



# MDMA-Assisted Psychotherapy for PTSD

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# Disclosures

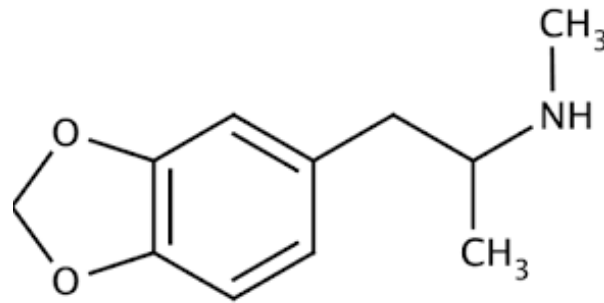
- Philanthropic Support:
  - ▣ Nikean Foundation
  - ▣ Leonard Latchman and Amanda Petrovic Psychedelic Therapy Education Fund
  
- Salary Support for work as co-PI with MAPS
  - ▣ From the Multidisciplinary Association of Psychedelic Studies (MAPS)

# Learning Objectives

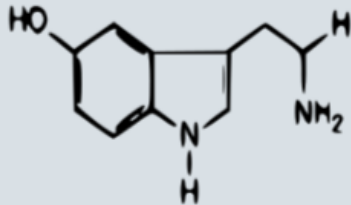
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1. Understand the treatment protocol for MDMA-assisted psychotherapy.
2. Describe the current scientific evidence for MDMA-assisted psychotherapy.
3. Identify theories of mechanism of action.

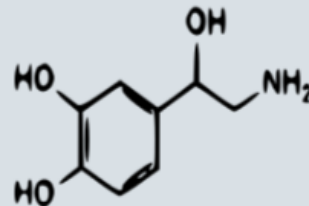
# MDMA



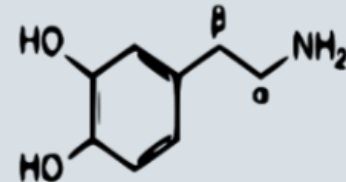
3,4-Methylenedioxymethamphetamine  
(MDMA)



Serotonin



Norepinephrine



Dopamine

# MDMA

- Onset of action: 30-60 minutes
- Peak effects: 1.5-2 hours
- Total duration is 4-6 hours
  
- Dosage:
  - ▣ 80-120 mg
  - ▣ Supplemental Dose of 40-60 mg at 1.5-2 hour mark to extend duration

# PTSD



Nightmares  
Flashbacks  
Intrusive Memories



Avoidance



Symptoms of Hyperarousal



Negative Changes in  
Mood and Cognition

# Existing Treatments

2017 Evidence-Based Treatments Recommended by VA for PTSD	Cohen's d effect size
Paroxetine	0.49
Sertraline	0.25
Cognitive Processing Therapy (CPT)	1.40
Prolonged Exposure (PE)	1.27
Eye Movement Desensitization & Reprocessing (EMDR)	1.08

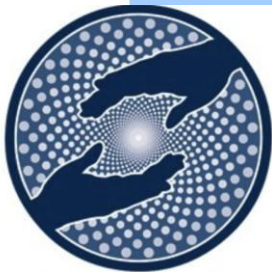
# Phase 3

## Study site cities

- Fort Collins
- Boulder
- San Francisco
- Los Angeles
- New Orleans
- Charleston
- Boston
- New York
- Madison
- Farmington
- Vancouver
- Montreal



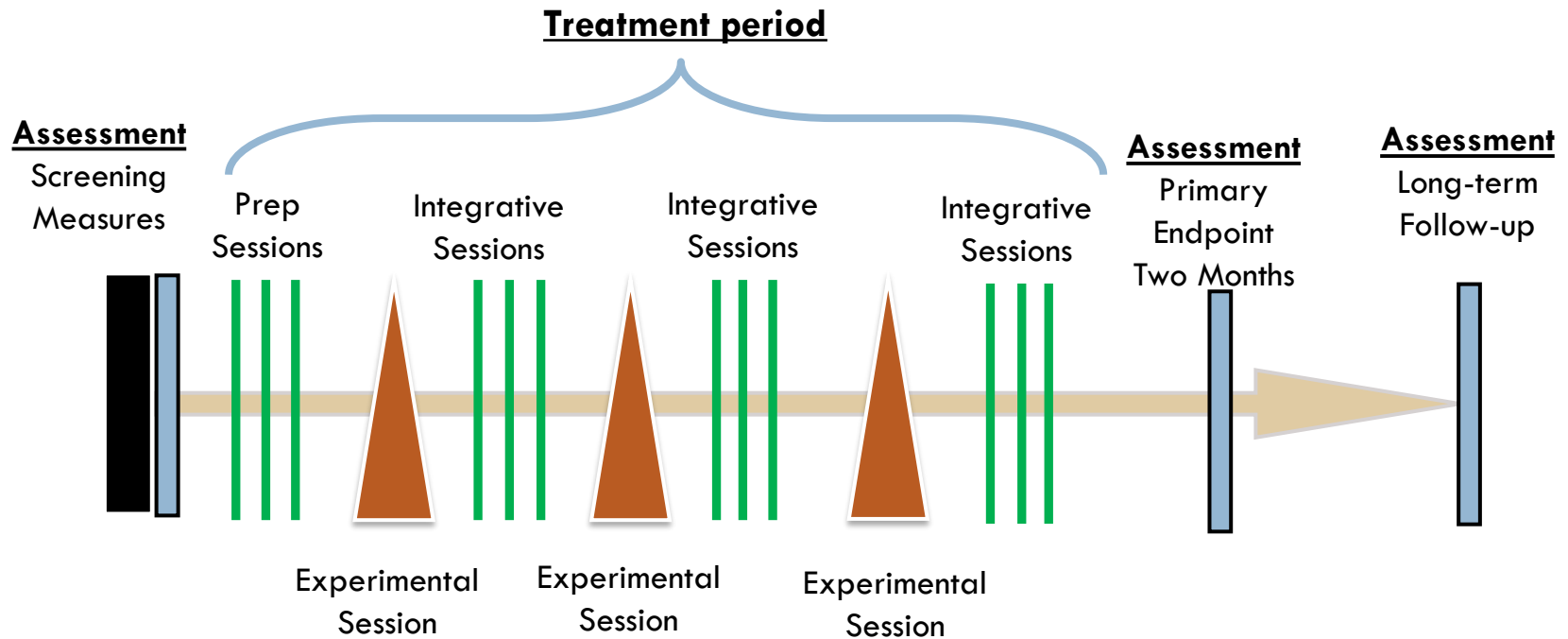
15 Sites  
12 in USA  
2 in Canada  
1 in Israel



**MAPS**  
MULTIDISCIPLINARY ASSOCIATION FOR PSYCHEDELIC STUDIES



# MAPS Protocol for MDMA-Assisted Psychotherapy for PTSD



# Safe Container



# Phase 3 Results

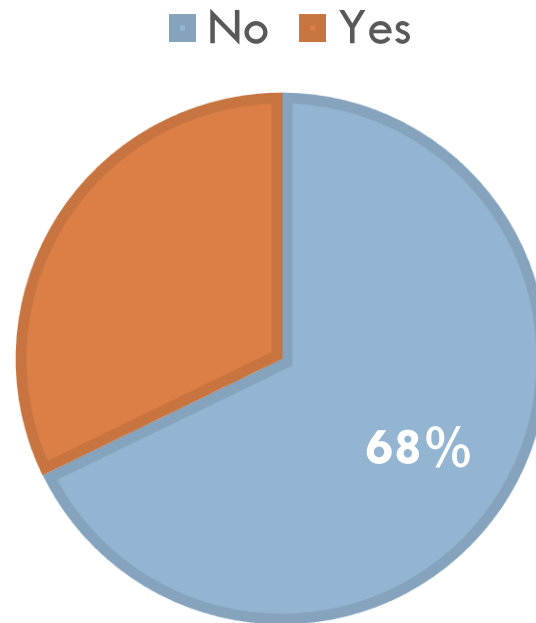
- Results so far show that MDMA-assisted psychotherapy is both safe and effective
- N=91

	MDMA	Placebo
Loss of Diagnosis	67%	32%
Remission	33%	5%

Effect size  $d = 0.91$

# Phase 2: Aggregated Results at 12 Months

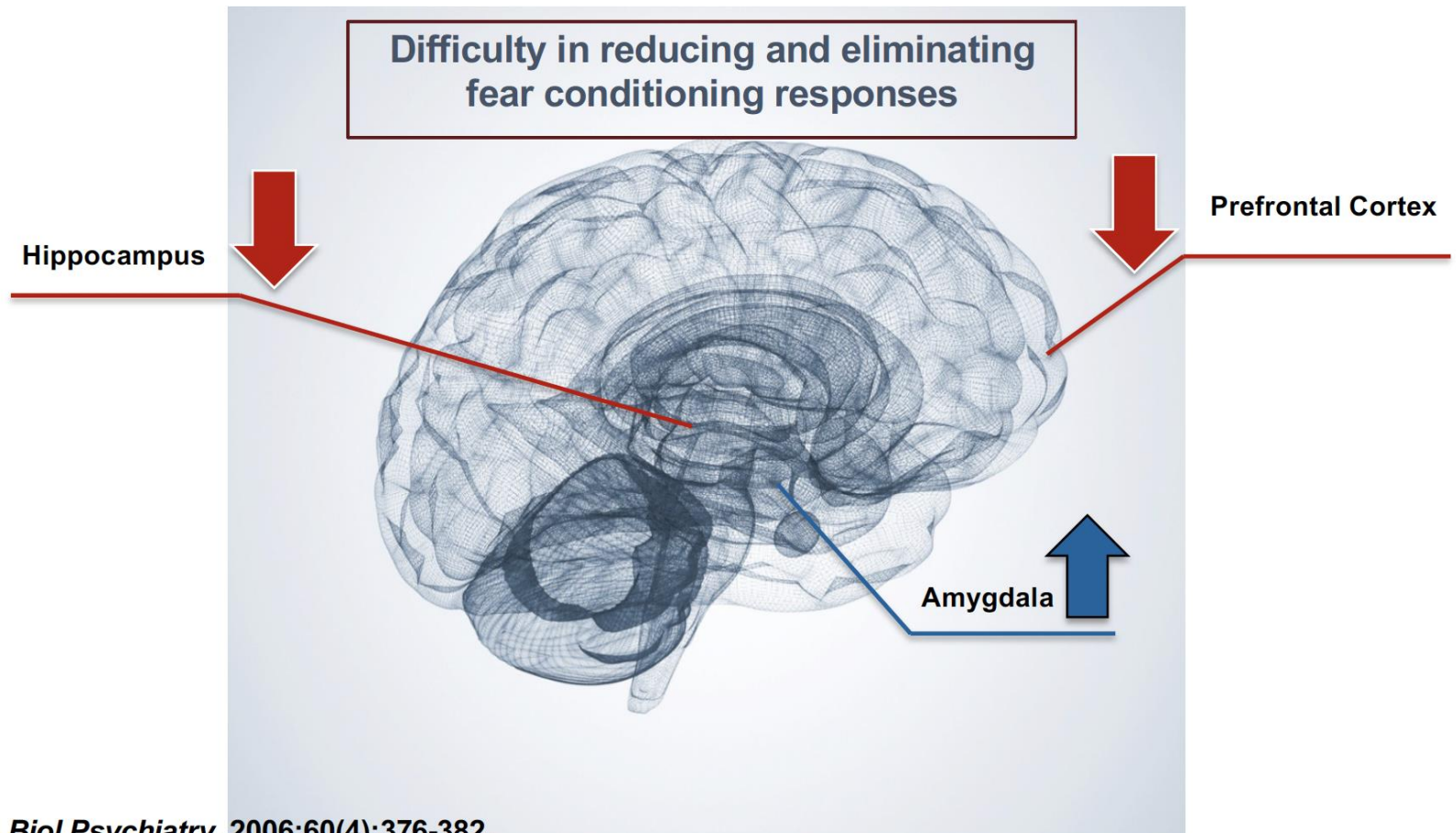
**68% of Subjects (N=90) Do Not Meet PTSD Criteria at 12-month Follow-up**



# Safety

- Adverse events
  - ▣ Transient, self-limiting
  - ▣ Include:
    - Muscle tightness – 63%
    - Decreased appetite – 52%
    - Nausea – 30%
    - Sweating – 20%
    - Feeling cold – 20%
    - Other: restlessness, dizziness, bruxism, nystagmus
- Transient increases in BP and HR (mean: 146/89 , 87)
- No evidence of:
  - ▣ Abuse potential
  - ▣ Suicidality
  - ▣ Cardiovascular events

# Neurological Effects of PTSD

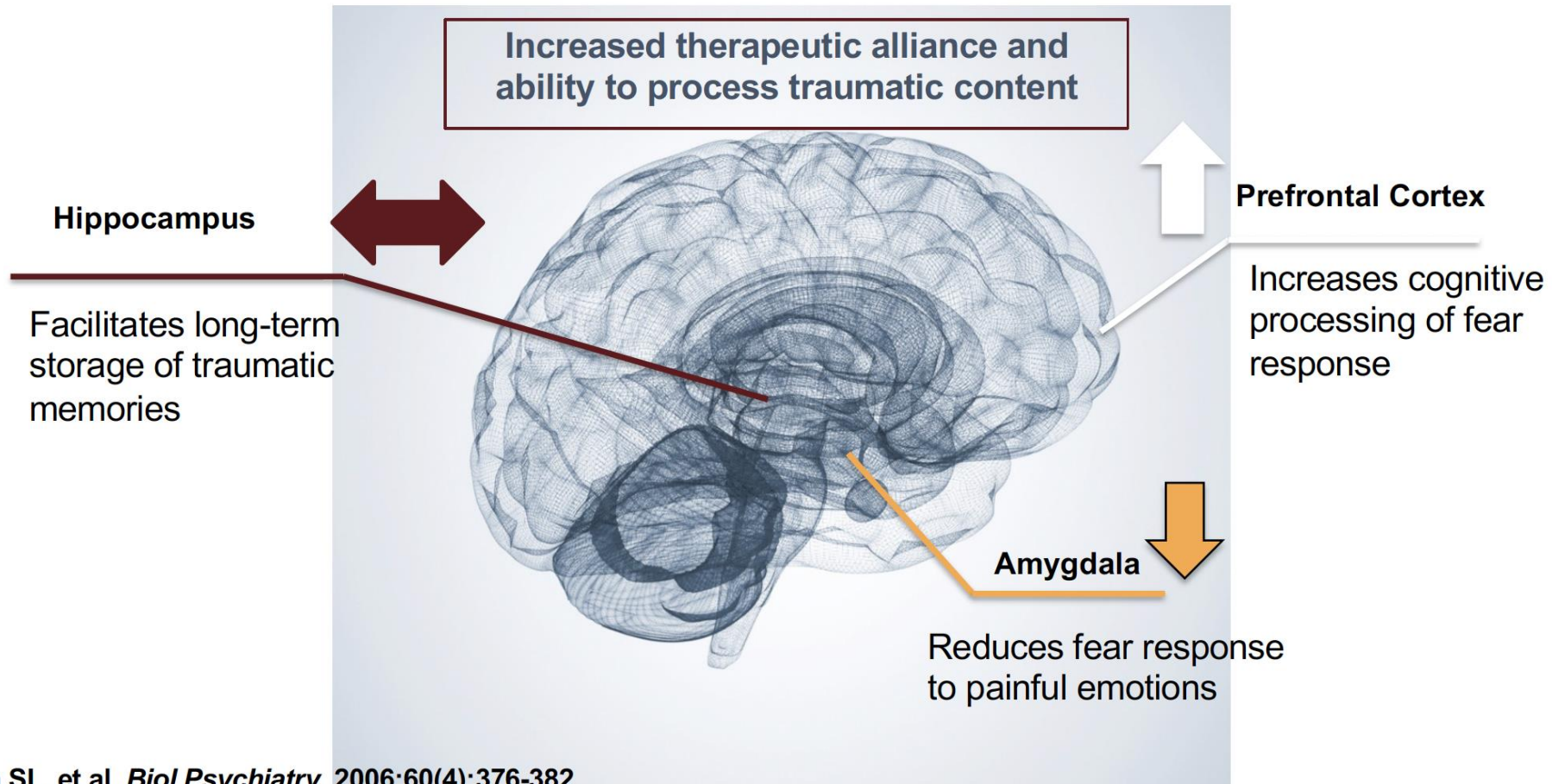


Rauch SL, et al. *Biol Psychiatry*. 2006;60(4):376-382.

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# Neurological Effects of MDMA



Increased therapeutic alliance and  
ability to process traumatic content

**Hippocampus**

Facilitates long-term  
storage of traumatic  
memories

**Prefrontal Cortex**

Increases cognitive  
processing of fear  
response

**Amygdala**

Reduces fear response  
to painful emotions

Rauch SL, et al. *Biol Psychiatry*. 2006;60(4):376-382.

Illustration by: Jezper/Shutterstock

# Re-opening Critical Periods in the Brain

- In animal models:
  - ▣ MDMA re-opens critical periods of social developmental via oxytocin
  - ▣ Allows for neurological imprinting of new social learning during this re-opening
  - ▣ Lasts for two weeks





# Therapeutic Mechanisms

- Builds trust and strengthens the therapeutic relationship
- Facilitates exposure therapy
- Increases empathy, self-compassion and forgiveness
- Facilitates shifts in thinking



# Risks

- ❑ Incomplete process
- ❑ Very strong transference and countertransference
- ❑ Therapist blind spots
- ❑ Patient expectations fueled by hype in the media
- ❑ Ethical violations in the field

# The Future

- Likely approval by the FDA in 2024
- Training through MAPS available for interested therapists



# References

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