

# The View from 10,000 Feet: An Overview of the Field

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# Disclosures

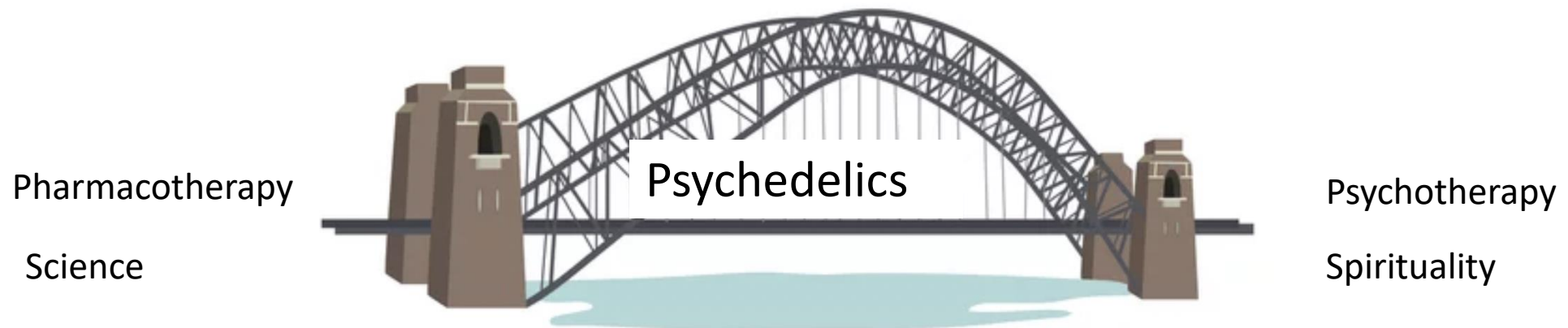
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# Learning Objectives

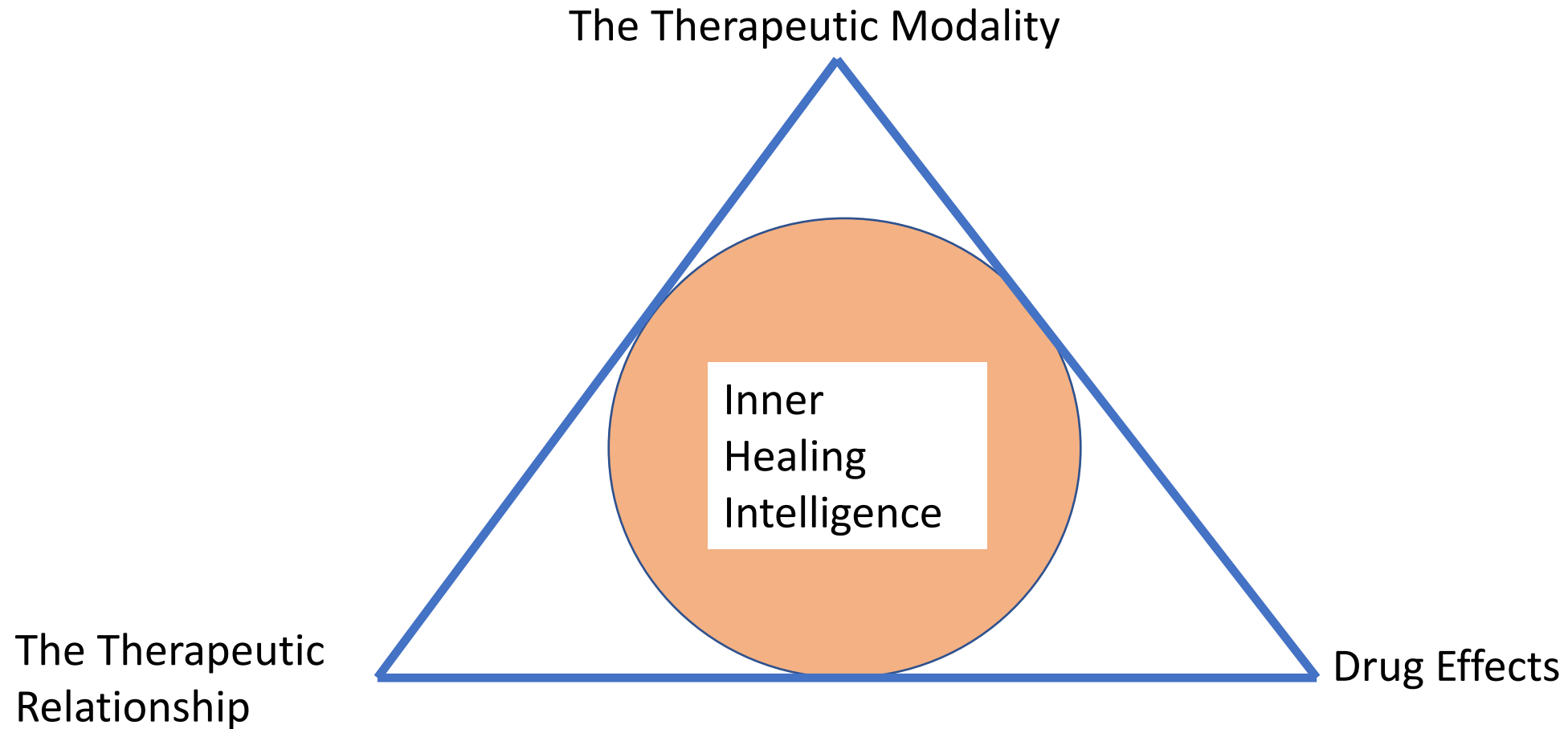
1. Describe the classes of psychedelic medicines including their safety profile.
2. Describe the subjective effects of psychedelic drugs.
3. Explore the mechanism of action.

# Definitions

- Psychedelic – means mind-manifesting
  - Induces a non-ordinary state of consciousness (NOSC)
- Other terms:
  - Hallucinogen
  - Entheogen – revealing the God within
  - Psychoplastogen



# What is Psychedelic-assisted Psychotherapy?

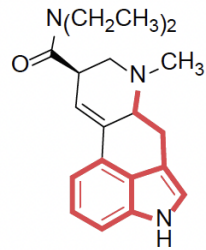
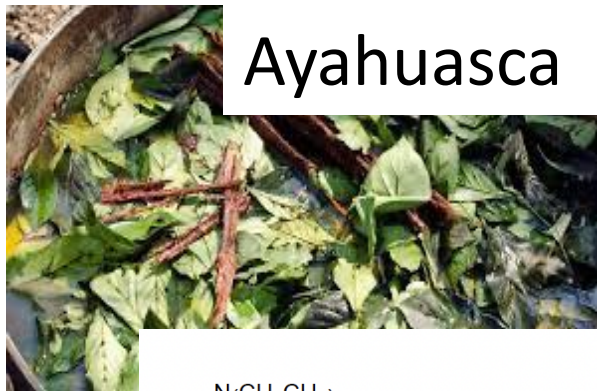


# The Inner Healing Intelligence

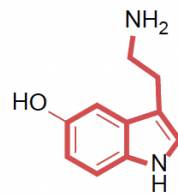


Praying, By Alex Grey

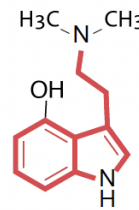
# Classic Psychedelics



LSD



Serotonin



Psilocin

5 HT2A Receptor Agonists

# Subjective Effects of Classic Psychedelics

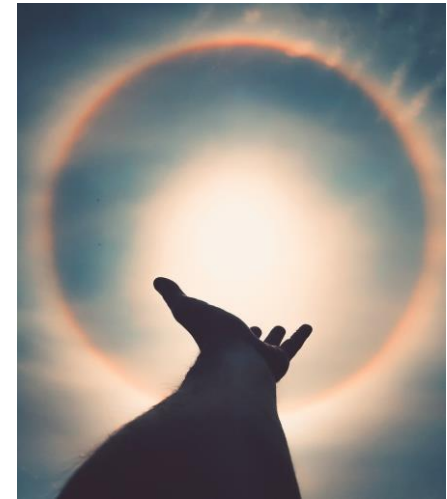
- Perceptual Changes
  - Closed eye visuals
    - elementary imagery
    - complex imagery
  - Audio-visual synesthesia
- Ego-dissolution
- Emergence of repressed trauma
- Emotional breakthrough/catharsis
- Cognitive Changes – new insights
- Transpersonal States/Mystical Experience



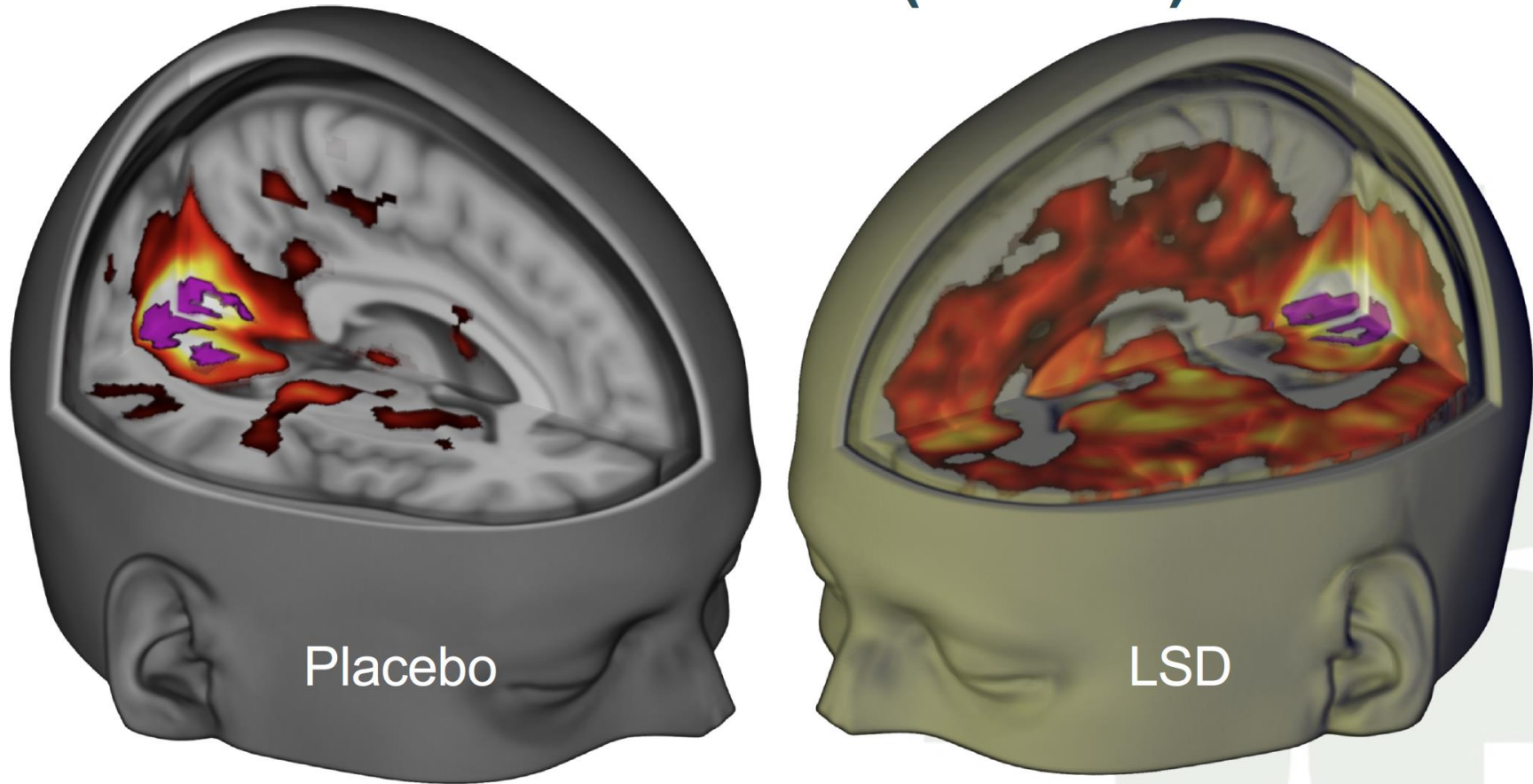


# Mystical Experiences

- MEQ = Mystical Experience Questionnaire
- Factor 1: Mystica
  - Internal unity
  - External unity
  - Noetic quality
  - Sacredness
- Factor 2: Positive mood
- Factor 3: Transcendence of Time and Space
- Factor 4: Ineffability



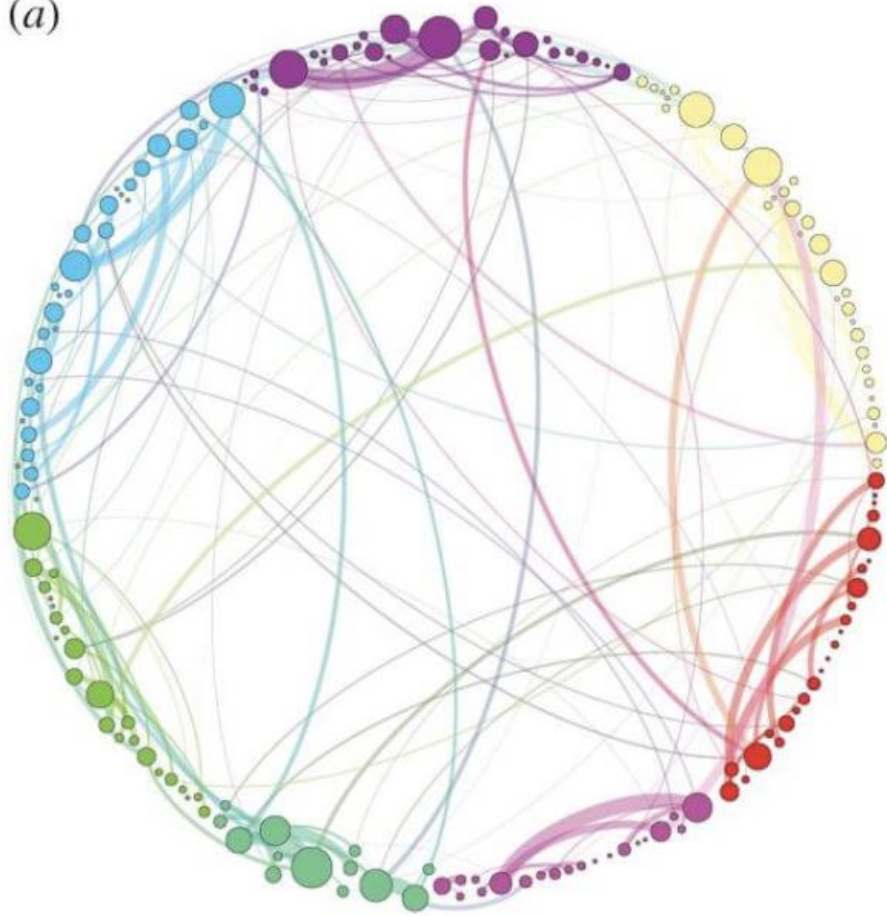
## “Brain on LSD” (rs-fMRI)



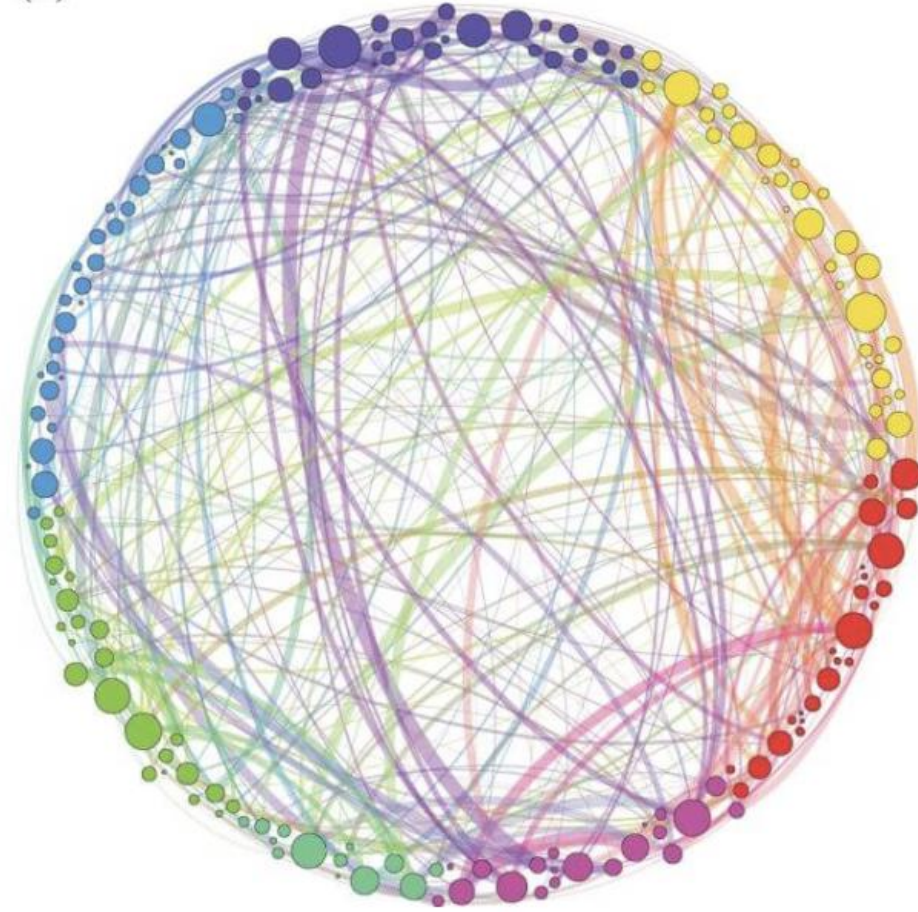
Carhart-Harris RL, et al. *Proc Natl Acad Sci U S A*. 2016;113(17):4853-4858.

Quieting of the Default Mode Network

(a)



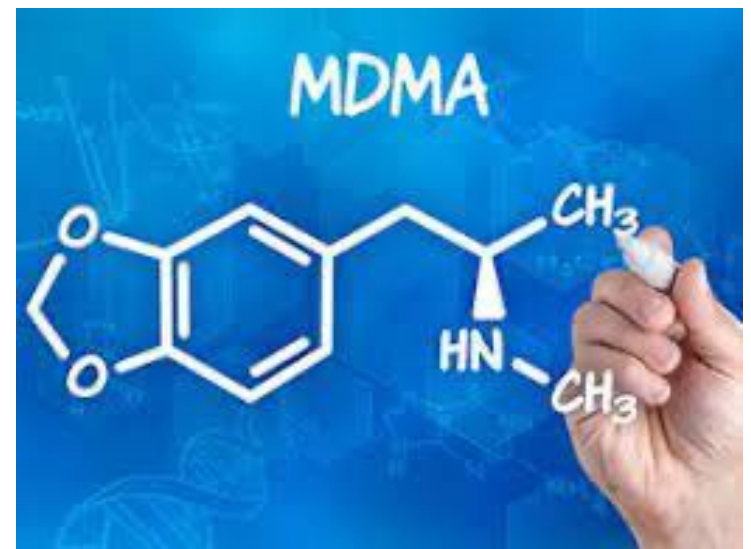
(b)



*Communication pathways after (a) placebo and (b) psilocybin*<sup>4</sup>

# Empathogens

- 3,4-Methylenedioxyamphetamine
- Other: MDA, 3 MMC
  
- Release: **serotonin**, dopamine, norepinephrine, oxytocin and cortisol
- Increase in empathy, self-compassion and feelings of oneness
- Decrease in fear response



# Ketamine

- Has psychedelic properties
- Can be used as KAP = Ketamine-Assisted Psychotherapy or purely biologically (ex. IV ketamine)
- Used for TRD, suicidality
- Complex pharmacology, hits many receptors
- NMDA receptor antagonist → increased glutamate neurotransmission in the brain
- Effects are more transient



# Does Psychedelic Psychotherapy Work?

Cautious Optimism

Early Signal is Hopeful

Much More Research Needed



# Psilocybin Research

## Completed studies:

- ↓ Major depressive disorder
- ↓ Treatment-resistant depression
- ↓ OCD
- ↓ Demoralization in Long-term AIDS Survivors
- ↓ Cancer-related Anxiety
- ↓ End of Life Distress
- ↓ Alcoholism
- ↓ Smoking Cessation
- ↓ Cluster Headaches

## Planned/On-going studies:

- Phase II Studies:
  - TRD
  - MDD
  - Alcoholism
- Depression 2<sup>o</sup> to Alzheimer's Disease
- Anorexia Nervosa
- Body Dysmorphic Disorder
- Co-occurring MDD + Alcoholism
- Cocaine use disorder
- Opioid use disorder
- PTSD

# MDMA Research

## Completed:

- Phase II and part of Phase III –  
↓ PTSD
- ↓ Social Anxiety in Autism
- ↓ Anxiety Associated with Life Threatening Illness

## Planned/On-going:

- CPT + MDMA for PTSD
- PE + MDMA for PTSD
- Group Protocol for PTSD
- Eating Disorders
- Alcoholism



# Is Psychedelic Therapy Safe?

- Very low toxicity
- Low risk of dependency
- Who is this not for?
- Who is this for?



# How can my patients access this treatment?

- Access remains very limited
  - Classic psychedelics (LSD, DMT, Psilocybin) are schedule III drugs under the CDSA
  - MDMA and Ketamine are Schedule I
- Research trials
- Private ketamine clinics (some public offerings)
- Section 56 Exemption - Therapsil
- Special Access Program



**NIKEAN**  
FOUNDATION



# Nikean Foundation announces \$5 million gift to create a Psychedelic Psychotherapy Research Centre at Toronto's University Health Network (UHN)

The Nikean Psychedelic Psychotherapy Research Centre will anchor Canada's thriving psychedelic innovation and academic research hub

MENTAL HEALTH

# The Nikean Psychedelic Psychotherapy Research Centre

## **Vision for the Nikean Psychedelic Psychotherapy Research Centre**

Psychedelic-assisted psychotherapy represents a new and exciting paradigm in the treatment of mental illness. This emerging field is poised to be one of the greatest breakthroughs in treating mental health in this generation.

The vision for the Nikean Psychedelic Psychotherapy Research Centre is to create an academic and innovation hub. The Centre plans to harness the potential of psychedelic medicine to provide transformative care to patients, pioneer training in psychedelic-assisted psychotherapy and conduct high-quality research that advances the field.

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