



Psychedelic Medicine: Old Compounds, New Beginnings

July 14, 2021

Housekeeping /Logistics



- This webinar will be recorded and shared with you via email.
- To post a question or a comment, please use the Q&A feature in Zoom.
- Please refer to the Bio Book in chat to read more about our panelists.

NEHI: Network for Excellence in Health Innovation



NEHI is a national nonprofit, nonpartisan organization with member organizations from diverse sectors of U.S. health care.

We are committed to developing pragmatic policy and practice recommendations that incorporate different industry perspectives to improve productivity, drive better outcomes and address unmet needs through innovation.

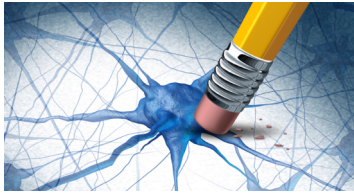


Webinar Overview



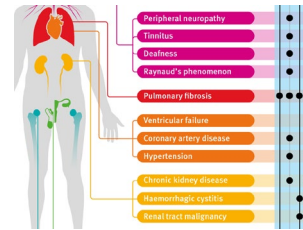
Mike Apkon, MD, PhD, MBA
President,
Sand Street Advisors
Member of the Board, NEHI
(Moderator)

CURRENT THERAPIES ARE INEFFECTIVE [IN SOME CASES MAKING IT WORSE]



Remission/Relapse Rates

Remission rates \leq 50% for depression
Long term remission < 1%
Small effect size for psycho-therapy
High rates of relapse



Negative Side Effects

High rate of non-compliance b/o side effects



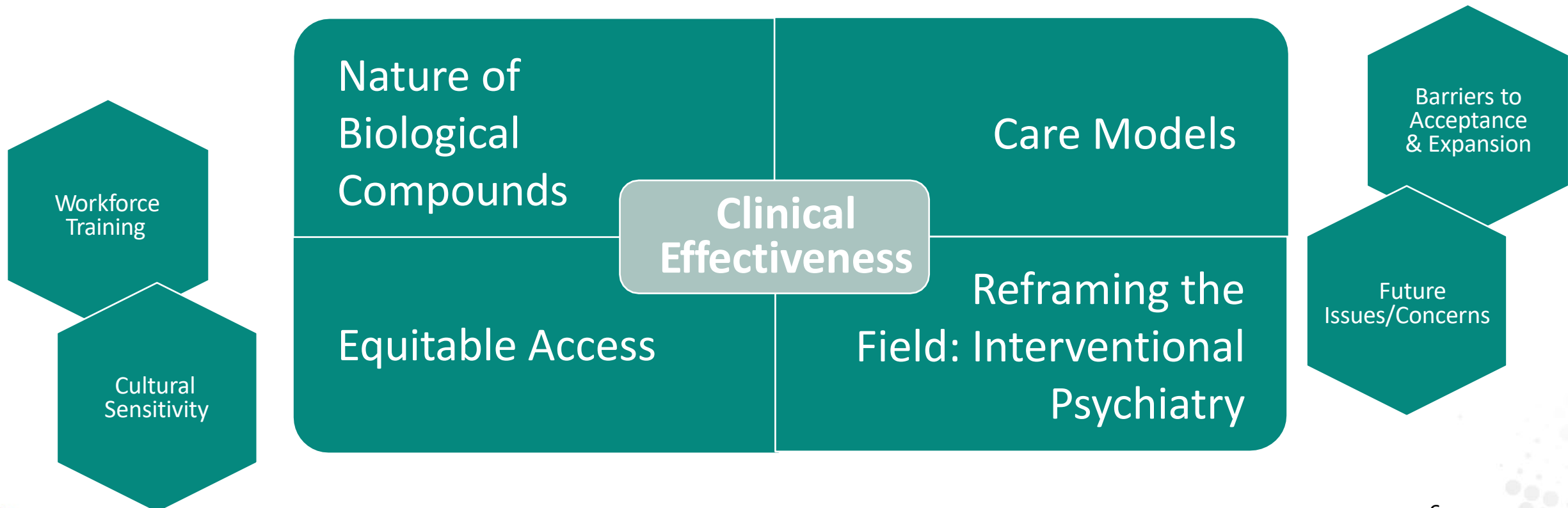
High Treatment Variability

Lack of standardization in medical or non-medical regimens
Access challenging

Few novel therapeutics/drugs have progressed to Phase 3 clinical trials or regulatory approval in the last 40 years

Webinar Goal

- Increase awareness and understanding of the issues involved in introducing psychedelic therapies in the behavioral and mental health ecosystem
- Assess implications for other innovation opportunities in this space



Agenda Items

- Panelist Introductions & Kick-offs (30 min)
 - John Krystal, MD
 - Joseph del Moral
 - Joy Sun Cooper, MBA
 - Neil Leibowitz, MD, JD
- Panel Discussion & Q&A (20 min)
 - Mike Apkon, MD, PhD, MBA
 - Dan Grossman
- Attendee Questions (10 min)
- Panelist Closing Comments (5 min)

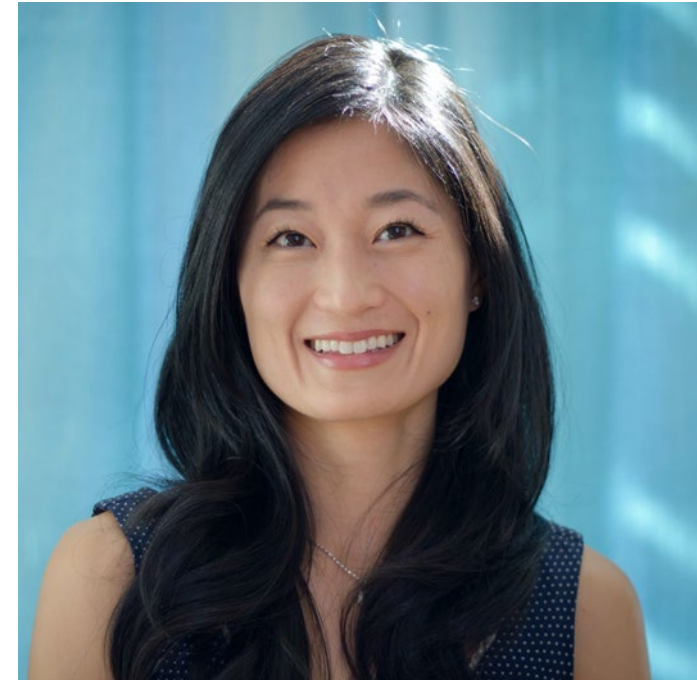
Our Panel



John Krystal, MD
Chair and Chief of Psychiatry,
Yale-New Haven Hospital



Joseph del Moral
Co-Founder and Chief Executive Officer,
Field Trip



Joy Sun Cooper, MBA
*Head of Commercialization and Patient
Access,*
MAPS Public Benefit Corporation



Our Panel



Neil Leibowitz, MD, JD
Chief Medical Officer,
Beacon Health Options



Dan Grossman
Managing Director & Senior Partner,
Boston Consulting Group
(Observations)



Ketamine, Psilocybin, and MDMA: Why these drugs, now?

John Krystal, MD
Yale-New Haven Hospital

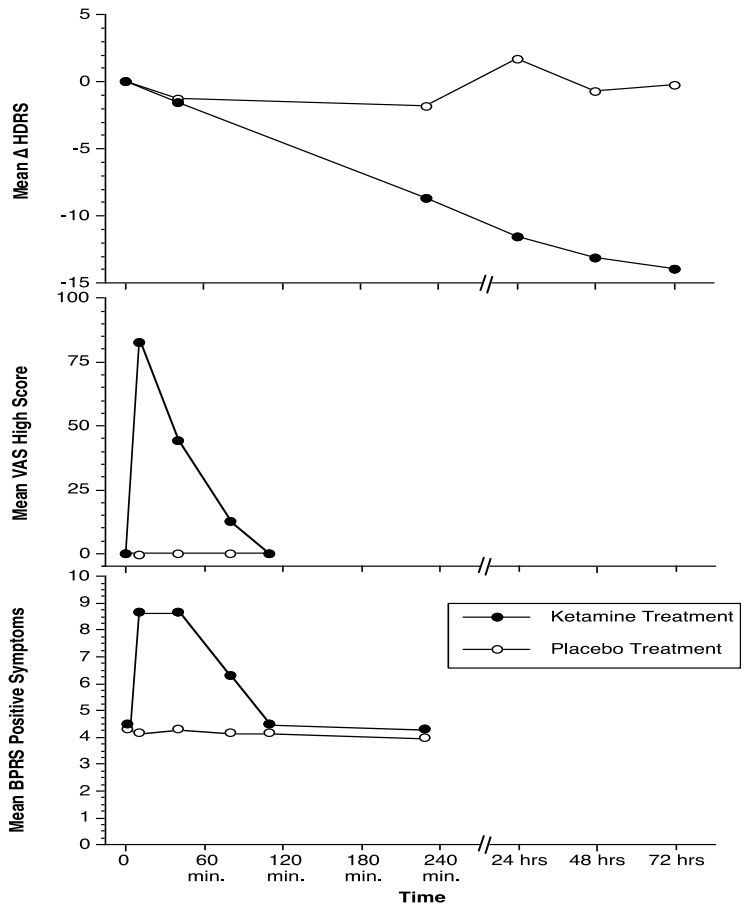
Ketamine, Psilocybin, and MDMA: Why these drugs now?

John Krystal, M.D.

Yale University

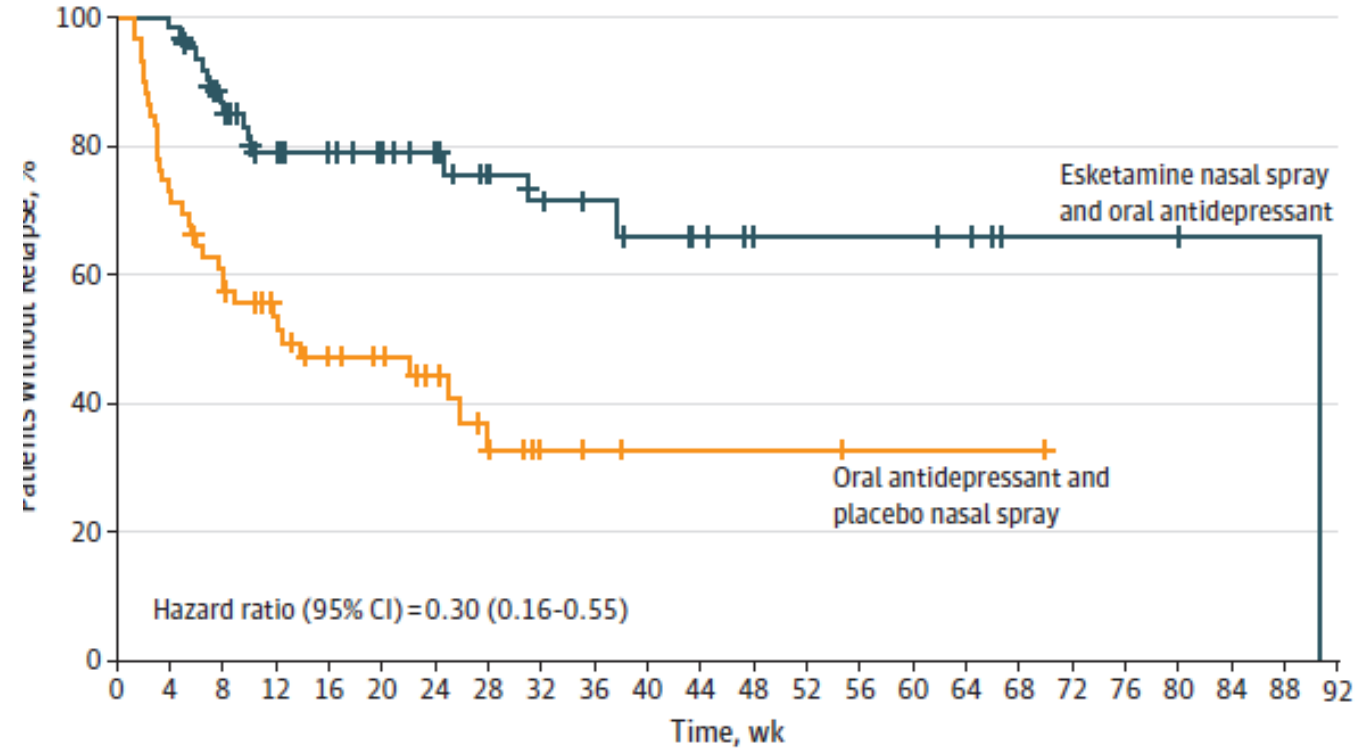
Antidepressant effects of ketamine: FDA approved for Treatment-resistant depression, March 2019

Rapid initial response



R. Berman et al. Biol Psychiatry 2000

Maintenance of benefit and protection against relapse

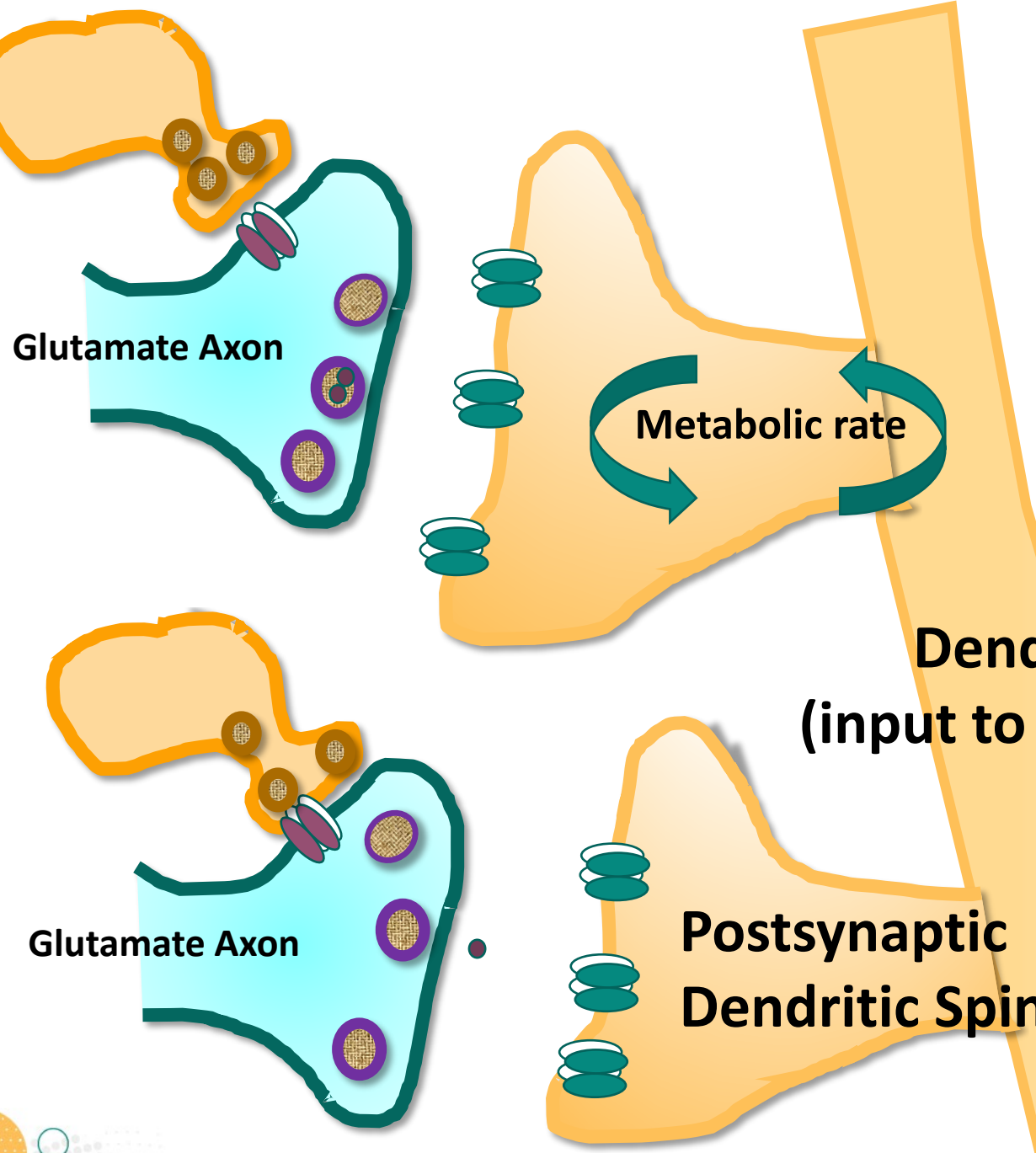


Daly EJ et al. JAMA Psychiatry 2019

Esketamine (Spravato): Yale experience

- Opportunities:
 - High rates of efficacy, high satisfaction with treatment
 - Patient interest outstrips availability
- Barriers limit uptake:
 - REMS: Clinic-based treatment (addiction, side effects)
 - Reimbursement for Spravato more common than Ketamine
 - Inadequate public insurance reimbursement creates disincentives, disparities
- Clinic structures overcome obstacles: limited by space and staff
 - Adequate space and nursing support (3 pts/nurse)
 - 2-3 hr/treatment
 - Efficient Cohorting: IPS Clinic – Ketamine (2 d/wk) and ECT (3 d/wk); some KET on ECT days
 - "Ketamine days": 4 cohorts per clinic day; up to 32 pts/day
 - Current Esketamine/Ketamine throughput: up to 50 patients/week

Glutamate synaptic abnormalities in depression



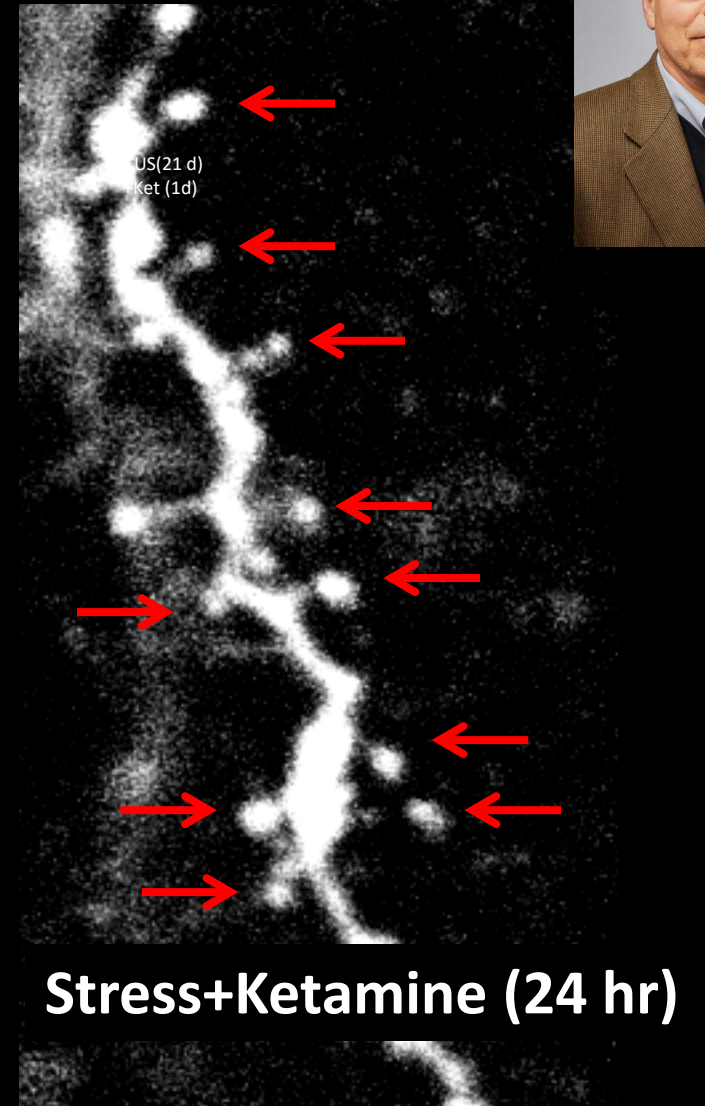
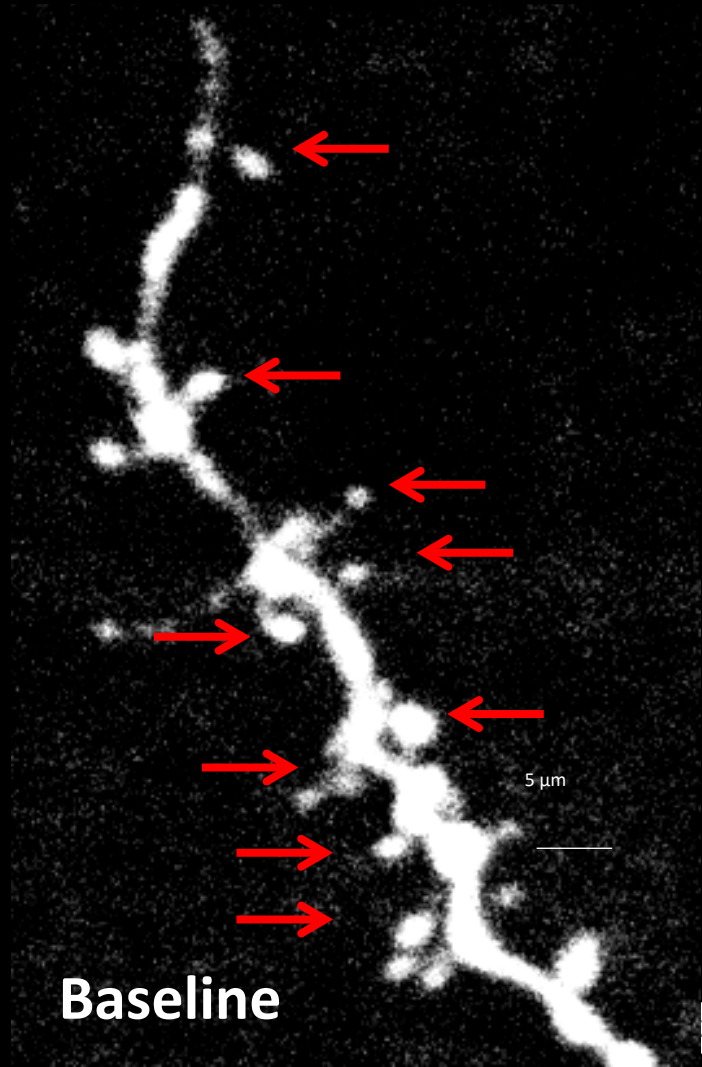
Reduced synaptic strength

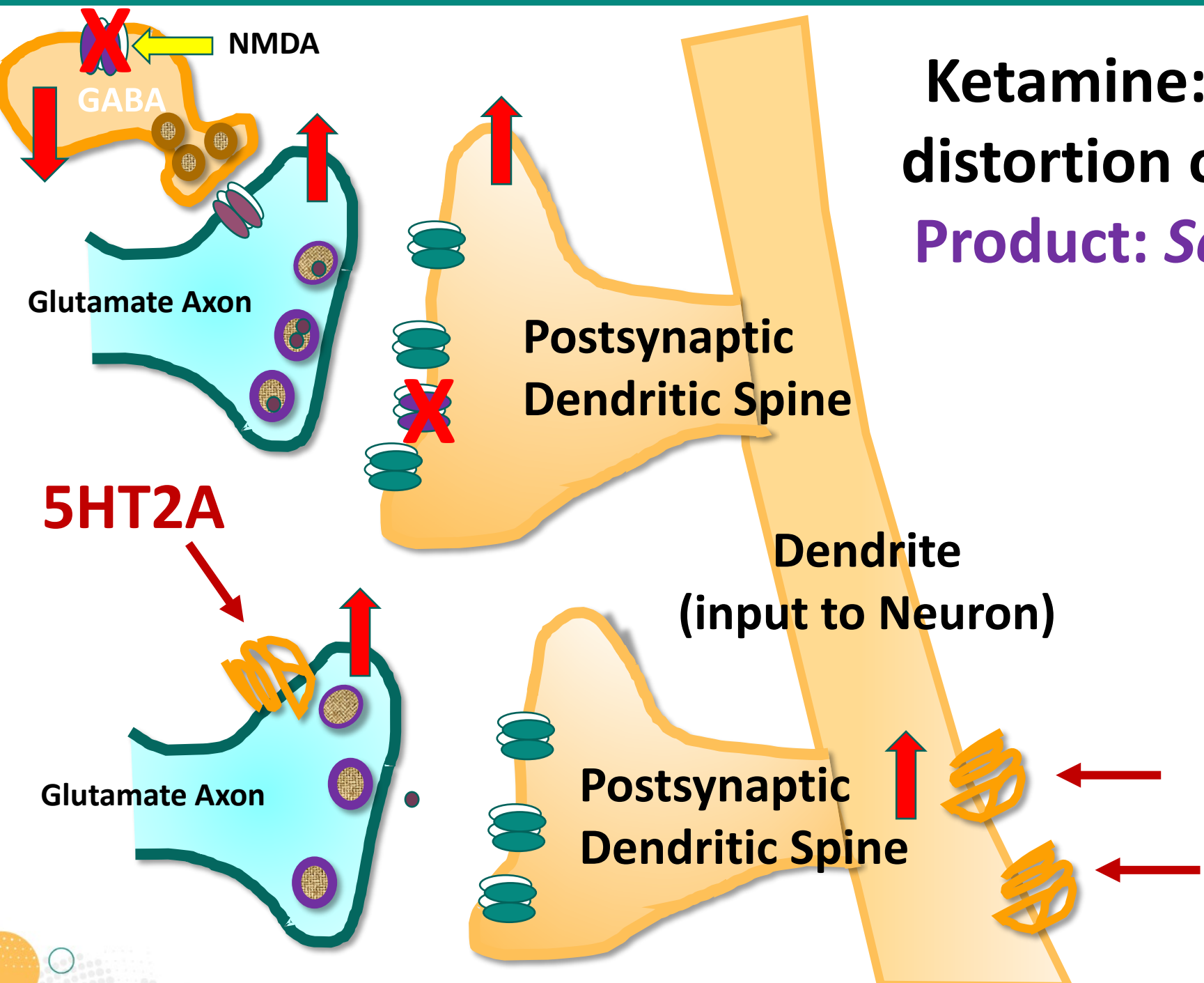
Reduced synaptic density

Abdallah et al. MedRvix 2021
Duman et al. Neuron 2019
Holmes et al. Nat Comm 2019

Ketamine stimulates rapid regrowth of synaptic connectivity in these regions

Duman and Aghajanian Science 2012





Ketamine: Disinhibition and distortion of cortical activity.

Product: *Sensory Distortions*

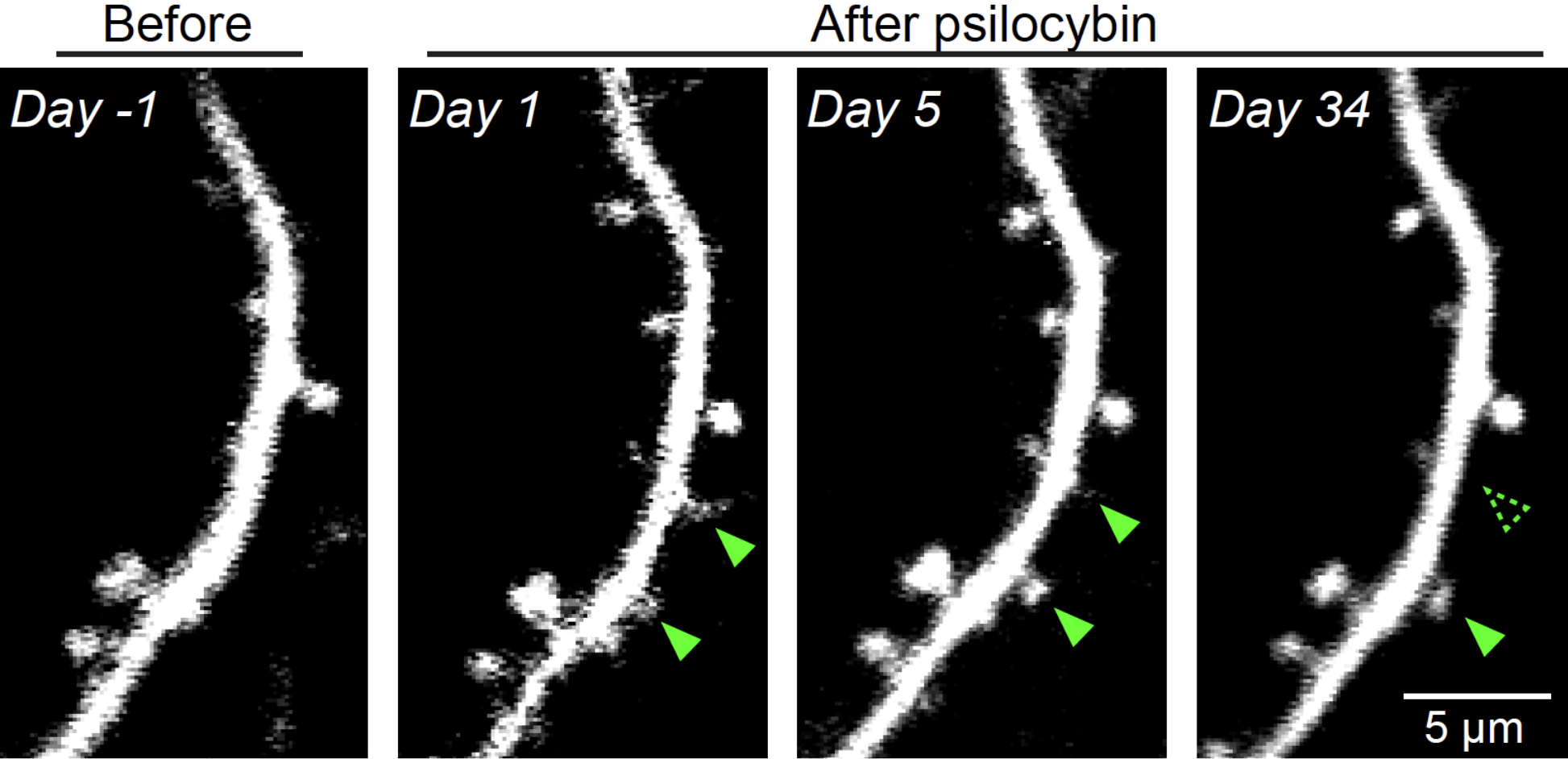
↓ neuroplasticity

Psilocybin: Direct activation via 5HT2A receptors

Product: *Hallucinations*

↑ neuroplasticity

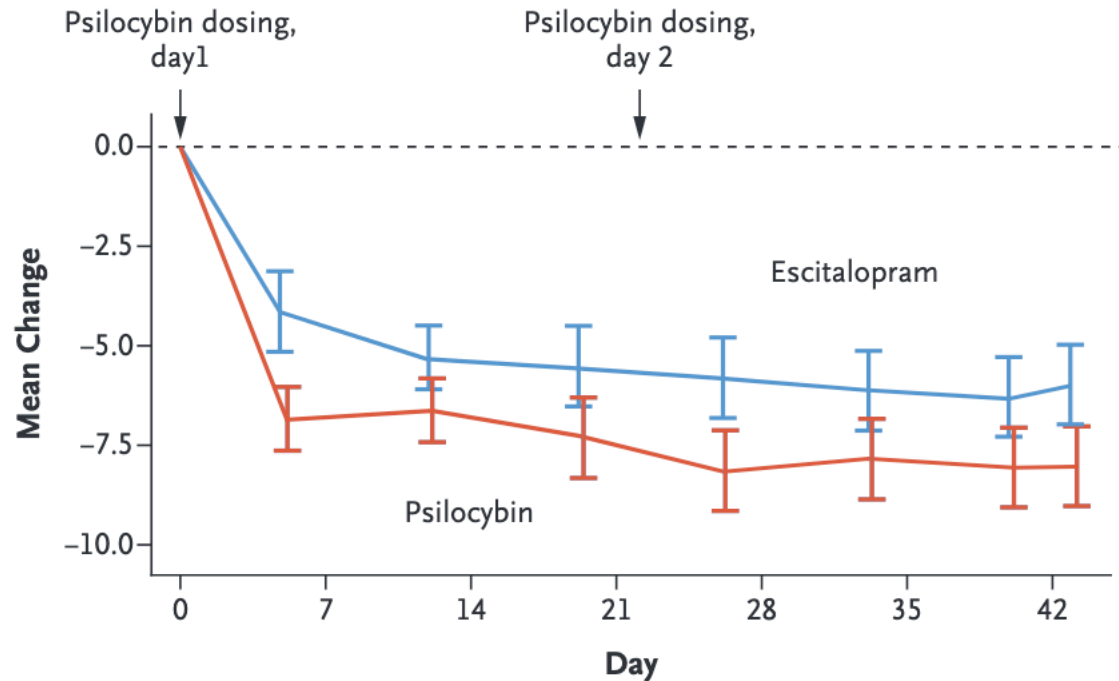
Psychedelics also cause brain synapses to regrow



Psilocybin (n=30) vs. Escitalopram (n=29) for MDD

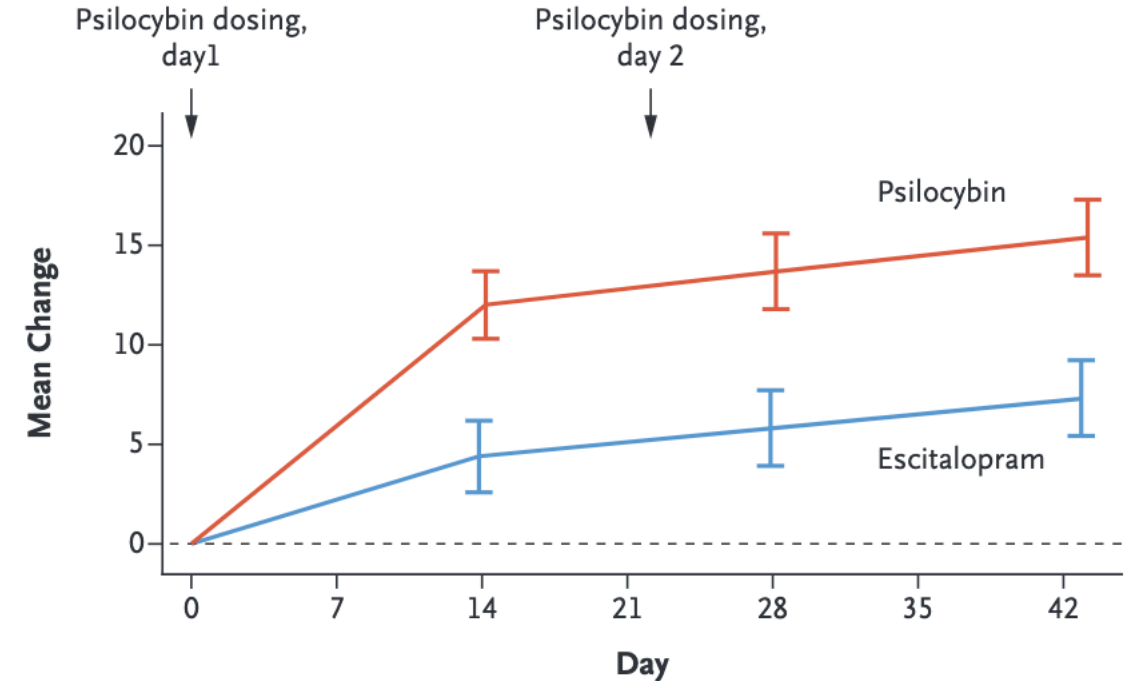
Depression Scale

A Change from Baseline in QIDS-SR-16 Score



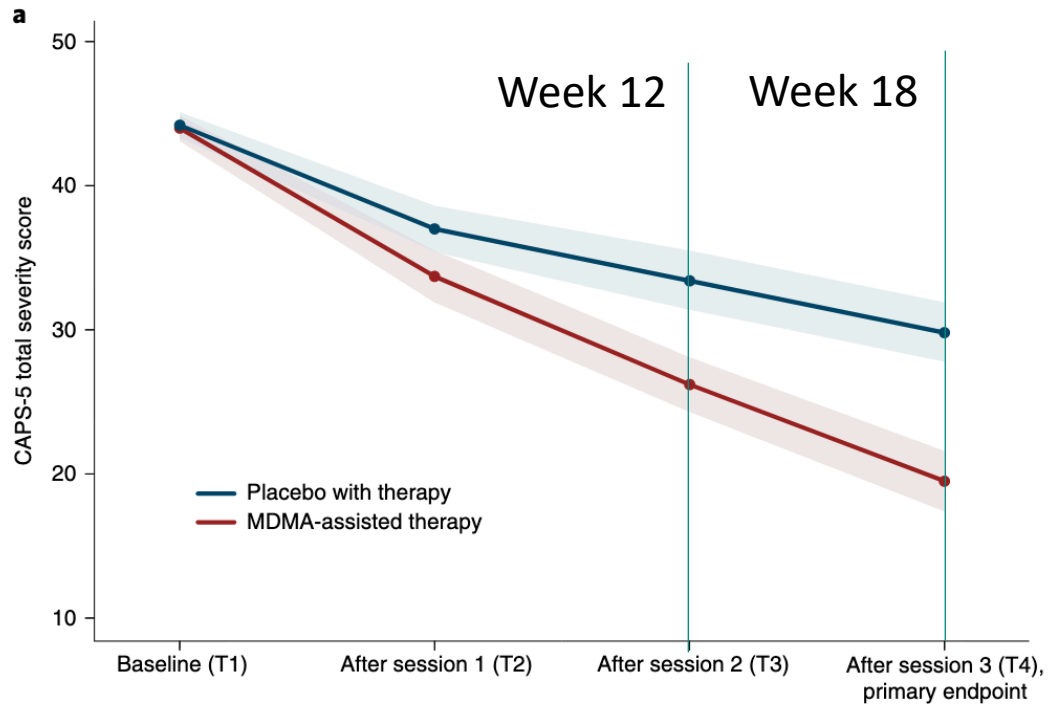
Well-Being Scale

B Change from Baseline in WEMWBS Score

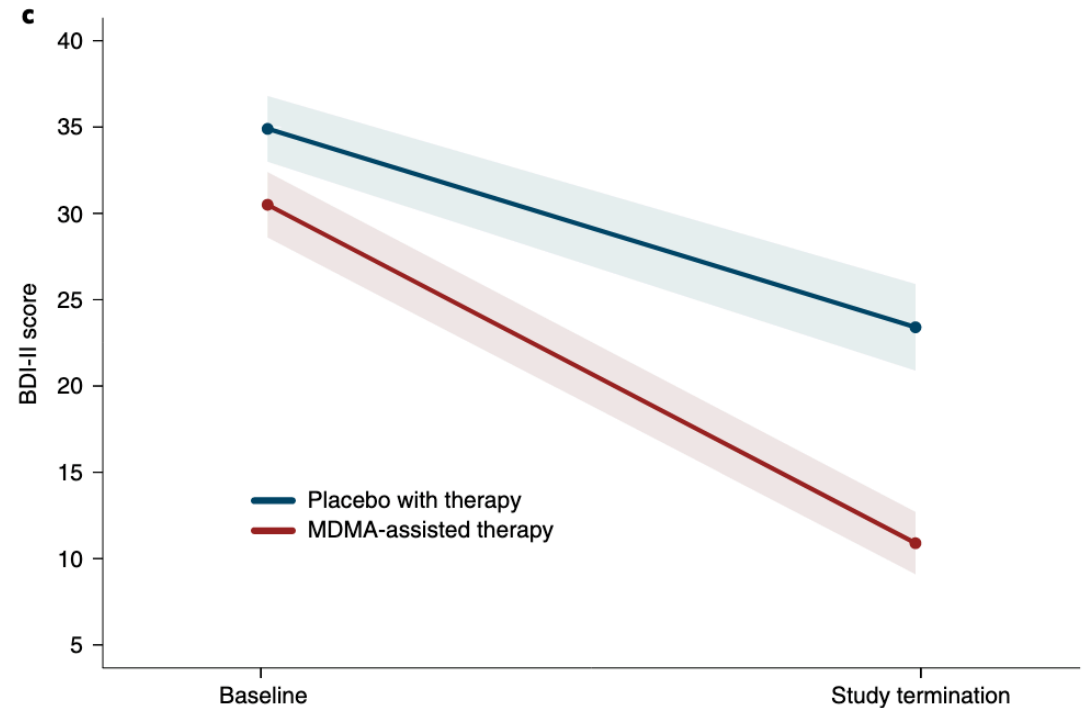


Methylenedioxymethamphetamine (MDMA) assisted therapy for PTSD (Mitchell et al. Nat Med 2021; 3 treatments, 6 weeks apart, n=90)

Reduction in PTSD Severity



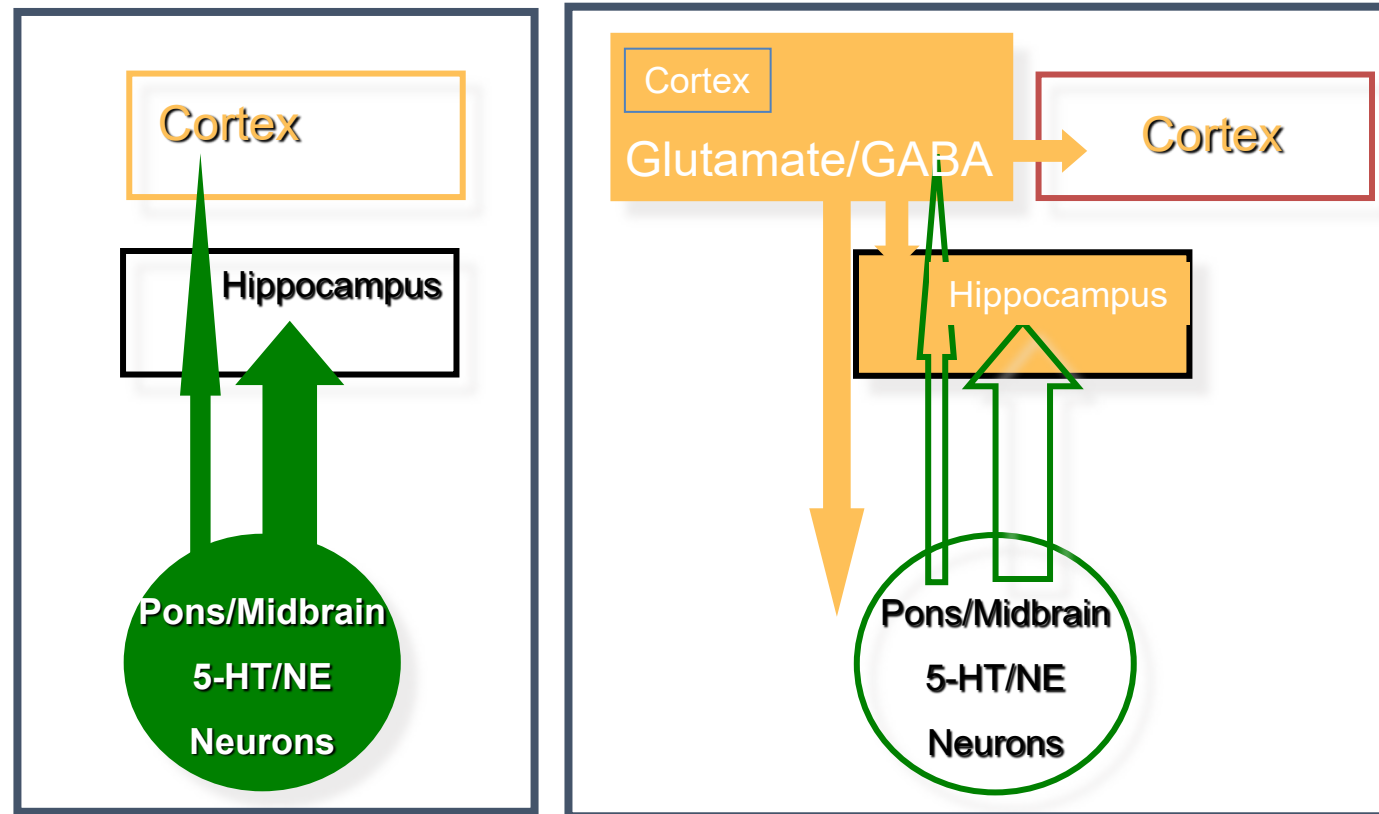
Reduction in Depression Severity



Methylenedioxymethamphetamine (MDMA)

- Multiple targets (monoamine transporters, vesicular transporter, TAAR1)
- A serotonin-releasing amphetamine verses “regular” amphetamine
 - Dexamphetamine (Adderall): Norepinephrine>Dopamine>Serotonin
 - MDMA: Serotonin>Dopamine>Norepinephrine
- Alters perception, expectations, and emotions: prosocial
 - Euphorogenic/stimulating
 - Amplifies positive stimuli, suppresses negative stimuli
 - Amplifies positive responses and suppresses negative responses to social stimuli
 - Promotes positive attributions to self and others, suppresses negatives
- Mechanisms not clear, may involve 5HT2A, 5HT1A, etc. stimulation in circuits regulating mood, self-perception, and social cognition

Broadening perspective: serotonin/midbrain and glutamate and cortico-limbic circuits





field trip
health

Field Trip Health



 field trip

Who we are

Field Trip Health is a **new kind of mental health solution.**

- Two operating divisions
 - Discovery - developing novel psychedelic drugs through the FDA approval process.
 - Health - largest provide of psychedelic assisted psychotherapy in the world with clinics across North America.
- Publicly traded on the TSX and have applied to list on the NASDAQ.
- Raised over \$110 million, from some of the leading biotech/healthcare investors in the country.



The challenge

Depression, Anxiety, PTSD

According to the CDC, in a 3-month period, patients with depression miss an average of 4.8 workdays and suffer 11.5 days of reduced productivity¹

85% of employees say their mental health struggles at work negatively affect home life²

78% of workforce says that the pandemic has negatively affected their mental health²

76% believe their companies should do more to support their mental health²

1. CDC Workplace Health Promotion -

<https://www.cdc.gov/workplacehealthpromotion/health-strategies/depression/evaluation-measures/index.html>

2. Oracle Workplace Intelligence - <https://www.oracle.com/a/ocom/docs/oracle-hcm-ai-at-work.pdf>

Current antidepressant approaches are failing most people.

There has not been significant innovation in depression treatments in decades

- Low responder rates
- Poor benefit/risk with chronic daily dosing
- High non-adherence and relapse rates

6-8 wks

Onset of efficacy

30%



Response rates

+2 

point improvement on
Hamilton Depression
Score (out of 52)

Side Effects

Addiction, Insomnia, Agitation,
Loss of Libido, Violent Impulses,
Suicidal Impulses

75% 

non-adherence rate

40-71% 

relapse rates



A new solution

Ketamine-assisted psychotherapy



What we do

We offer FDA- approved ketamine with a tightly integrated program of psychotherapy for hard-to-treat mental health conditions.

- Depression
- Anxiety
- PTSD
- Substance-use disorders

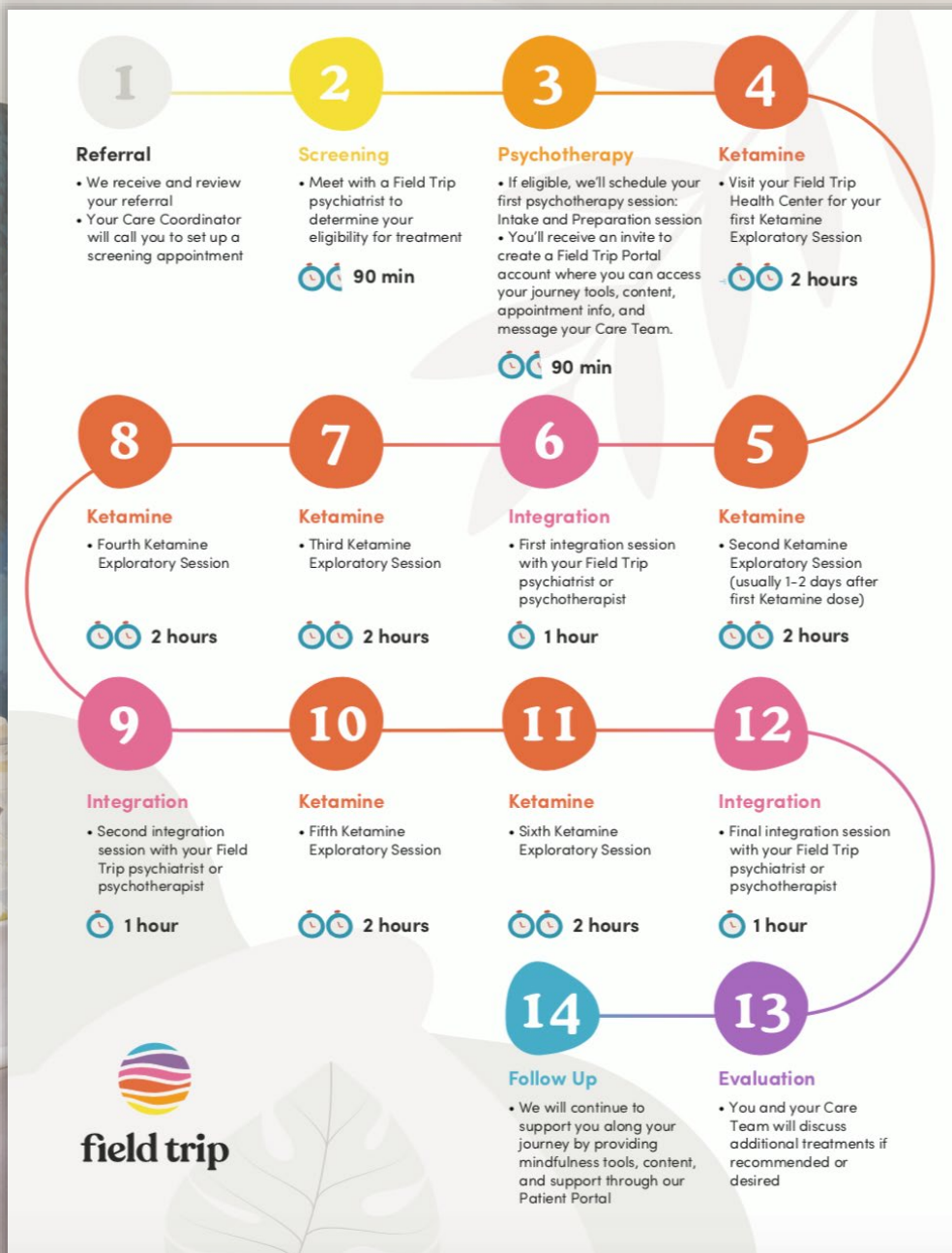
The program

Field Trip Health's personalized approach to ketamine-assisted psychotherapy

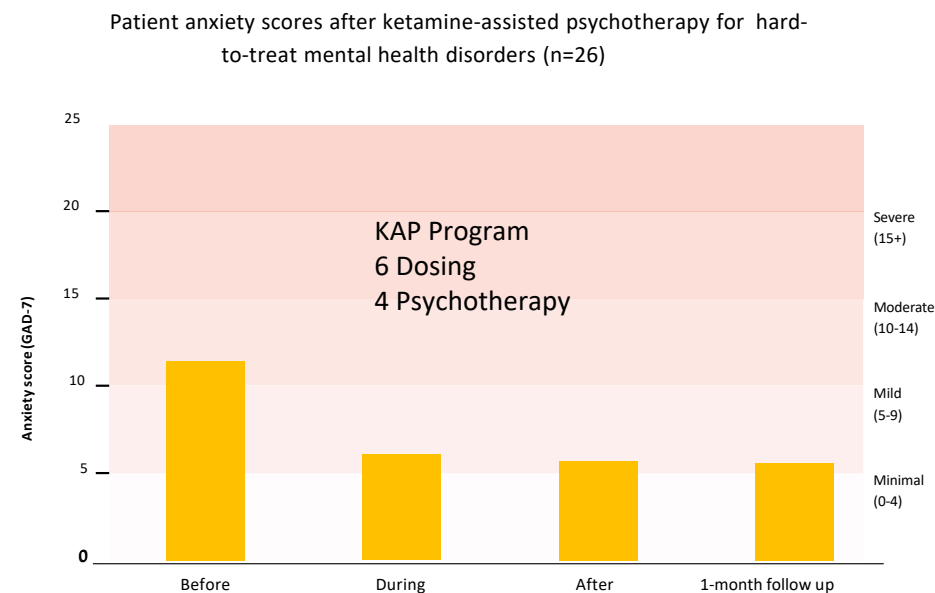
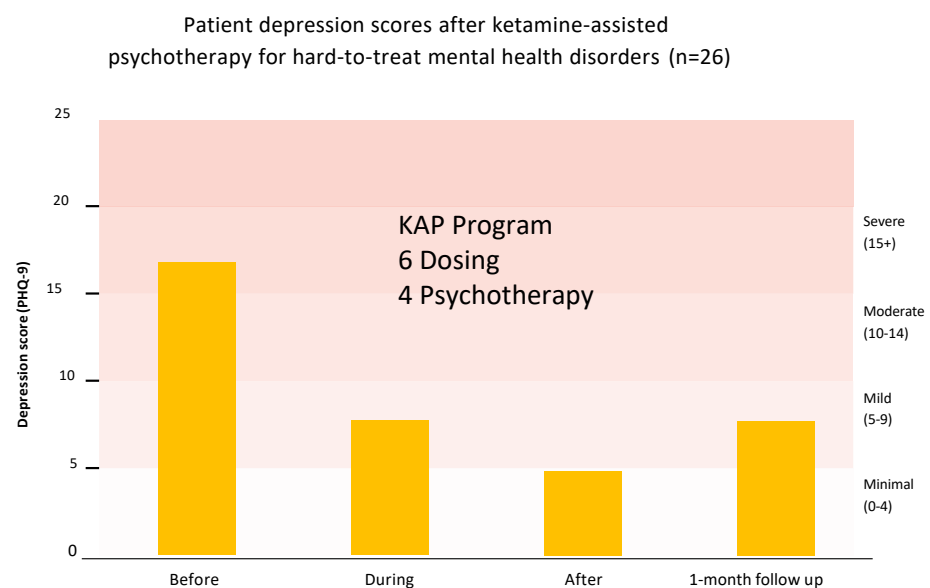
We recognize the value of combining the fast-acting, acute antidepressant effects of ketamine with an evidence-based psychotherapeutic approach for sustained improvements in mental health and patient self-efficacy.

To achieve these sustainable outcomes, we augment ketamine administration with client-centered talk therapy techniques (e.g. cognitive behavioral therapy, motivational interviewing, behavioral activation), as well as digitally-delivered educational and interactive content, including mood-monitoring and mindfulness exercises.

A typical patient journey is illustrated by the infographic on the left.



Delivering significant quality of life improvements for our patients.



Results not peer-reviewed. The typical KAP program duration is 3-4 weeks. "Before" data are based on surveys taken at psychiatric consultation; where data are missing, surveys from psychologist intake session are supplemented.



Cost and productivity gains

Treatment Programs

- Cost: Approx. \$5000 for the Core program, some insurance coverage
- Structure of Core Program: 1 preparatory session; 6 ketamine dosing + therapy sessions; 3 integration therapy sessions

Productivity gains

- Studies¹ show that for every 1 point increase in PHQ-9 there is a productivity loss of 1.65%
- Patients who undergo Field Trip's ketamine assisted psychotherapy have an average reduction of 8.6 points on the PHQ-9 scale.
- Many of our patients have been able to return to work after being on disability leave.

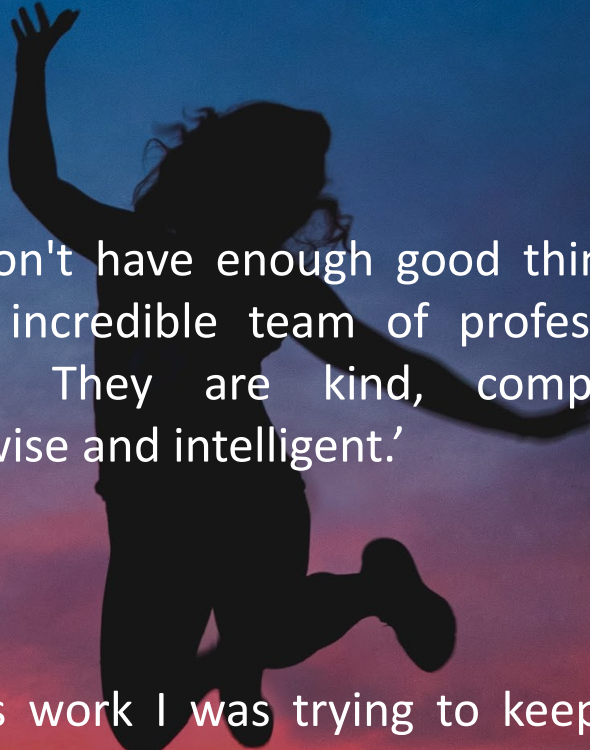
1. Severity of Depression and Magnitude of Productivity Loss –
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3133577/>



Testimonials

'For the first time I was going about my life without that pit in my stomach, without the waves of fear roiling in my chest, without feeling my throat constrict at the simple thought of having to go to the grocery store. That, in itself, was amazing.'

'FT was one of the few places that I felt truly and consistently viewed me holistically, as a full person with passions, hobbies, and dreams outside of simply getting better.'

A silhouette of a person with long hair, jumping joyfully with arms raised and one leg bent, set against a vibrant sunset sky with shades of orange, red, and purple. The person is positioned on the right side of the frame, appearing to be in mid-air.

'I simply don't have enough good things to say about the incredible team of professionals at Field Trip. They are kind, compassionate, incredibly wise and intelligent.'

'Before this work I was trying to keep walls up and people out, now I feel safe to let the walls down and people in.'



Our clinics



State-of-the-art mental health centers across the USA and Canada

Current Locations:

- New York
- Chicago
- Los Angeles
- Atlanta
- Houston
- Toronto

Locations Under Construction:

- Seattle
- San Diego
- San Carlos
- Austin
- Washington, DC
- Fredericton, NB
- Many more...

Questions & Challenges

How do you scale access to these types of treatments? Cost and lack of insurance coverage are the main barriers to access.

How will psychedelic assisted psychotherapy integrate into the existing ecosystem? Need for specialized centers?

What are the implications for clinicians, drug developers, payers, and patients?





Thank You!

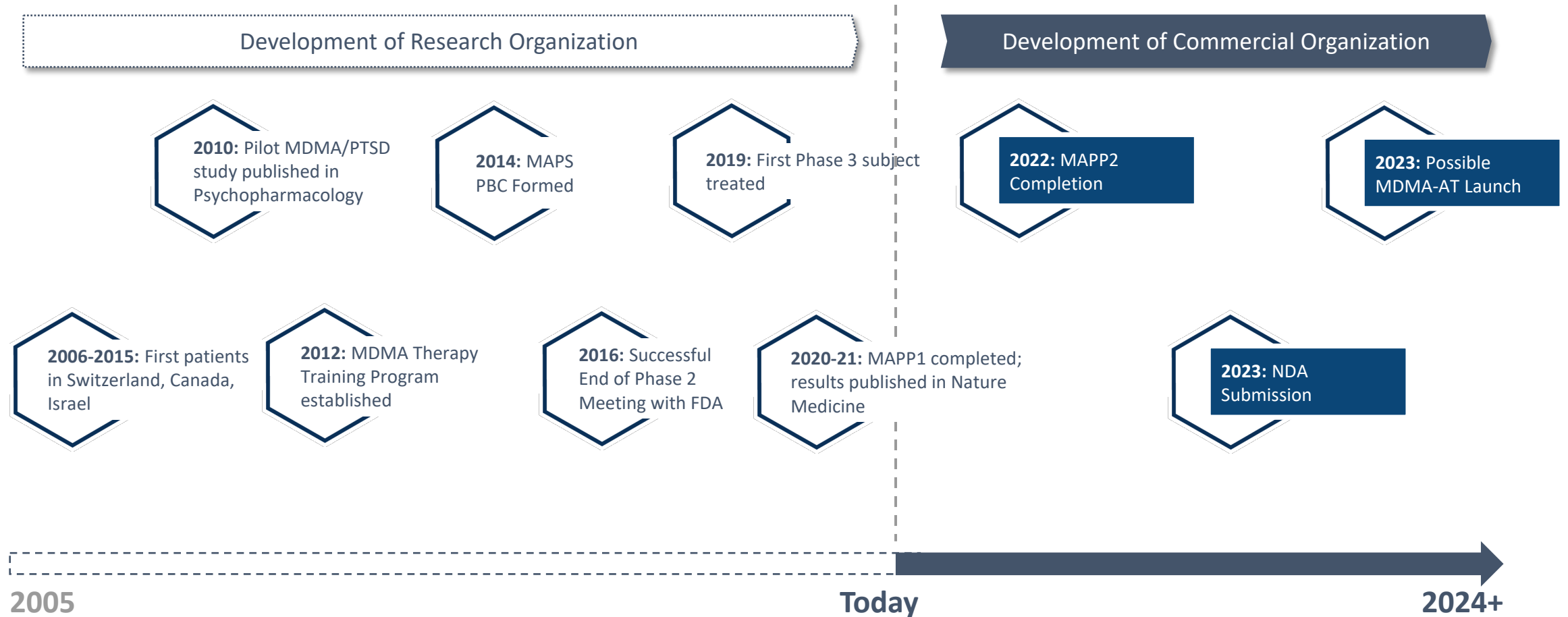
Joseph del Moral
CEO

joseph@fieldtriphealth.com

We are rapidly approaching the possible launch of MDMA-assisted therapy as an approved treatment for PTSD



Evolution of MAPS Public Benefit Corporation

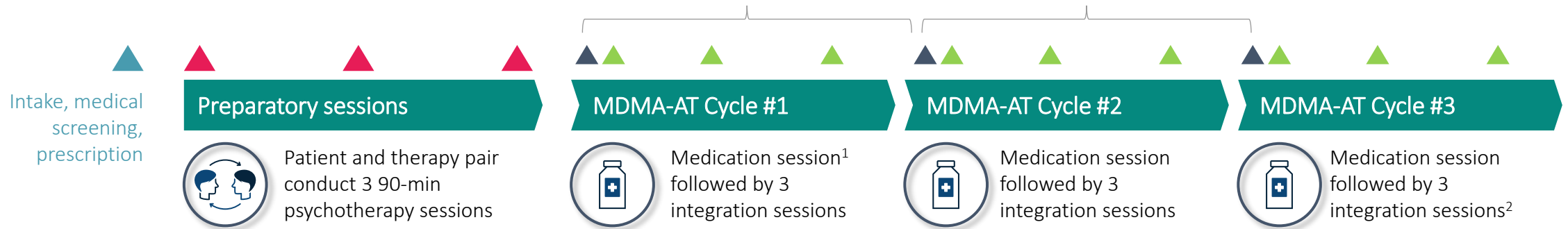


MDMA-assisted therapy protocol

In Ph. 3 trials, 3 therapy sessions with MDMA, 12 therapy sessions without MDMA, over ~14 weeks

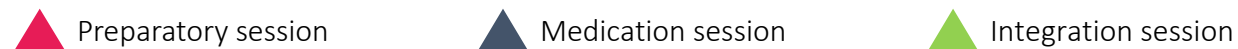


At least 21 days required between MDMA Medication sessions



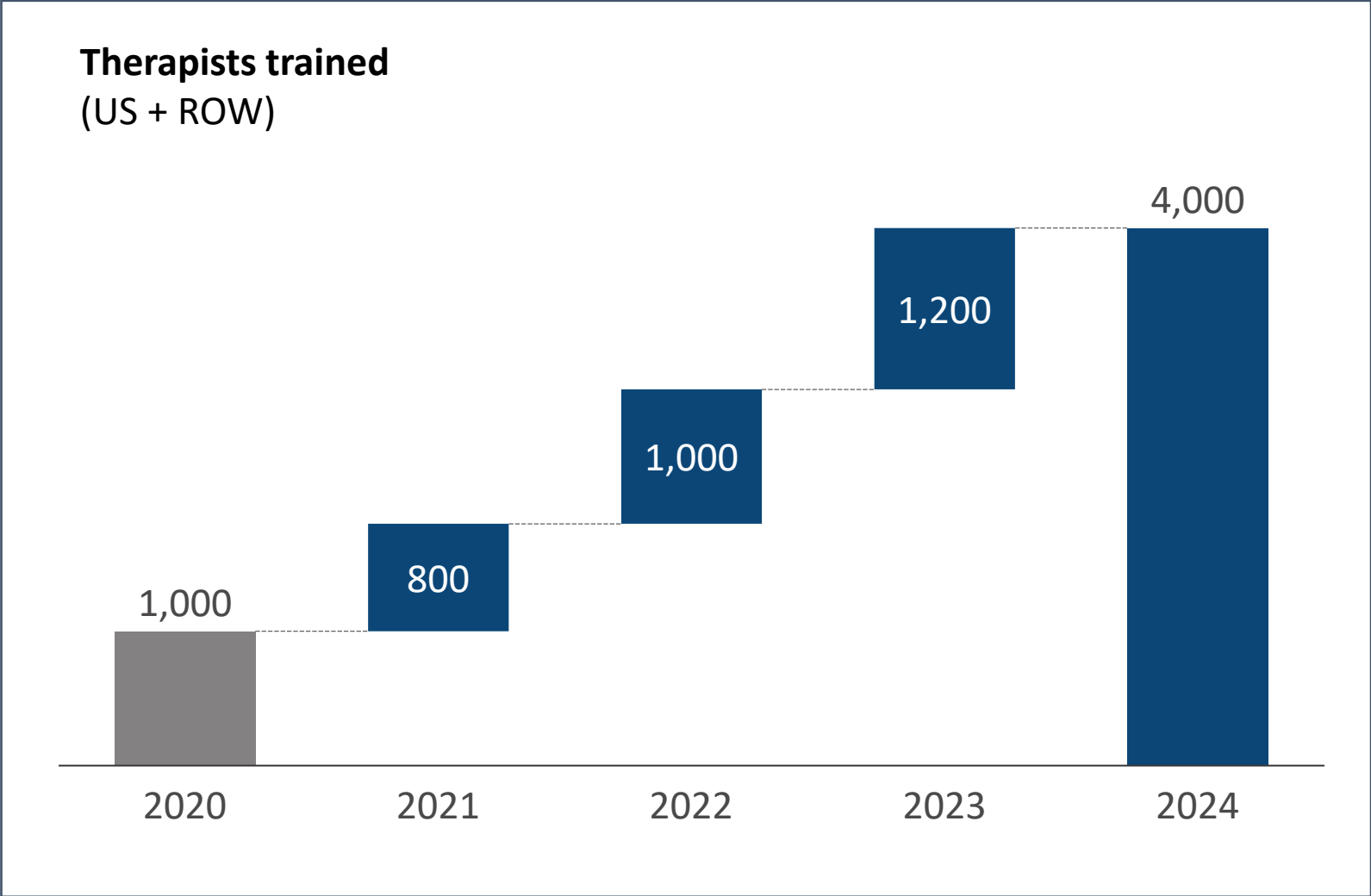
In each medication session, patient self-administers an initial dose of MDMA followed by a supplemental dose of MDMA 1.5-2 hours later. Sessions last for ~8 hours and are administered with psychotherapy.

3 integration sessions follow. The first integration session is typically the following day. The remaining two occur in following weeks.



1. Also called "Treatment Session", "Dosing Session", or "MDMA Session" 2. FDA protocols optimized for 3 treatment sessions, although 2 might be sufficient for some patients

MAPS' MDMA Therapy Training Program is scaling aggressively in preparation for launch





It's not this hierarchical model, it's more like 'Can we meet somebody at this level together and collaborate and create trust and empower them to be able to understand and to know where their path is? And to really respect that path.'

**-Marcela Ot'alora,
Therapist, Co-Investigator, Trainer**

We are studying both the clinical effectiveness and cost-effectiveness of MDMA-assisted therapy



Third-party payers are likely to save money within three years by covering this form of therapy.

Covering 1,000 PTSD patients would generate \$103M in savings over 30-year time frame.



Thank you for joining us. Please provide your feedback by completing our survey.