

Combining Psychedelic Treatments with Substance Use Disorder Treatments

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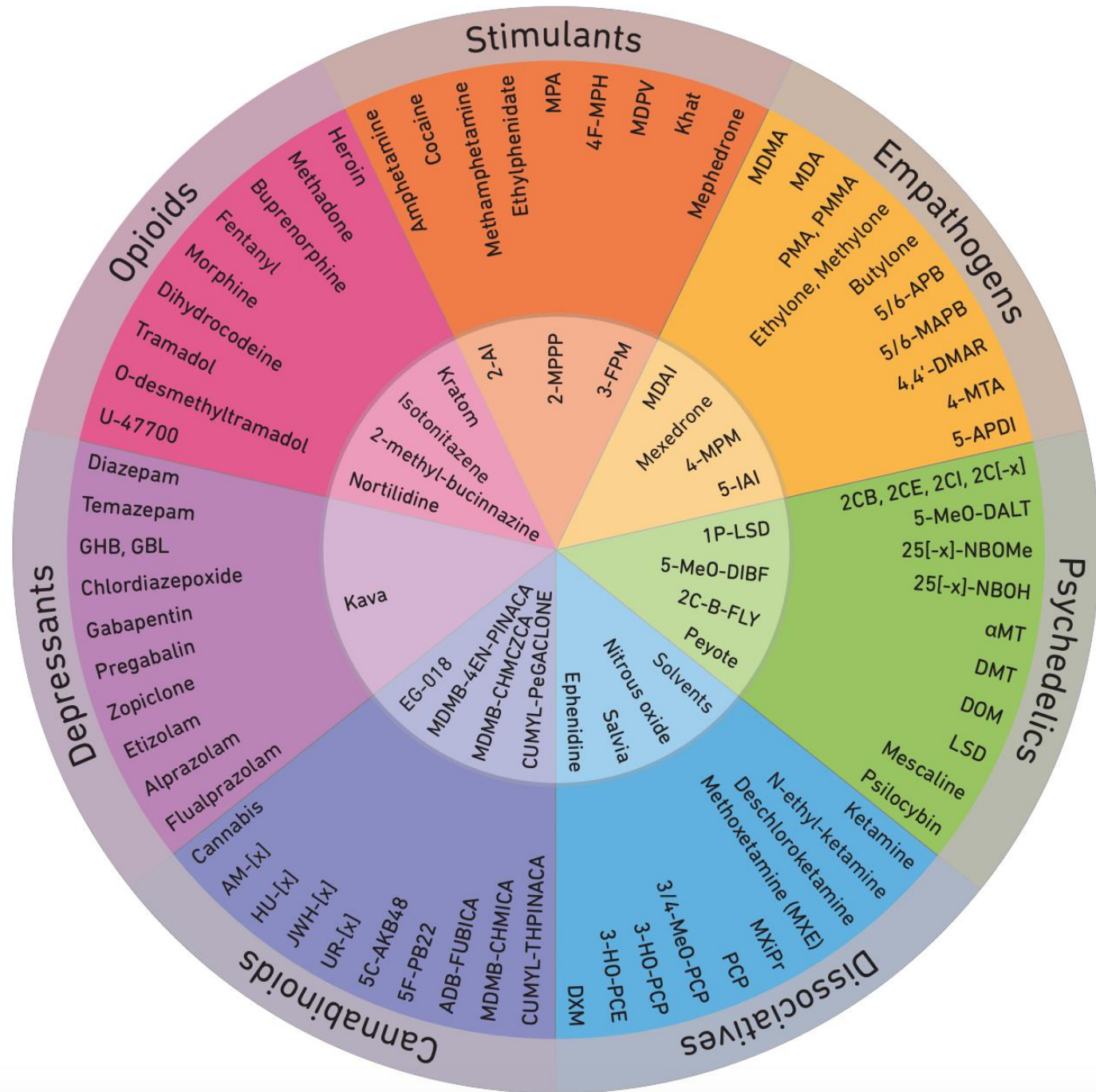


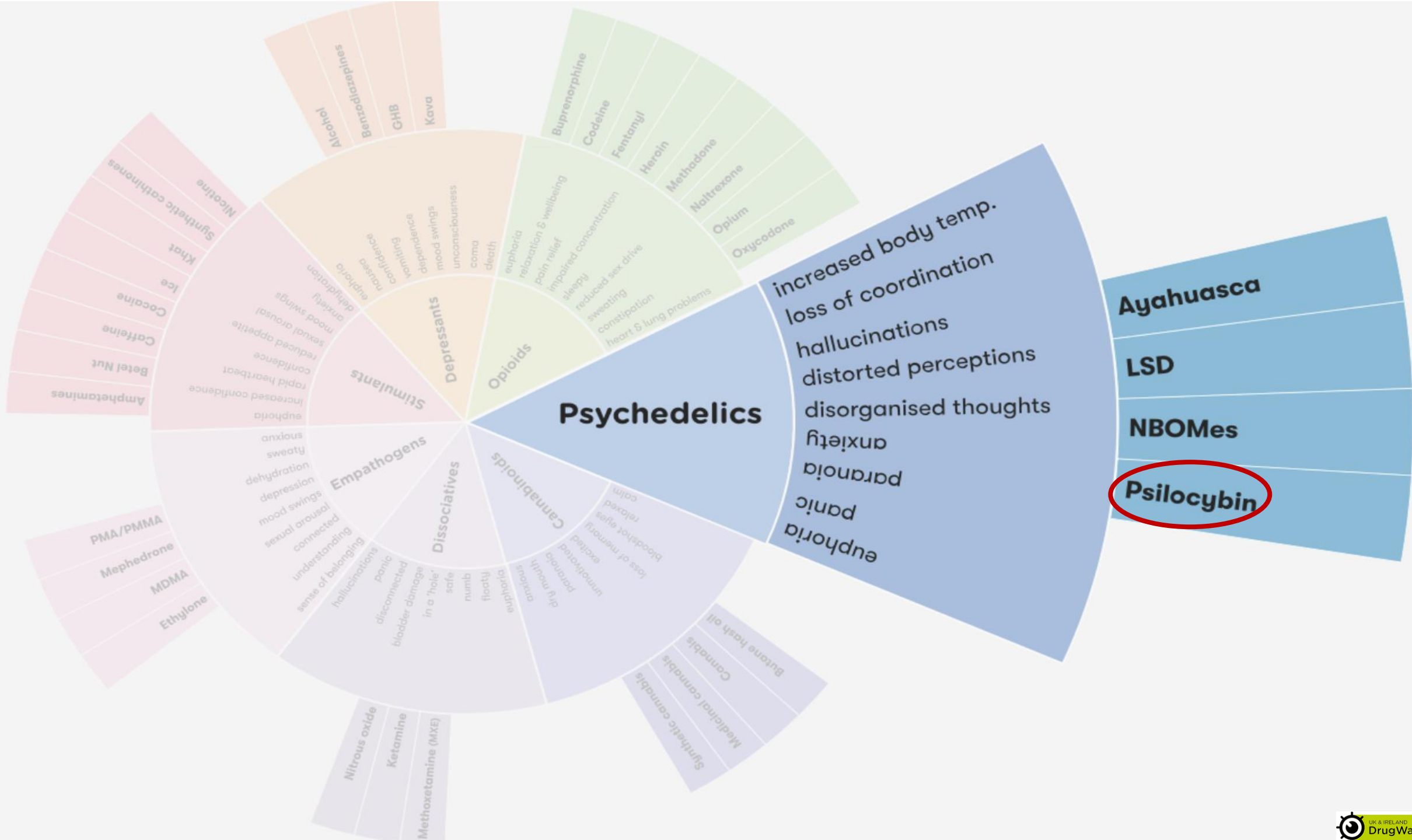
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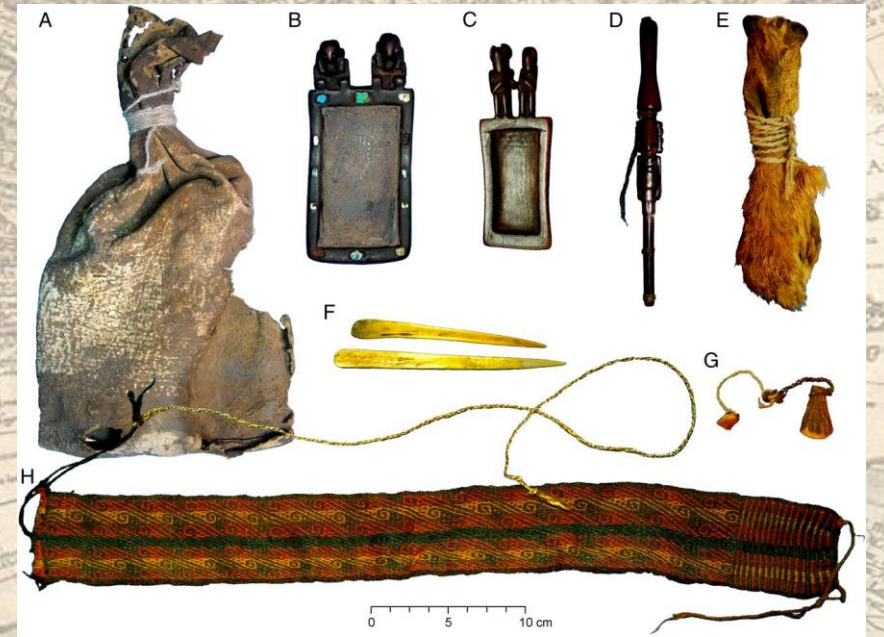


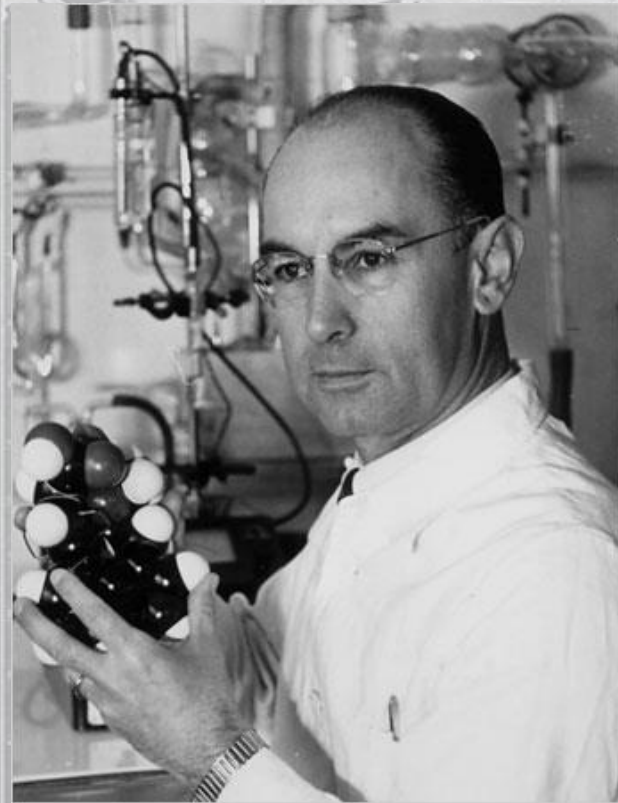
- Ayahuasca
- LSD
- NBOMes
- Psilocybin**

- **History of Psychedelic Research**

- Pharmacology
- Pre-Clinical
- Physiological Effects
- Set and Setting
- Subjective Effects
- Treatment Efficacy
 - Well-Being
 - Mood Disorders
 - Substance Use Disorders
- Future Directions



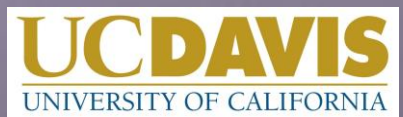
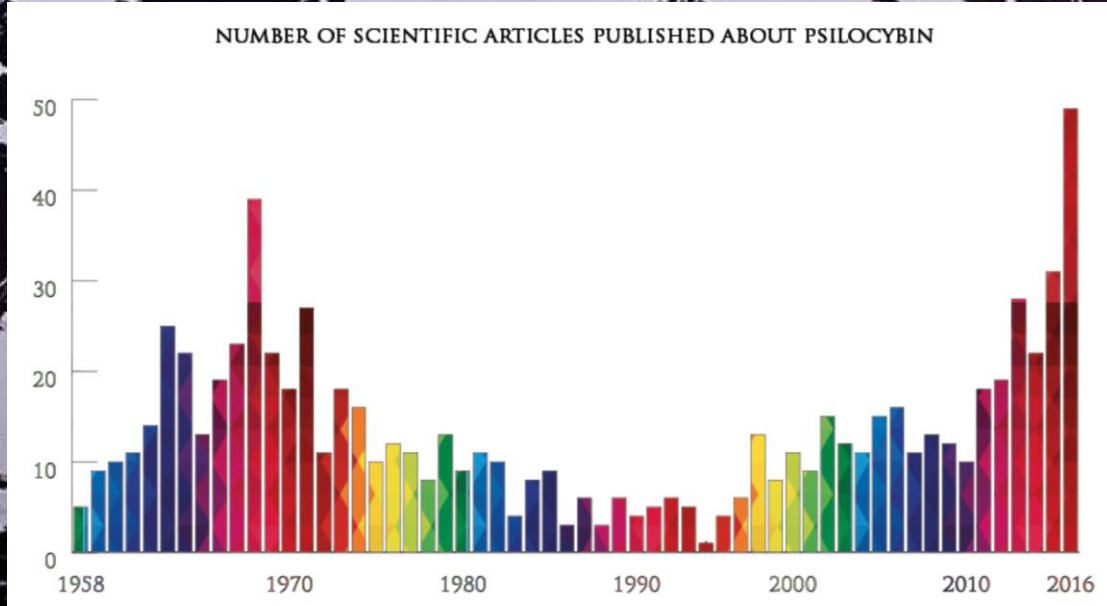




WORLD



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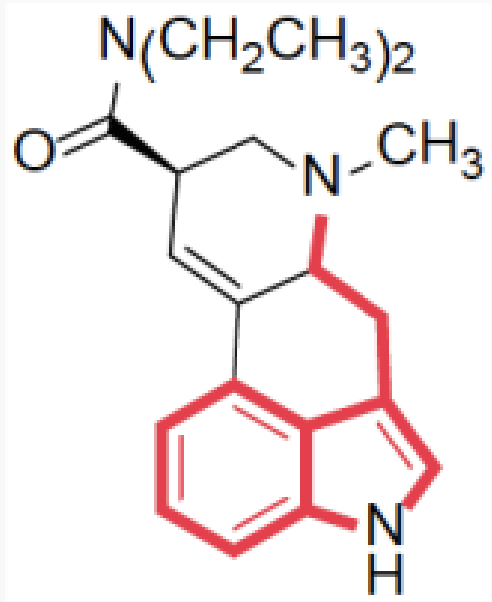


FDA

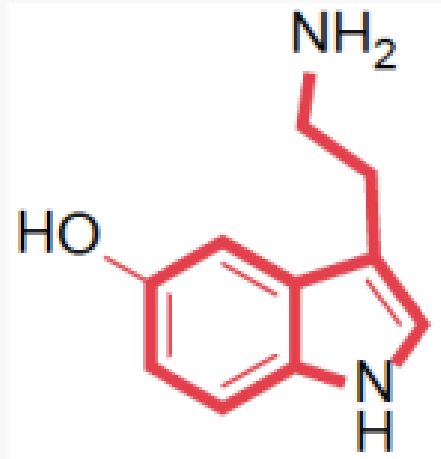
Breakthrough Therapy
Designation

- History of Psychedelic Research
- **Pharmacology**
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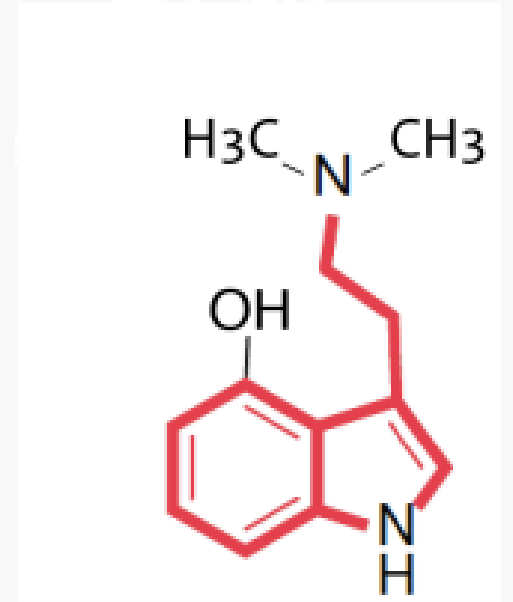




LSD



Serotonin

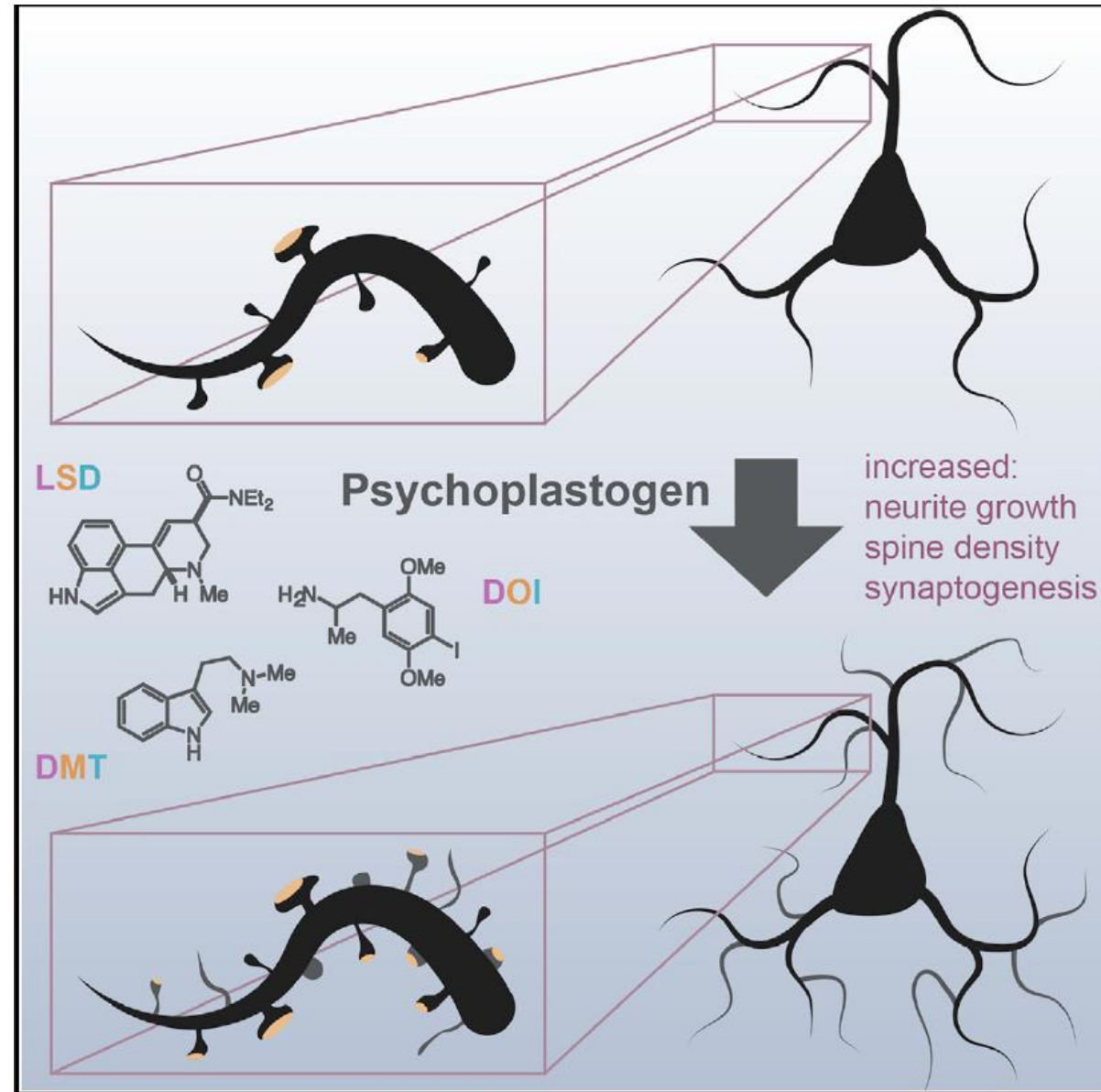


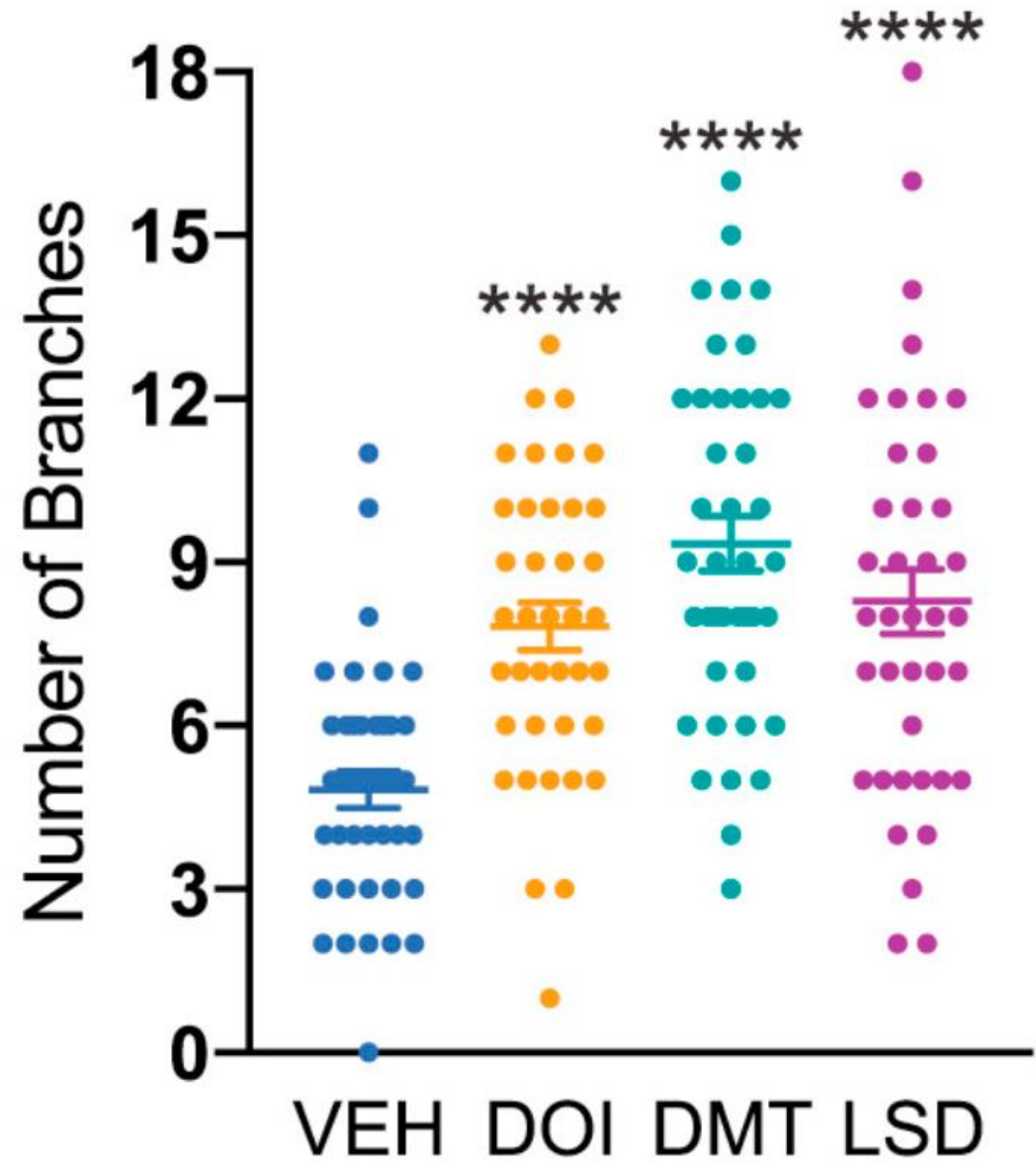
Psilocin

Psychedelics (“Serotonergic Hallucinogens”)

- Substances that exert their effects primarily by an agonist (or partial agonist) action on brain serotonin 5-hydroxytryptamine (5-HT) 2A receptors

Cultured Cortical Neurons

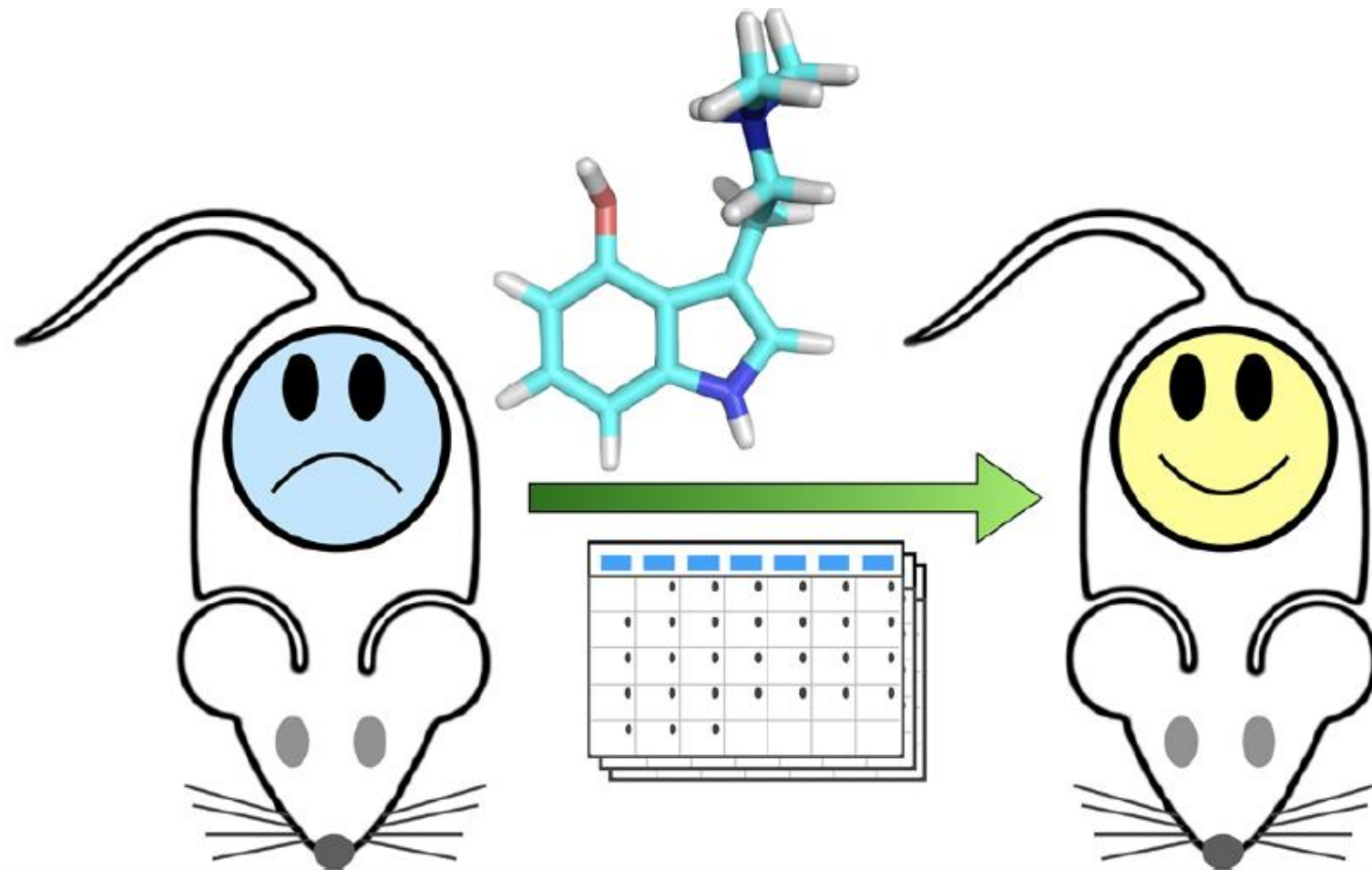




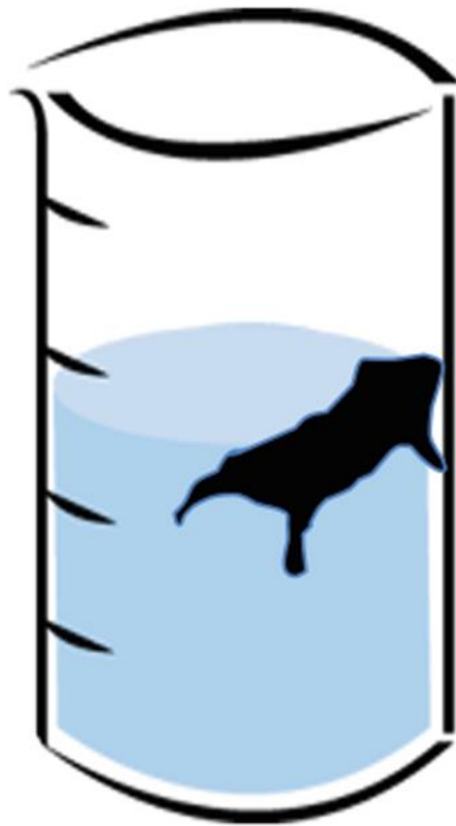
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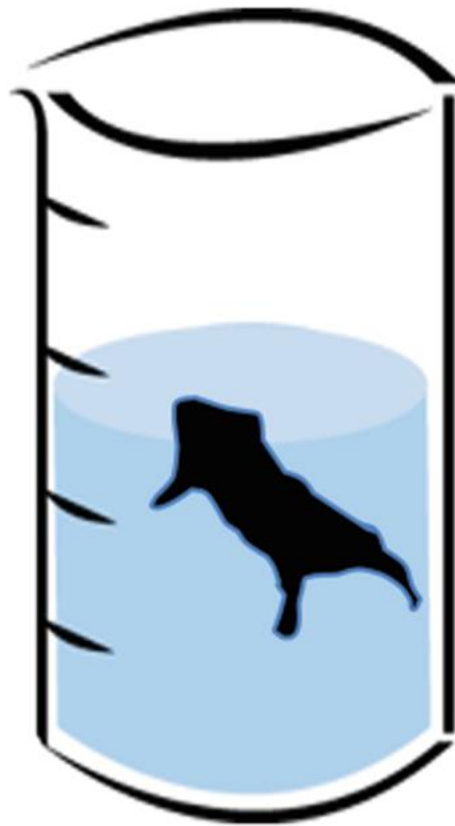
Rodents



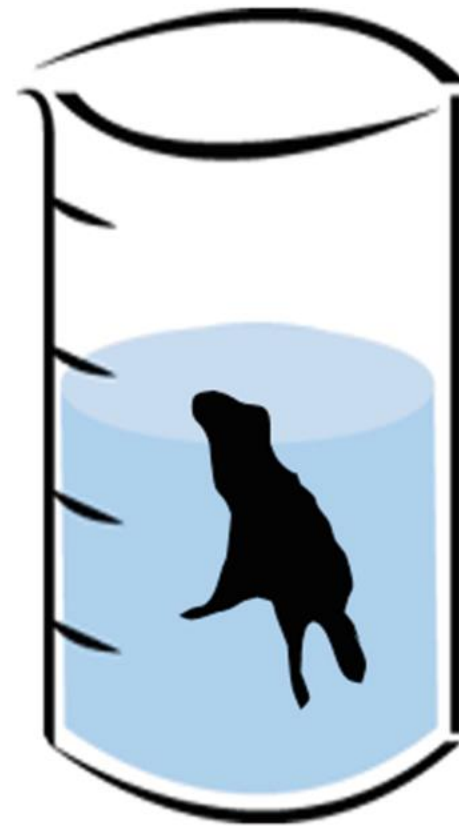
Climbing



Swimming

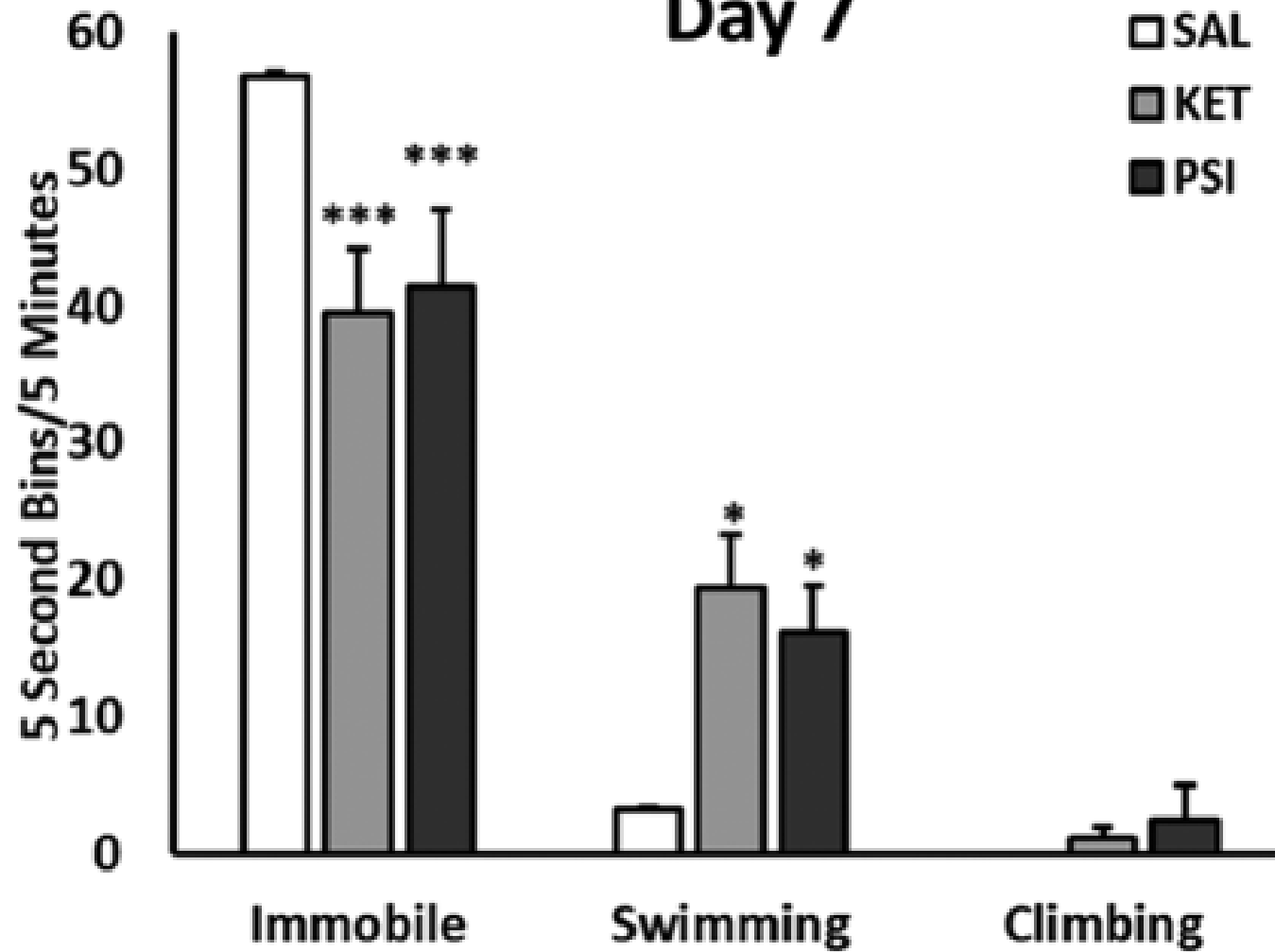


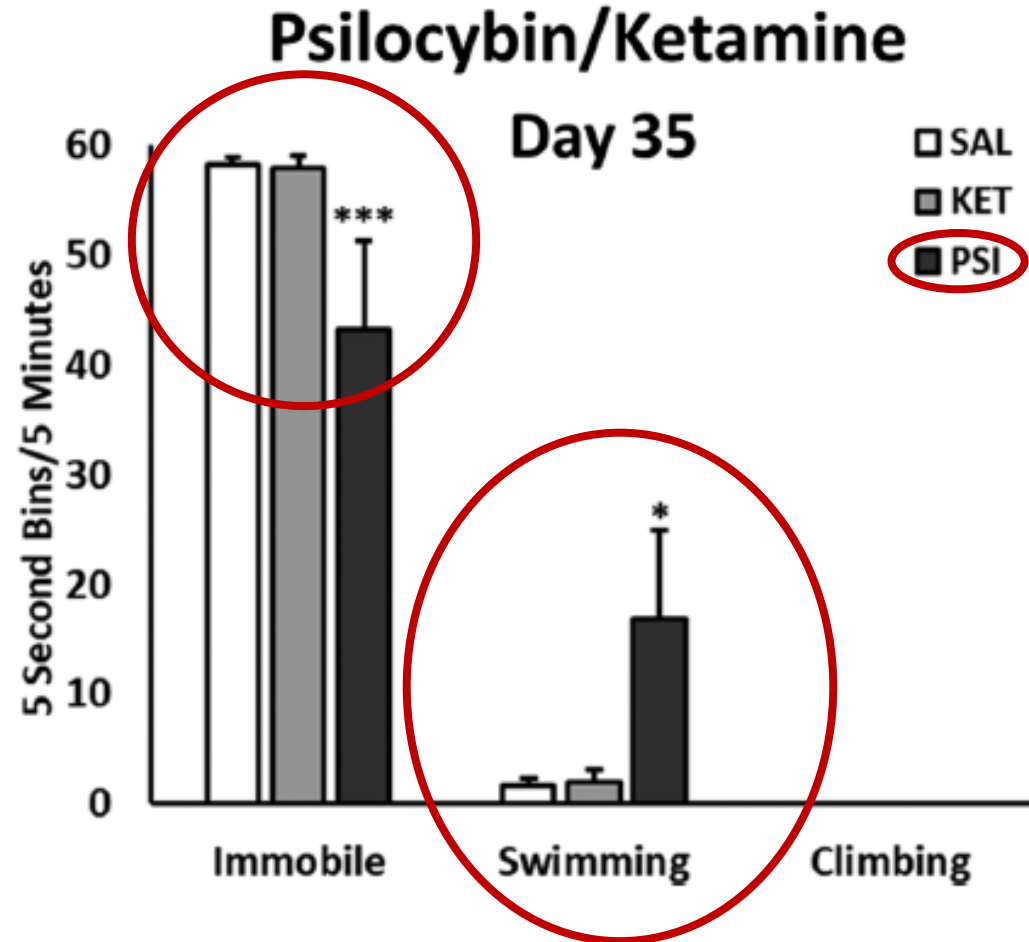
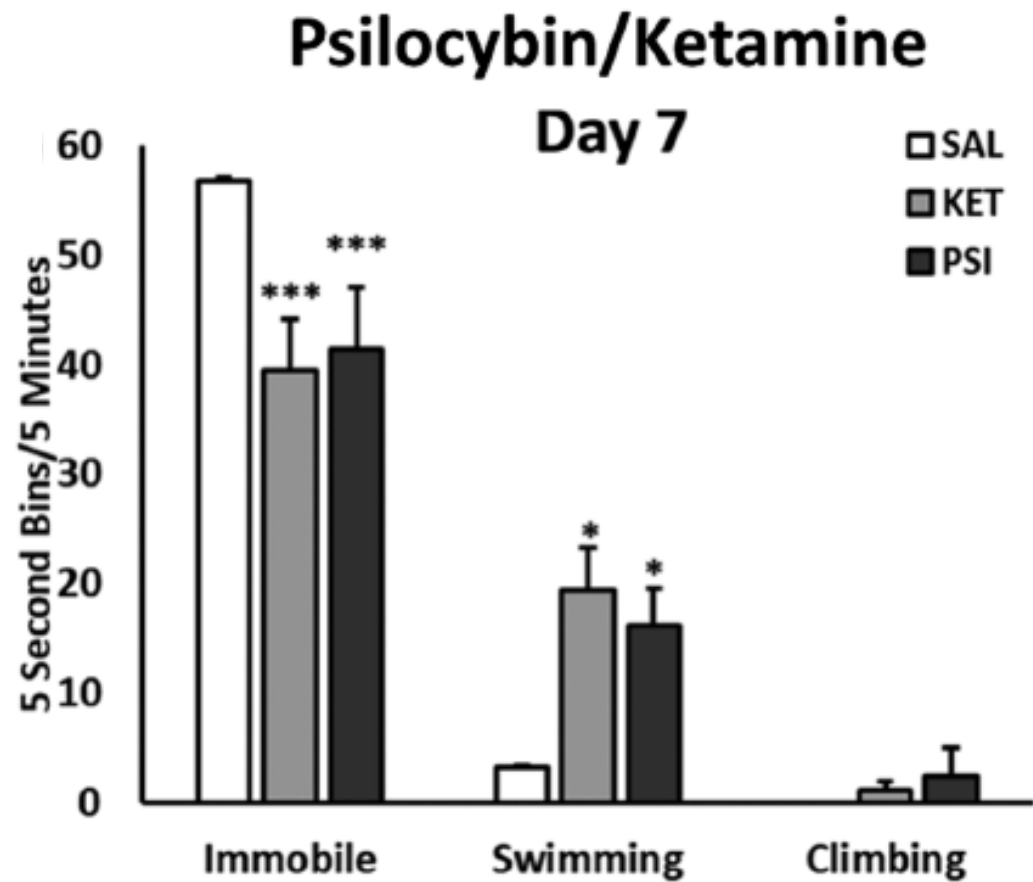
Immobile



Psilocybin/Ketamine

Day 7





- History of Psychedelic Research
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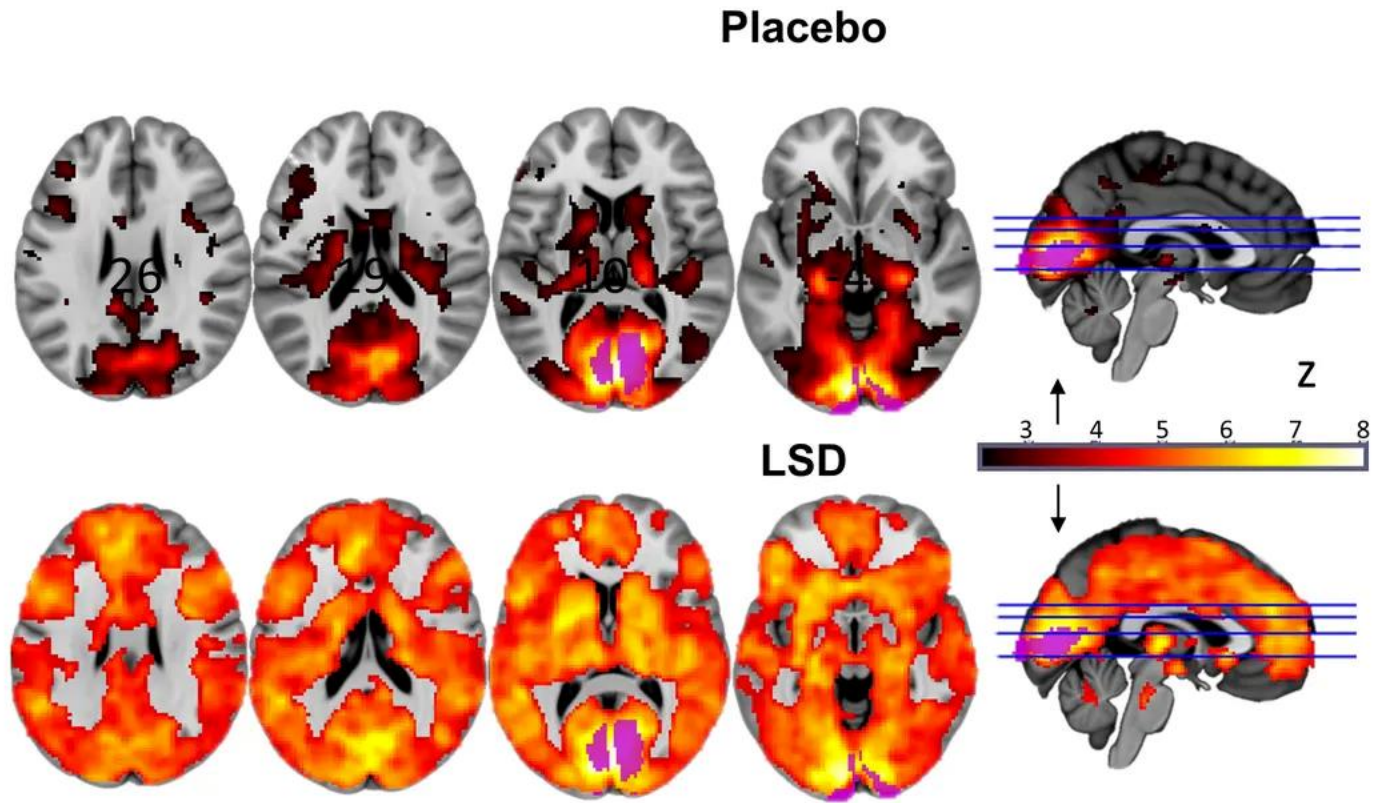


Physiological Effects

- Transient increase in heart rate and blood pressure
- Mild Headaches
- Non-toxic
- Non-addictive

Neuroimaging

Increased Resting State Functional Connectivity



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“Set and Setting”

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- Set = Mindset (expectations, mindset, cultural messages, clinical messages)

“Set and Setting”

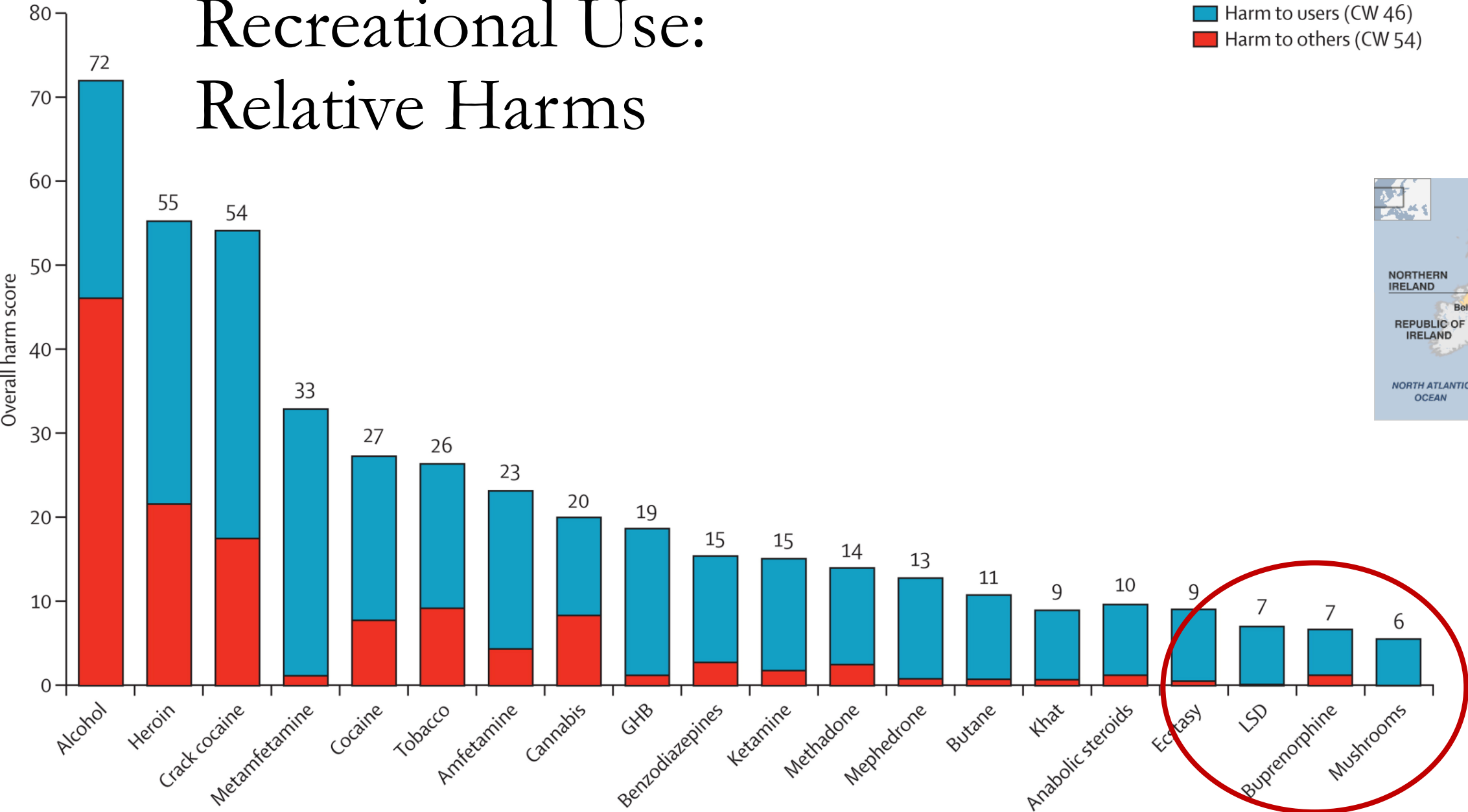
- Set = Mindset (expectations, mindset, cultural messages, clinical messages)
- Setting = Context (physical location, treatment room, social situation)

Recreational Use: Challenging Experience Survey

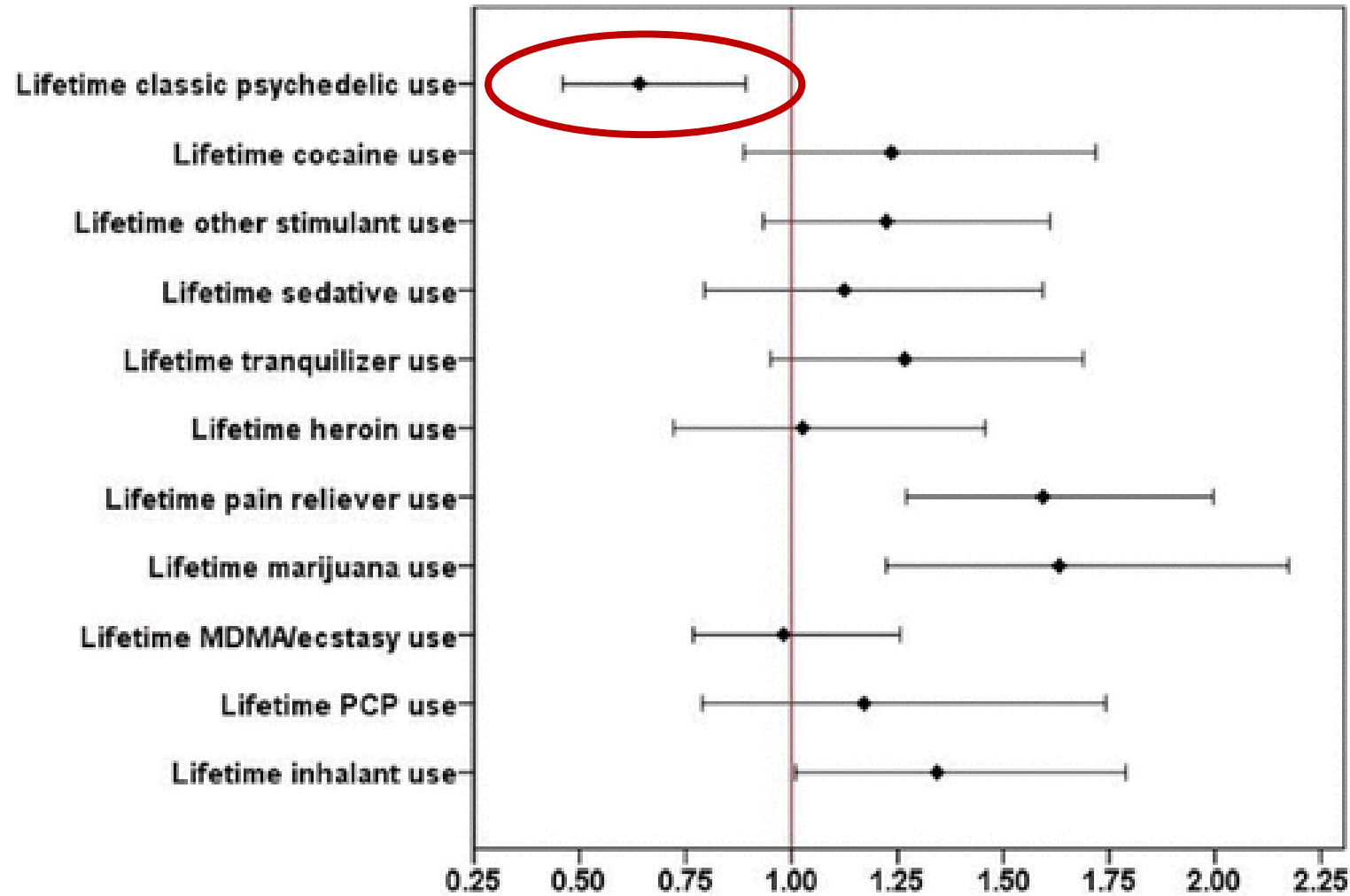
- Of these respondents, 39% rated the experience as among the top five most challenging experiences of their lifetime
- 11% reported putting themselves or others at risk of physical harm
- 2.7% reported getting medical help during the occasion.

Recreational Use: Relative Harms

■ Harm to users (CW 46)
■ Harm to others (CW 54)



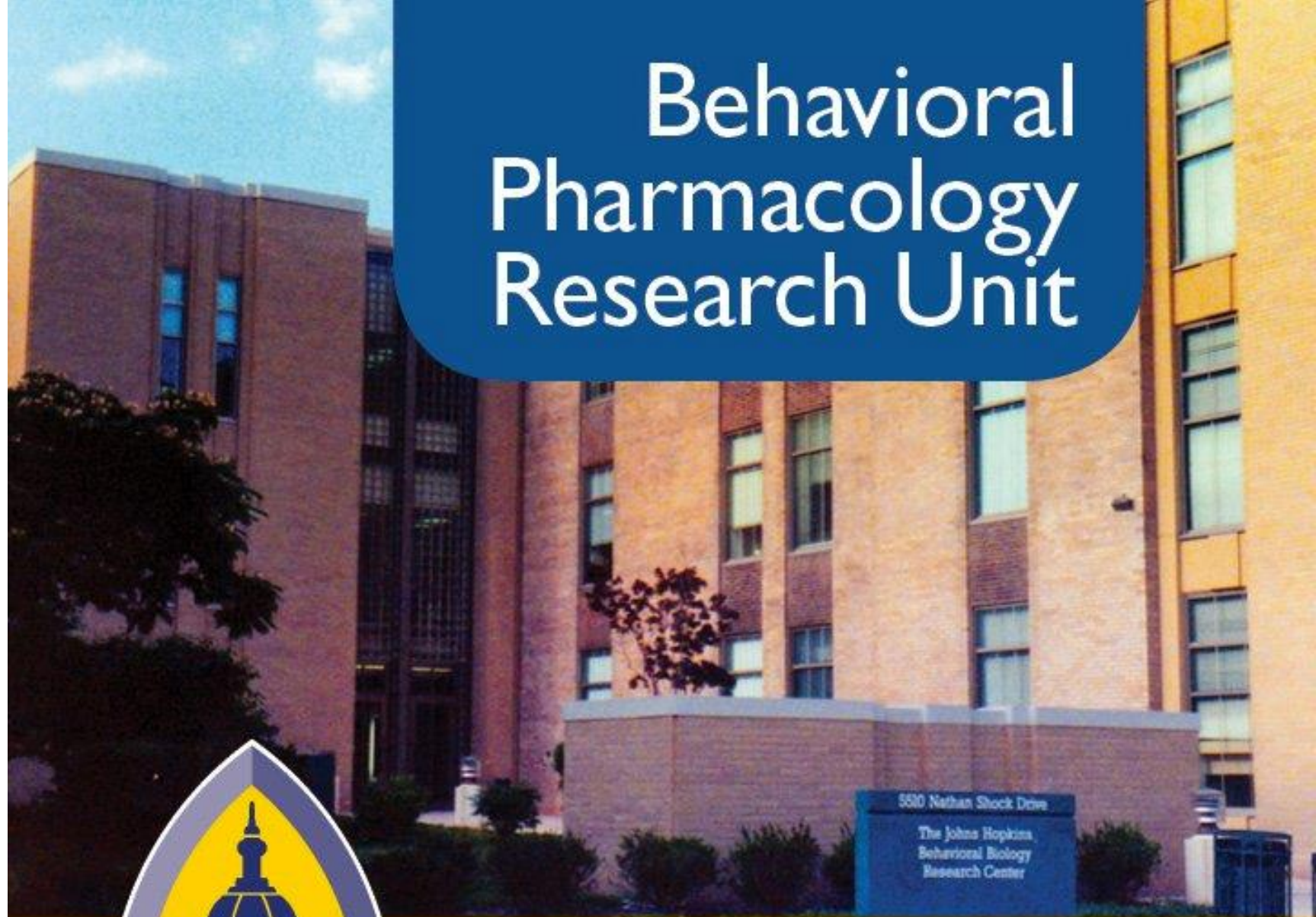
Recreational Use Previous Year Suicide Attempt



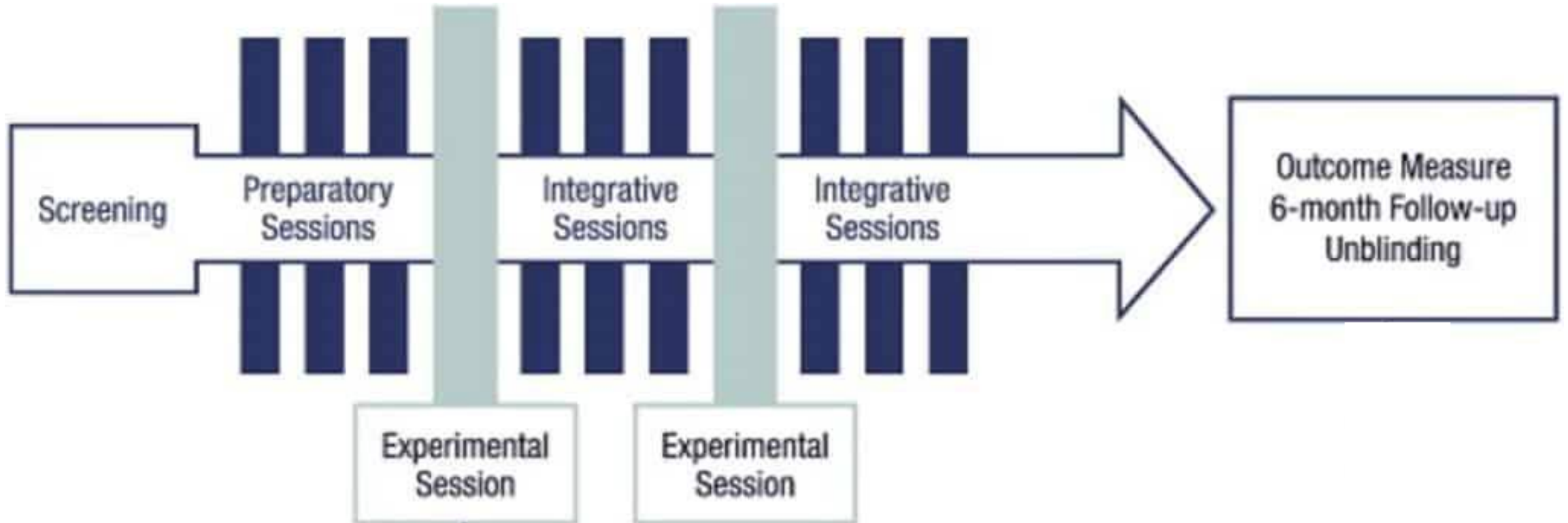
(Holds true for past month psychological distress and past year suicidal thinking)

Clinical Setting

Behavioral Pharmacology Research Unit



Clinical Use: Typical Procedures





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Challenging Experiences in Clinical Contexts

- Many participants endorse that the experience was challenging

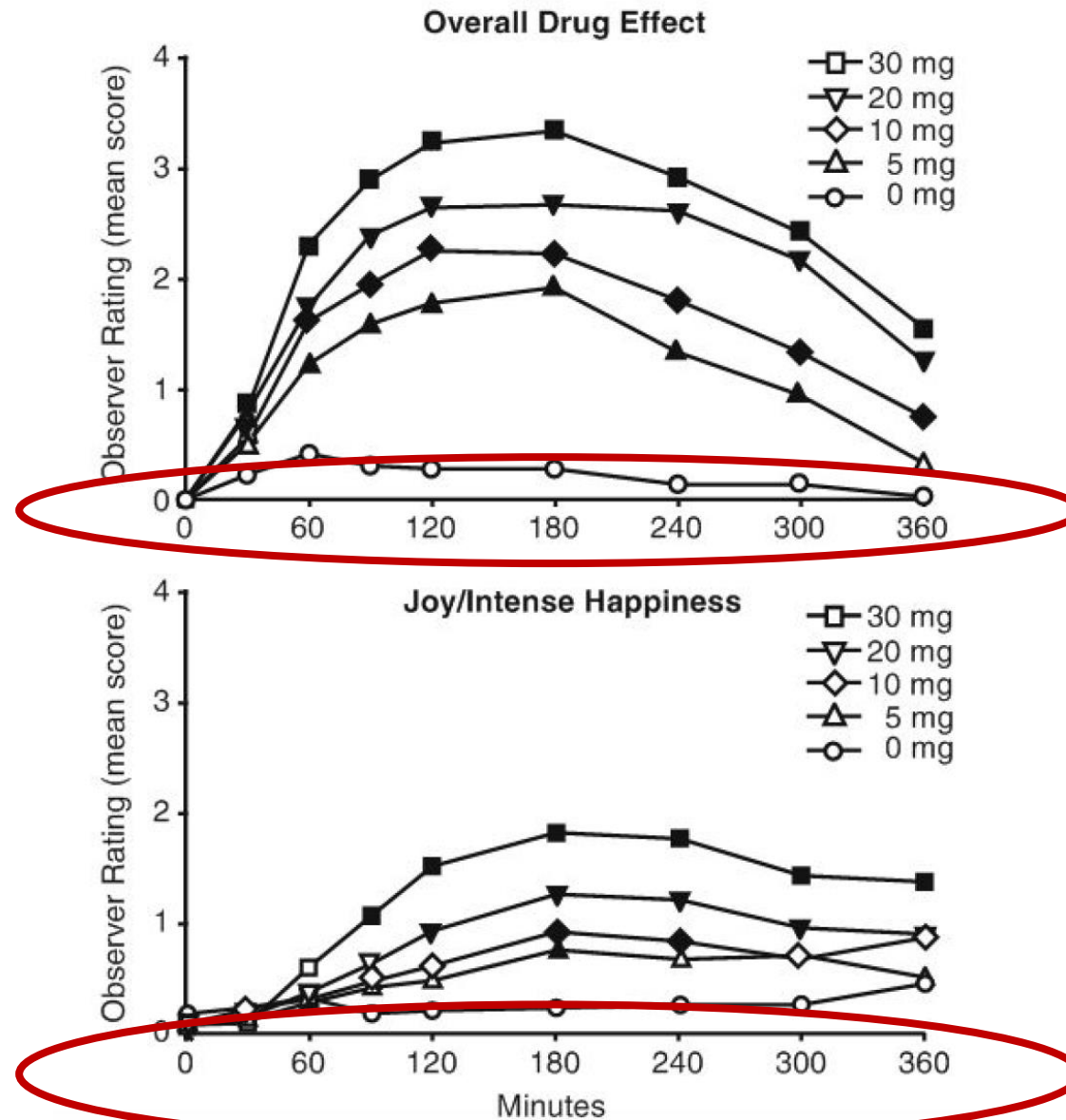
Challenging Experiences in Clinical Contexts

- Many participants endorse that the experience was challenging
- “It is not fun, that is the thing. It is a hard experience; it is a very rich experience. You have a lot of things to learn from it, but how much fun is learning, you know?”

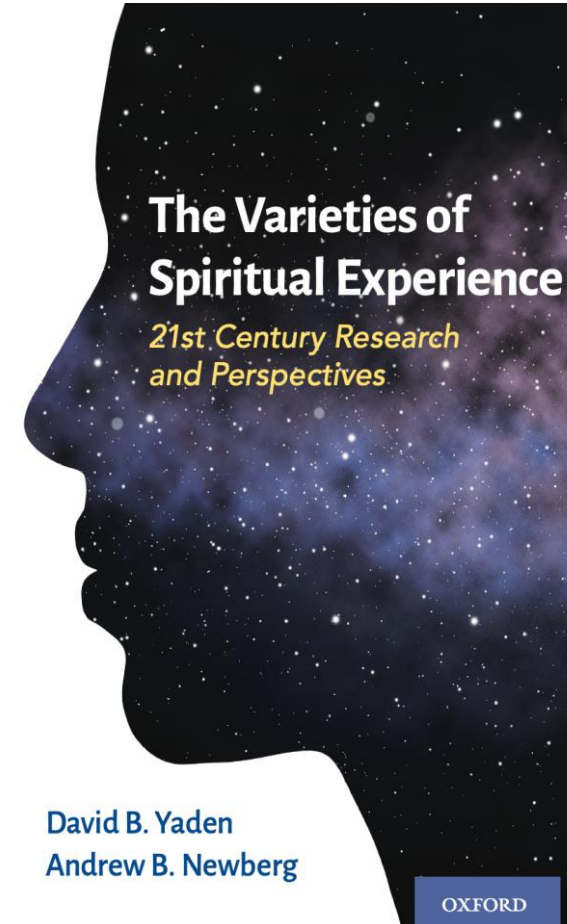
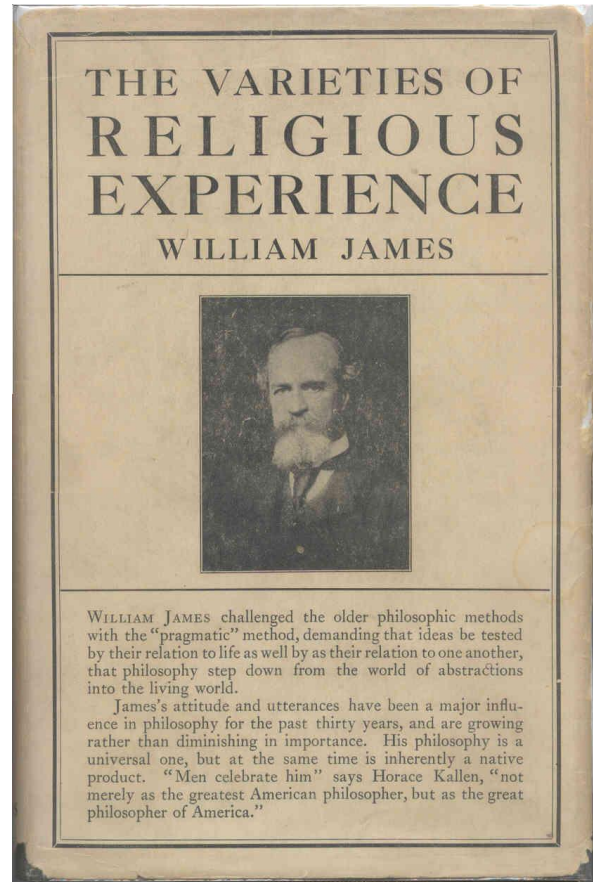
- History of Psychedelic Research
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Dose-Dependent Subjective Effects



Mystical-Type Experience



Mystical Experience Questionnaire (MEQ)

Four Factors in the Mystical Experience Questionnaire (MEQ30)

Factor 1: Mystical

Internal Unity

Experience of pure being and pure awareness (beyond the world of sense impressions).

Factor 2: Positive Mood

Experience of amazement.

Factor 3: Transcendence of Time and Space

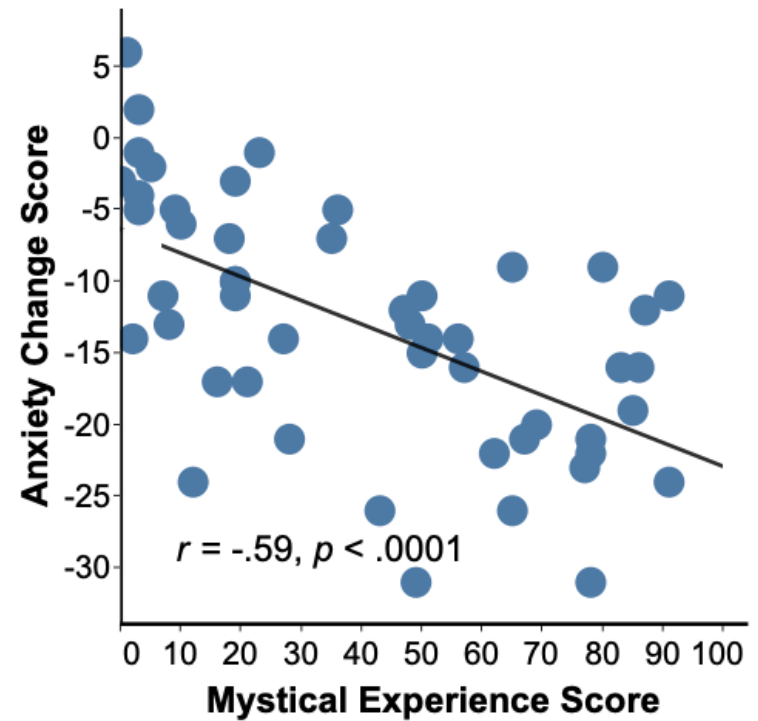
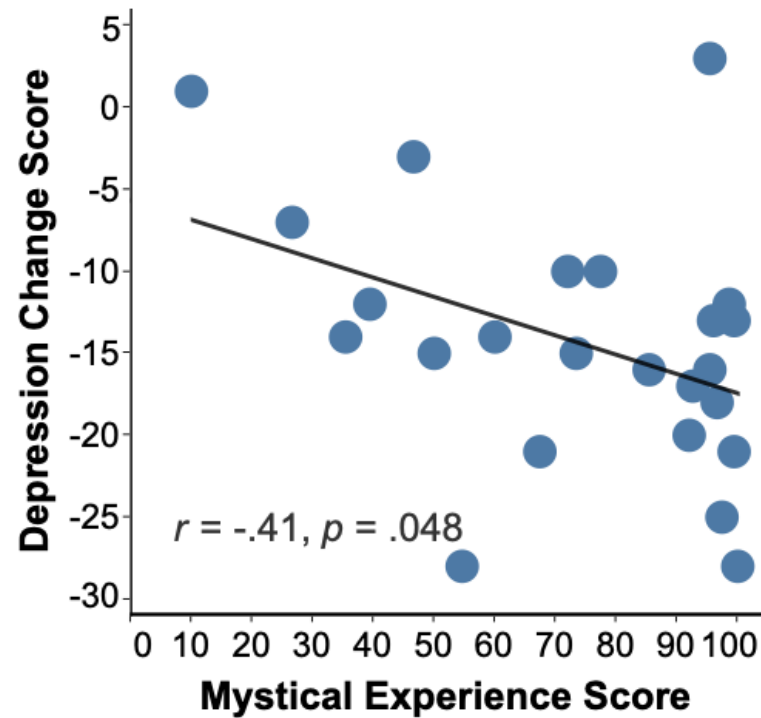
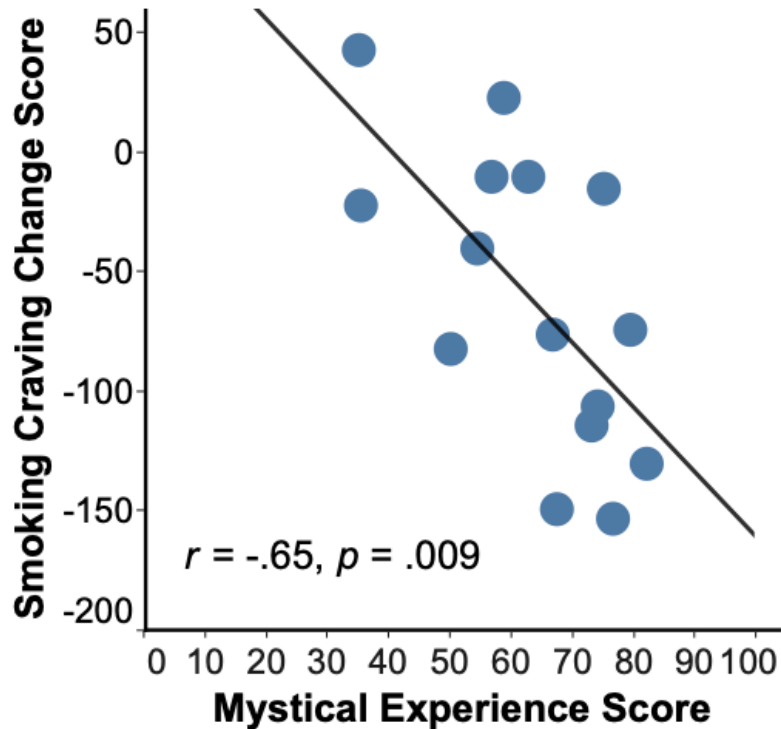
Loss of your usual sense of time or space.

Factor 4: Ineffability

Sense that the experience cannot be described adequately in words.

“[I experienced a] feeling of no boundaries, where I didn’t know where I ended and where my surroundings began. Somehow, I was able to comprehend what oneness is”

Mystical Experience on Sessions Days Predicts Later Therapeutic Outcomes



- History of Psychedelic Research
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- **Treatment Efficacy**
 - Substance Use Disorders
 - Tobacco Use Disorder
 - Alcohol Use Disorder
 - On-Going Clinical Trials
- Future Directions



Substance Use Disorders (SUD)



Nicotine Use Disorder (NUD)

- Open-Label

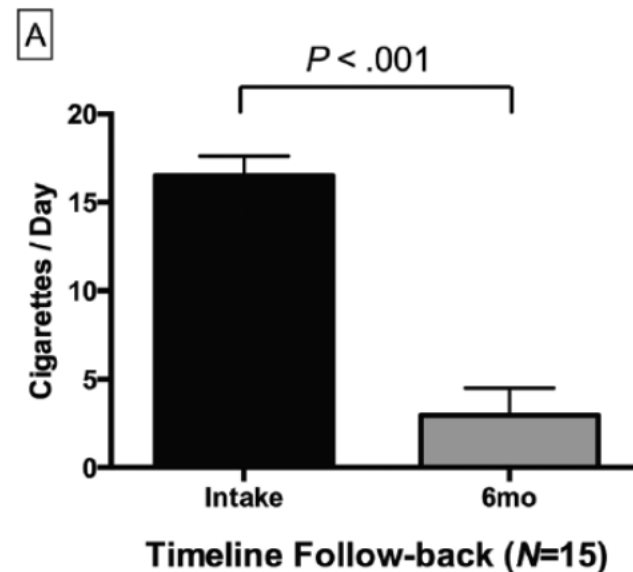


Nicotine Use Disorder (NUD)

- Open-Label
- N = 15
- Two doses of psilocybin (20 mg/70 kg & 30 mg/70 kg)
- Paired with 15-week smoking cessation program

Nicotine Use Disorder (NUD)

- *Open-Label*
- 12 of 15 (80%) showed biologically confirmed abstinence at 6 months
 - (current behavioral and/or pharmacological therapies are about 35% effective)



Nicotine Use Disorder (NUD)

On-Going

- **Psilocybin-facilitated Smoking Cessation Treatment: A Pilot Study**
 - Johns Hopkins University School of Medicine
 - Randomized controlled trial (control = NRT, nicotine patch)
 - ClinicalTrials.gov Identifier: NCT01943994
 - N = 95 expected enrollment

- **5-HT_{2A} Agonist Psilocybin in the Treatment of Tobacco Use Disorder**
 - Multisite: Johns Hopkins University, University of Alabama, NYU
 - Randomized controlled trial (inactive placebo = niacin)
 - ClinicalTrials.gov Identifier: NCT05452772
 - N = 66 expected enrollment

Alcohol Use Disorder (AUD)

- RCT

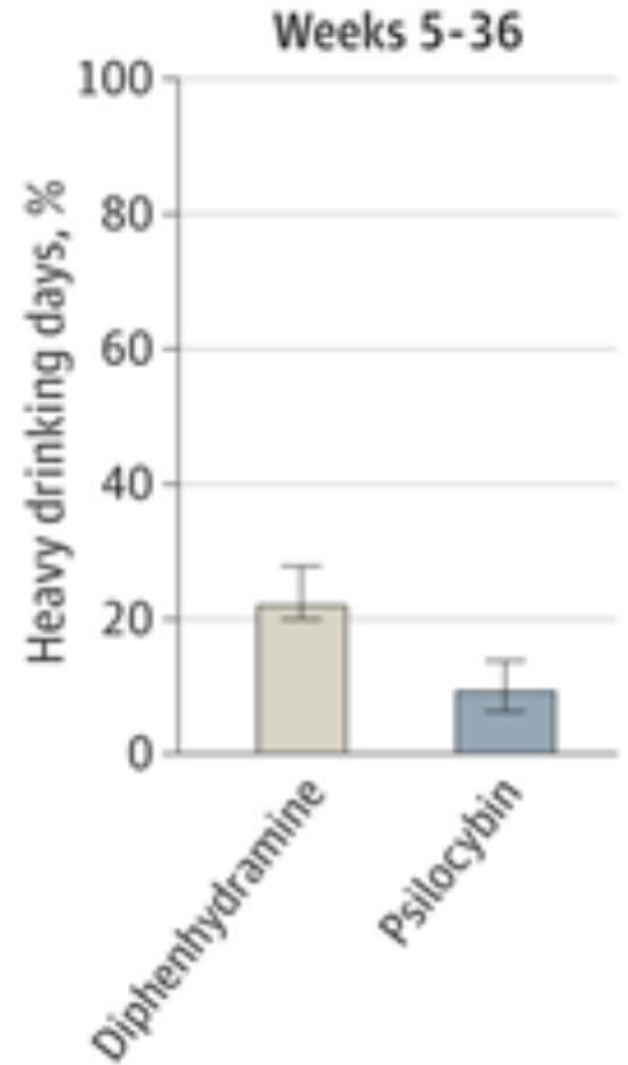


Alcohol Use Disorder (AUD)

- Randomized controlled trial (inactive placebo = diphenhydramine)
- N = 93
- Two doses of psilocybin (25 mg/70 kg & 25-40 mg/70 kg)
- Paired with 12-week manualized psychotherapy

Alcohol Use Disorder (AUD)

- RCT
- Percentage of heavy drinking days during the 32-week double-blind period was 9.7% for the psilocybin group and 23.6% (P = .01)
- Mean daily alcohol (drinks per day) lower in the psilocybin group



Alcohol Use Disorder (AUD)

On-Going

- **Clinical and Mechanistic Effects of Psilocybin in Alcohol Addicted Patients**
 - University of Zurich
 - RCT
 - N = 60 expected enrollment
 - ClinicalTrials.gov Identifier: NCT04141501

- **Psilocybin Treatment of Major Depressive Disorder with Co-occurring Alcohol Use Disorder**
 - Johns Hopkins University School of Medicine
 - RCT
 - N = 90 expected enrollment
 - ClinicalTrials.gov Identifier: NCT04620759

Alcohol Use Disorder (AUD)

On-Going

- **Psilocybin-assisted Therapy for Treatment of Alcohol Use Disorder**
 - Copenhagen University
 - RCT
 - N = 90 expected enrollment
 - ClinicalTrials.gov Identifier: NCT05416229

- **Psilocybin-assisted Psychotherapy for Treatment of Alcohol Use Disorder**
 - University of Iowa
 - RCT
 - N = 20 expected enrollment
 - ClinicalTrials.gov Identifier: NCT05421065

Opioid Use Disorder (OUD)

On-Going

- **Adjunctive Effects of Psilocybin and Buprenorphine**
 - University of Wisconsin
 - RCT
 - N = 10 expected enrollment
 - ClinicalTrials.gov Identifier: NCT04161066

- **Psilocybin for Opioid Use Disorder in Patients on Methadone Maintenance With Ongoing Opioid Use**
 - Johns Hopkins University School of Medicine
 - RCT
 - N = 92 expected enrollment
 - ClinicalTrials.gov Identifier: NCT05242029

Cocaine Use Disorder (CUD)

On-Going

- **Psilocybin-facilitated Treatment for Cocaine Use: A Pilot Study**
 - University of Alabama, Birmingham
 - RCT
 - N = 40 expected enrollment
 - ClinicalTrials.gov Identifier: NCT02037126

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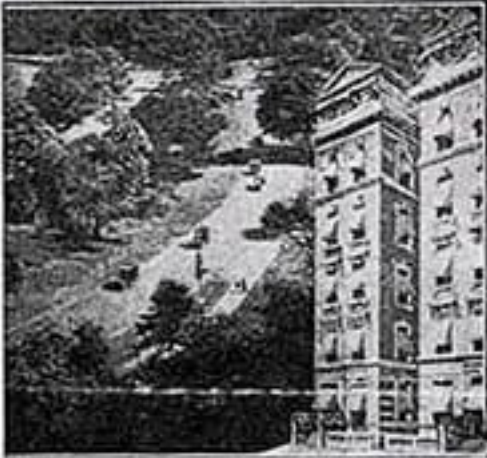


Integrating Psychedelics with SUD Treatments

CHARLES B. TOWNS HOSPITAL
293 Central Park West New York, New York
For ALCOHOLISM and DRUG ADDICTION

ANY PHYSICIAN having an addict problem is invited to write for Hospital literature.

This institution has specialized in addictions for over 30 years. Its method of treatment has been fully described in THE JOURNAL A. M. A.; in The Handbook of Therapy, from the A. M. A. Press; and in other scientific literature. The treatment is a regular hospital procedure, and provides a definite means for eliminating the toxic products of alcohol and drugs from the tissues. A complete Department of Physical Therapy, with gymnasium and other facilities for physical rebuilding, is maintained. Operated as an "open" institution. Physicians are not only invited but urged to accompany and stay with their patients.

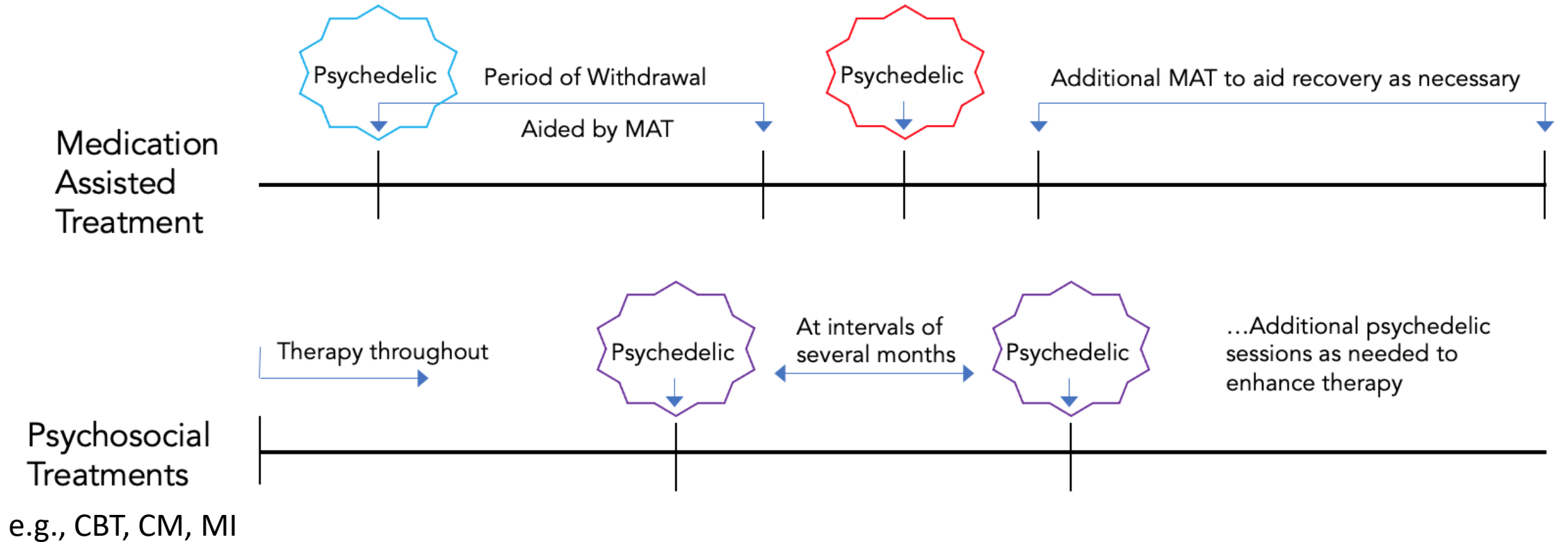


Located Directly Across from Central Park



- Bill Wilson – Founder of AA and 12-step programs
- Belladonna (scopolamine)
- LSD

Integrating Psychedelics with SUD Treatments



Small vertical text on the left side of the label, partially obscured.

TAKE 1 CAPSULE BY

Psilocybin 25 mg/70 kg

Quantity: 1 CAP

Do Not Use After: 1/31/20



VIEWPOINT

Psychedelics in Psychiatry—Keeping the Renaissance From Going Off the Rails

VIEWPOINT


Preparing for the Bursting of the Psychedelic Hype Bubble

JAMA The Journal of the
American Medical Association

Yaden, Yaden, & Griffiths, 2020, *JAMA Psychiatry*

Yaden, Potash, & Griffiths, 2022, *JAMA Psychiatry*

Thank you!

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 [@ExistWell](https://twitter.com/ExistWell)

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