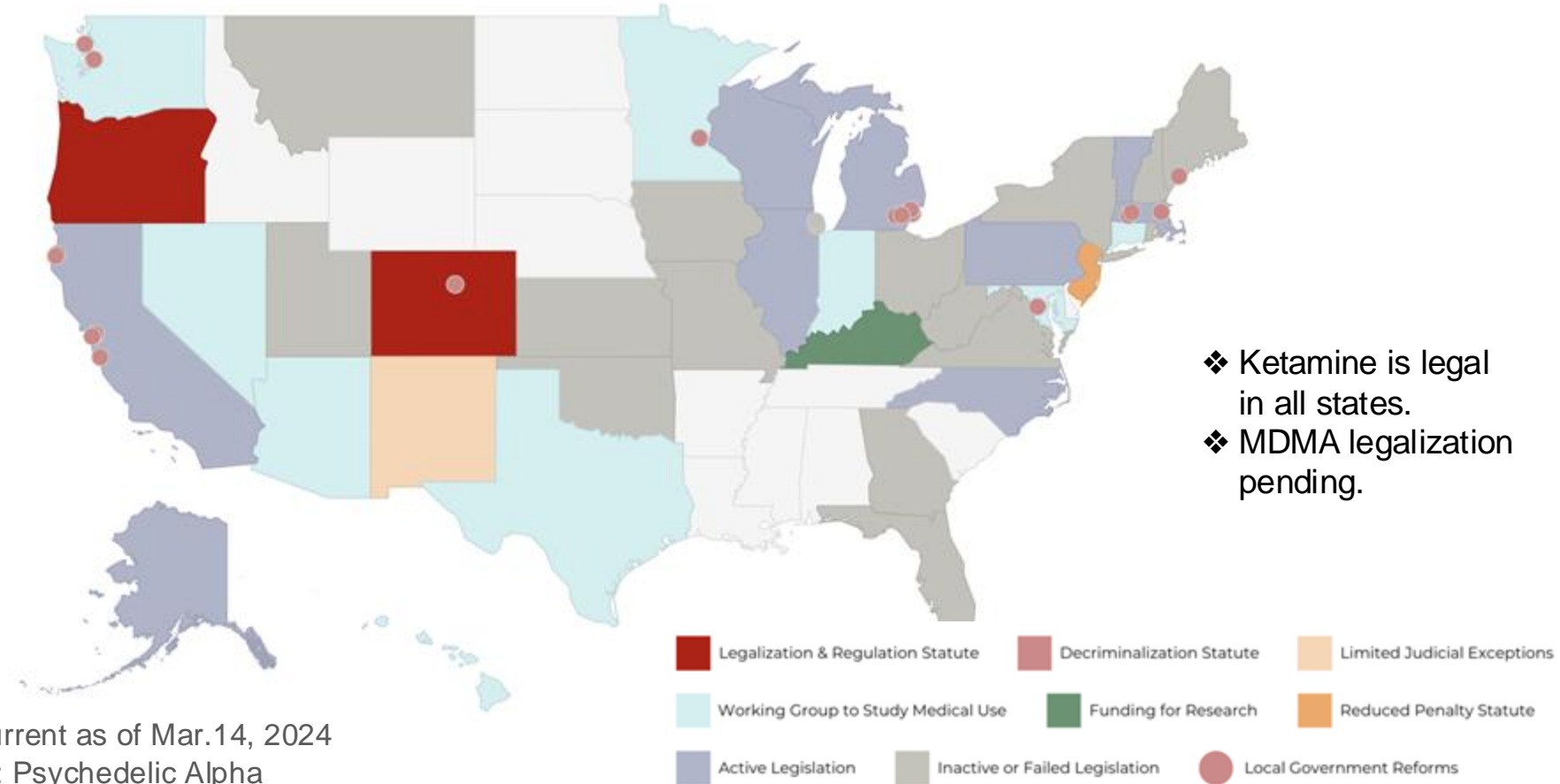
Met with therapist after each infusion

Maintenance: Q4 weeks

Tried extending further but noticed worsening mood

# Part 3: Regulatory, Ethics, Safety

# Psychedelic legislation in the United States



Data current as of Mar.14, 2024  
Source: Psychedelic Alpha

# Diversity, Equity & Inclusion in Psychedelic Integration Therapy

“Psychedelic-assisted therapy and the current psychedelic renaissance is embedded within a White-dominant medical framework.

There is a lack of diversity within the field of psychedelic researchers, with Indigenous people and people of color underrepresented both as researchers, therapists, and participants in studies.”



George JR, Michaels TI, Sevelius J, Williams MT. The psychedelic renaissance and the limitations of a White-dominant medical framework: a call for indigenous and ethnic minority inclusion. *J Psychedelic Stud.* 2020;4:4–15.

Michaels TI, Purdon J, Collins A, Williams MT. Inclusion of people of color in psychedelic-assisted psychotherapy: a review of the literature. *BMC Psychiatry.* 2018;18:1–9.

# Cultural roots, Westernization

“Psychedelics have been part of the spiritual practices and cultures of Indigenous people throughout the world and have historically been frequently condemned by Western cultures.

As a result, the "discovery" of psychedelic-assisted therapy by Western medicine has been criticized as another example of colonialism or cultural appropriation that repeats a history of oppression.”



George JR, Michaels TI, Sevelius J, Williams MT. The psychedelic renaissance and the limitations of a White-dominant medical framework: a call for indigenous and ethnic minority inclusion. *J Psychedelic Stud.* 2020;4:4–15.

Michaels TI, Purdon J, Collins A, Williams MT. Inclusion of people of color in psychedelic-assisted psychotherapy: a review of the literature. *BMC Psychiatry.* 2018;18:1–9.

# Call to action: To strike a balance between seemingly opposing forces.

Engineer safe supply of psychedelic substances when legislation allows.

Keep the cost of integration therapy within reach.

Dialogue with traditional healers from the communities that started these practices while promoting ethical, safe use for patients.



# Viewer submitted and voted Q & A - Follow along on your device



[Presenter Q&A Web Browser Reference Link](#)



LIVE Q&A! Please Scan QR  
Go to <https://sli.do> and enter  
#1260685



# Thank you!

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- ❖ Justin Laube, MD: UCLA
- ❖ Thais Salles Araujo, MD: UCLA
- ❖ Leslie Mendoza Temple, MD: Endeavor Health/  
University of Chicago
- ❖ Mikhail Kogan, MD: George Washington  
University
- ❖ Erika Steinbrenner, MD: Imagine Healthcare,  
Epiphany Wellness, Symetria Recovery



Extra slides

# CHACRUNA : Ayahuasca

An Amazonian-based plant tea: 50-100 ml

*Psychotria vidris*

Dimethyltryptamine (DMT)



*Banisteriopsis caapi*  
Harmine  
tetrahydroharmine  
harmaline

# Supplementation

## Dietary Preparation

Magnesium L Threonate 144 mg BID  
NAC 1200 mg BID  
Alpha lipoic acid 200 mg  
Vitamin C 1000 mg BID  
5HTP 100 mg with EGCG 500 mg  
Electrolytes  
B6  
CDP-Choline 500 mg  
Melatonin 3-10 mg

### **1 week before/after:**

No red/heavy meats,  
alcohol, spicy food

### **2 days before:**

No fermented foods

### **1 day before/after:**

Minimize sugar

**No food 5 hrs prior to  
ceremony**

# How to engage but stay safe as a healthcare professional.

1. “Avoid facilitating access to psychedelics or prohibited substances in any way and avoid providing a space wherein psychedelics would be used.
2. Refrain from coordinating work with underground guides. Referring a client to an underground therapist is a clear and obvious form of knowingly facilitating access to prohibited substances.
3. In contrast, receiving referrals from an ‘underground’ guide entails less legal risk. Members of the public are free to refer to whatever practitioner they wish.”



# Could our integrative health patient also be seeking out and be supported by psychedelic therapies?

**Table 2.** Patient Percentages of Reasons for Seeking Care at IM Clinic and Goals (n = 4182) **BraveNet PBRN 2008-2011**

Reasons for seeking care at IM clinic	Extremely/ Quite a Lot	Conditions Addressed	Percent (n = 4182)
I want to improve my health and wellness now to prevent future problems	83.85	<u>Pain (chronic)</u>	<u>33.1</u>
I want to try new options for my health care	76.65	Fatigue	10.2
To maximize my health regardless of whether or not my illness is curable	74.62	Hyperlipidemia	10.0
To be in a place that acknowledges the connection between mind, body, spirit, and community	70.33	Pain (acute)	9.7
To receive objective, medical advice on nonconventional approaches	67.24	Stress	9.3
To receive care in a safe, healing environment	66.71	Wellness visit	8.5
A place where I can receive care from a multidisciplinary team	58.48	Cancer	8.3
		Weight	8.0
		Anxiety	7.7
		Depression	7.2