

# Essais cliniques : les psychédéliques soignent-ils ?

## Journée de la Psychiatrie de l'Est

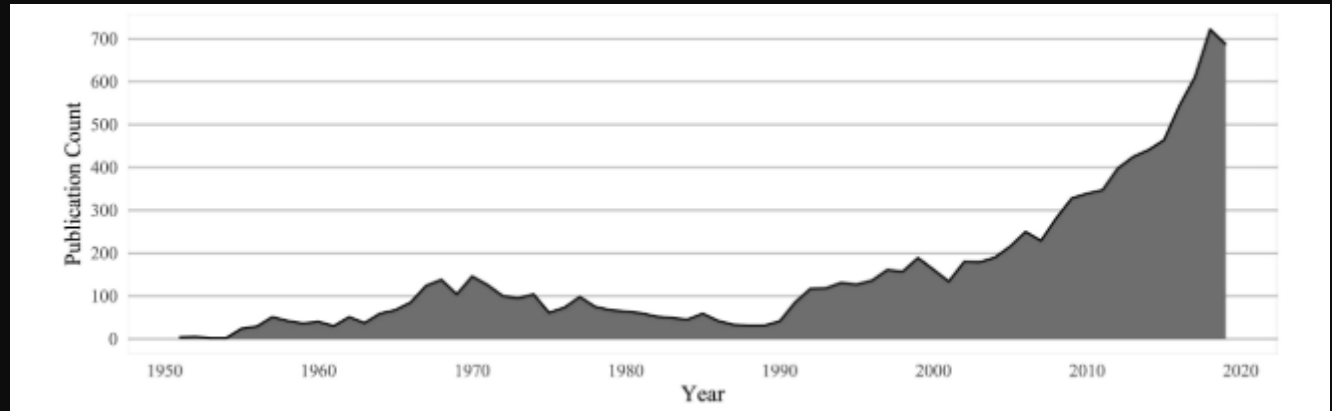


Ludovic Dormegnny-Jeanjean  
CEMNIS – Centre de Neuromodulation Non-Invasive de Strasbourg  
UMR 7357 iCube – Université de Strasbourg  
lundi 8 mai 2023

# Bibliométrie

**"Psylocybin" et/ou "LSD" = 965 publications en 2022**

- rTMS = 1919
- Kétamine = 1602
- SSRI = 389
- ECT = 637



(Petranker et al, 2020)



**ClinicalTrials.gov**

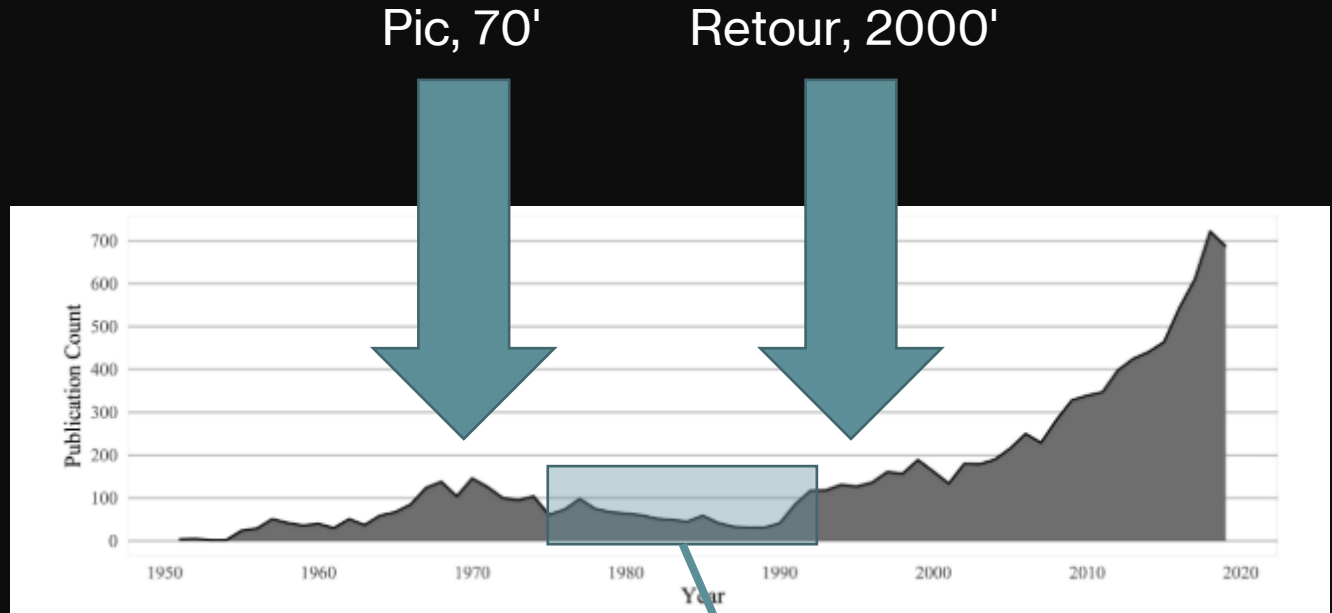
**105 études en cours**

- *dépression, anxiété, burn-out*
- *ALZ*
- *Addictologie*
- *OCD, TCA...*

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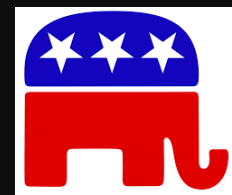
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## Période de creux

- Causes : pénalisation, méthodologies discutables
- Lobbies +++ (+-3 G\$)



**Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial**



Stephen Ross<sup>1,2,3,4,5,6</sup>, Anthony Bossis<sup>1,2,4</sup>, Jeffrey Guss<sup>1,2,4</sup>, Gabrielle Agin-Liebes<sup>10</sup>, Tara Malone<sup>1</sup>, Barry Cohen<sup>7</sup>,

**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>,

## 2016 - 2 essais en cross-over → symptômes psy – maladie grave

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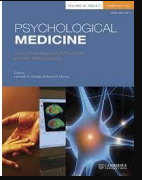


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Fernanda Palhano-Fontes<sup>1,2</sup>, Dayanna Barreto<sup>2,3</sup>, Heloisa Onias<sup>1,2</sup>,

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**Effects of Psilocybin-Assisted Therapy on Major Depressive Disorder: A Randomized Clinical Trial**



Alan K. Davis, PhD; Frederick S. Barrett, PhD; Darrick G. May, MD; Mary P. Cosimano, MSW; Nathan D. Sepeda, BS; Matthew W. Johnson, PhD; Patrick H. Finan, PhD; Roland R. Griffiths, PhD

**2019**

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**Single-Dose Psilocybin for a Treatment-Resistant Episode of Major Depression**



G.M. Goodwin, S.T. Aaronson, O. Alvarez, P.C. Arden, A. Baker, J.C. Bennett, C. Bird, R.E. Blom, C. Brennan, D. Bruschi,

**2021**

**4 essais cliniques → dépression**

- Contrôlés, randomisés, double aveugle
- Accompagnement psychothérapeutique

**2022**

# Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial



Stephen Ross<sup>1,2,3,4,5,6</sup>, Anthony Bossis<sup>1,2,4</sup>, Jeffrey Guss<sup>1,2,4</sup>, Gabrielle Agin-Liebes<sup>10</sup>, Tara Malone<sup>1</sup>, Barry Cohen<sup>7</sup>,

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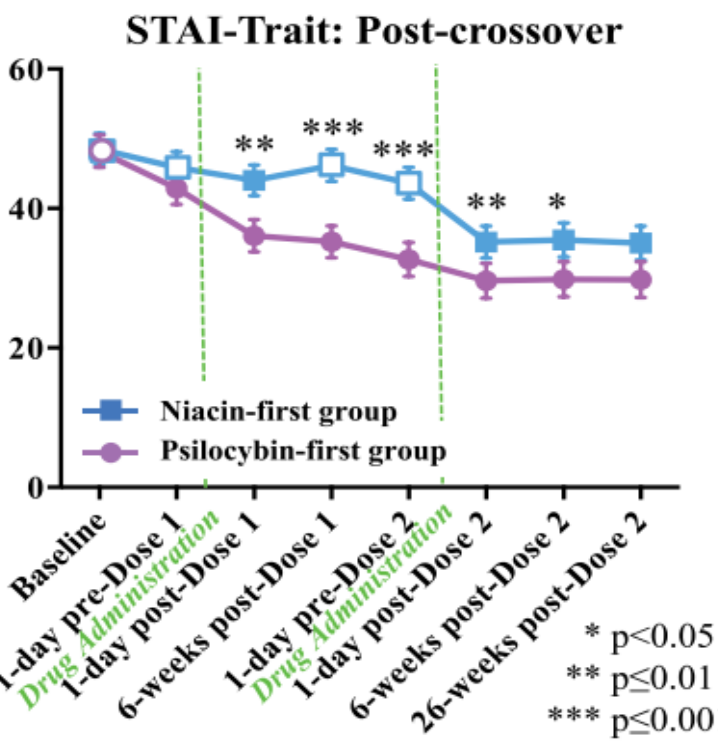
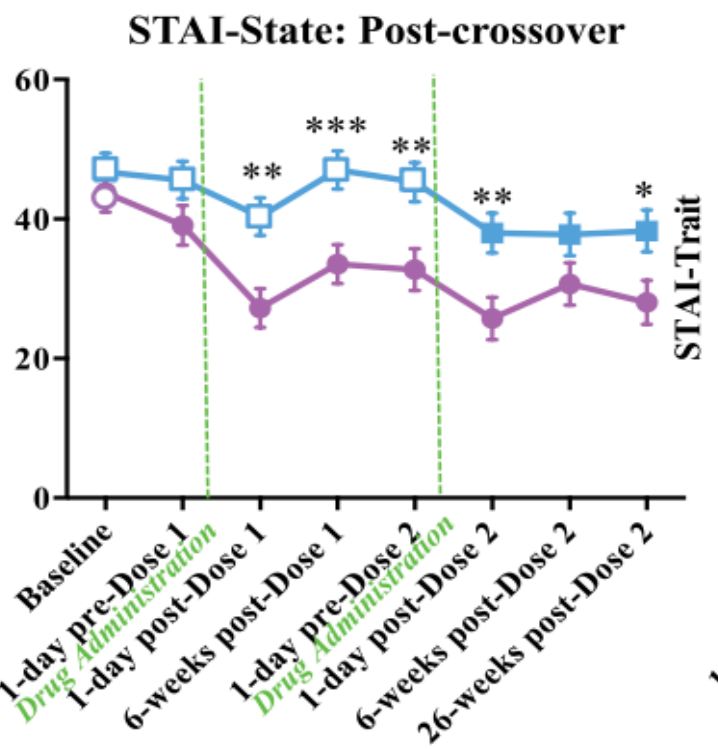
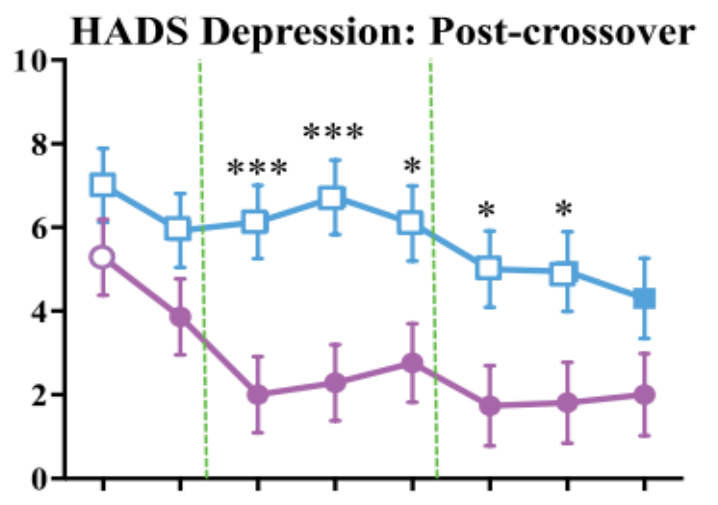
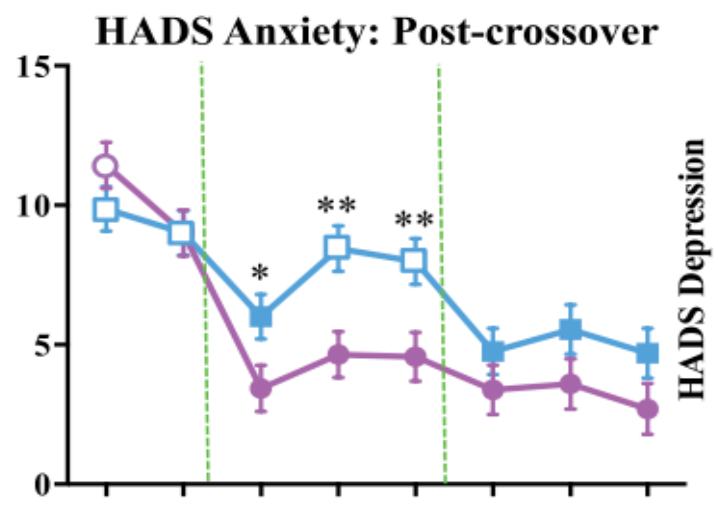
## Essai randomisé, cross over patients anxiété / dep + cancer (incluant les rémissions)

### 31 patients randomisés

- 28% avec dépression
- 55% déjà utilisé hallucinogènes

**Active** : PCB 0,3mg/kg

**Placebo** : niacine (vit B3)



\* p<0.05  
 \*\* p≤0.01  
 \*\*\* p≤0.001

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**Design +-similaire**


**51 patients randomisés**

- 35% avec dépression
- 45% déjà utilisé hallucinogènes

**Active : PCB 30/22mg DU**

**Contrôle : PCB 1mg DU**


Rapid antidepressant effects of the psychedelic ayahuasca in treatment-resistant depression: a randomized placebo-controlled trial



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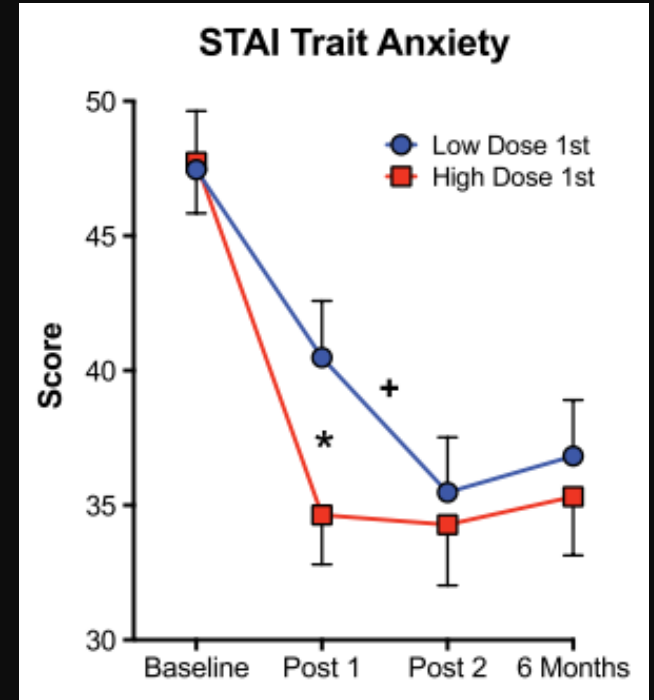
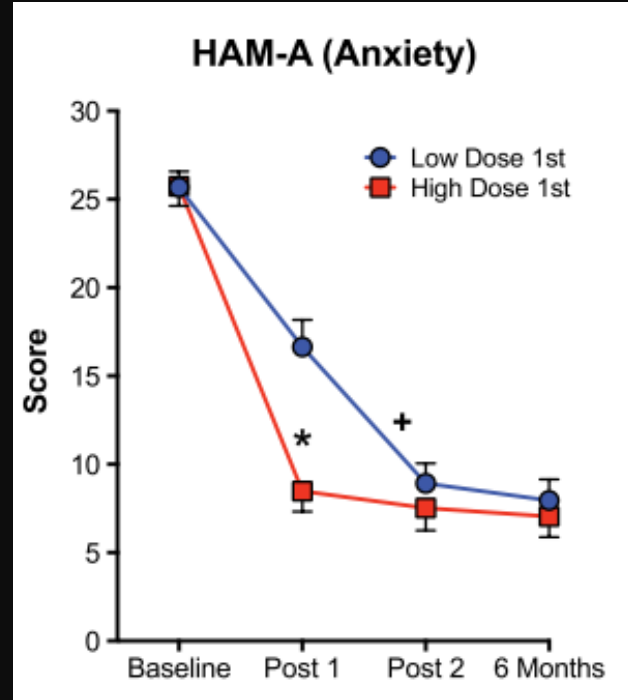
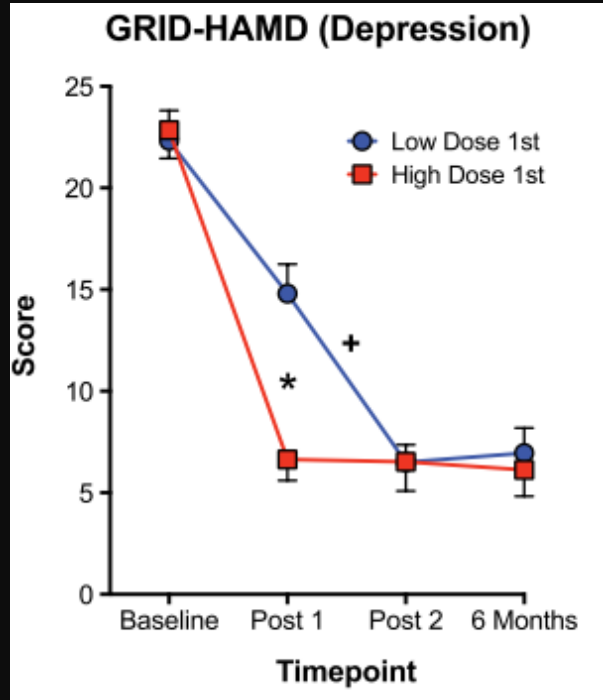
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- Infléchissement dans le bras contrôle
- Effet biologique ?
  - Effet placebo +++++ ?




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## Essai randomisé en double aveugle contre placebo

N = 29, R à deux lignes

76% tble perso – cluster B

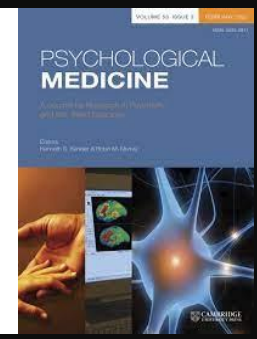
+ stressseurs environnementaux

**Active :** 0,36mg/kg –N-DMT

**Placebo :** neutre, imite gout et propriétés dig

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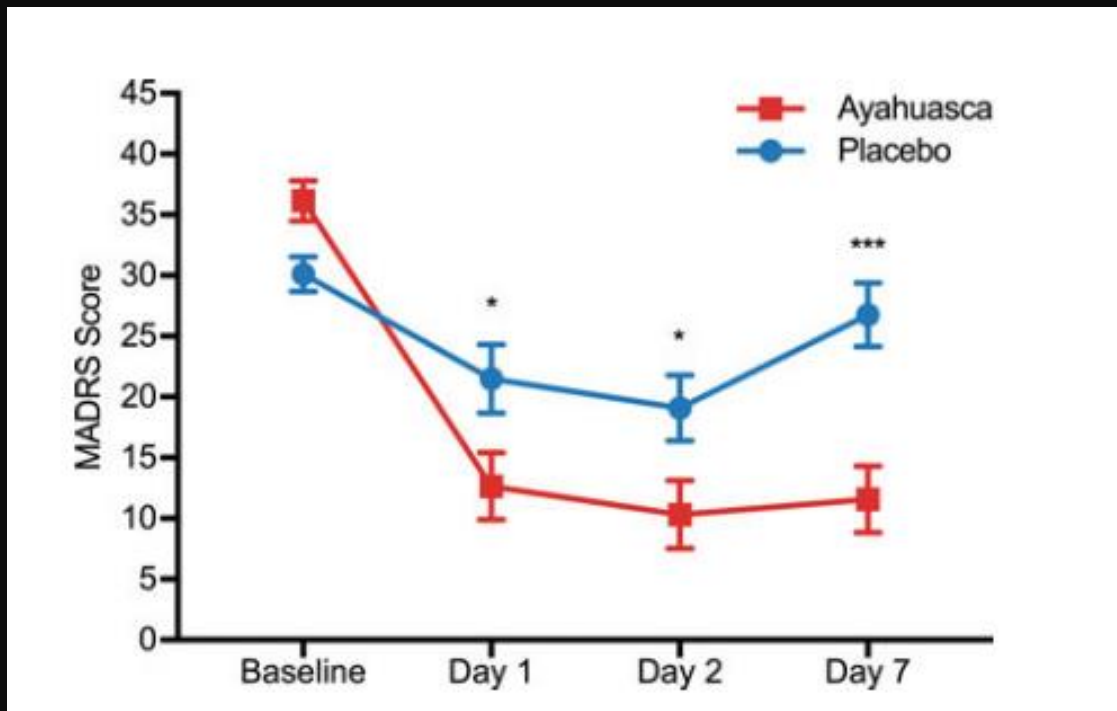
**Placebo** : neutre, imite gout et propriétés dig

**Rep (j7)** : **active** = 57% ; **placebo** = 20%


**Rem (j7)** : **active** = 43% ; **placebo** = 13 %

### Mais !


- Tbles perso et stressseurs externes ++  
→ effet Cocooning
- Placebo non-psychédélique
- Harmaline = effet IMAO




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**Essai randomisé, simple aveugle  
N = 27(24)**

**2 doses de PCB (20 et 30mg/70Kg)  
Intervalle = 1 sem**

**Pas de placebo (*delayed*)**


JAMA Psychiatry | [Original Investigation](#)

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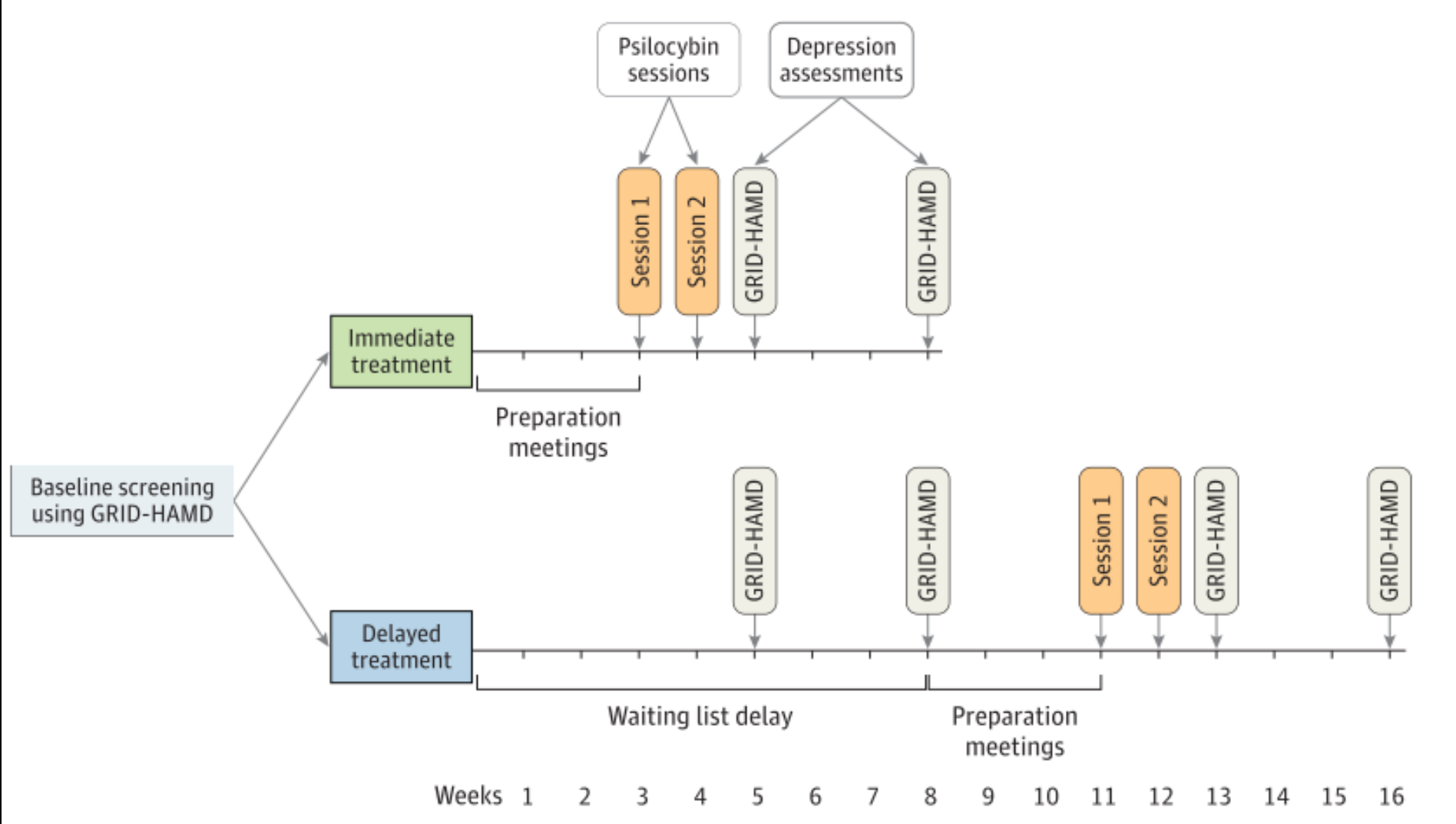
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# Essai randomisé, simple aveugle



Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial

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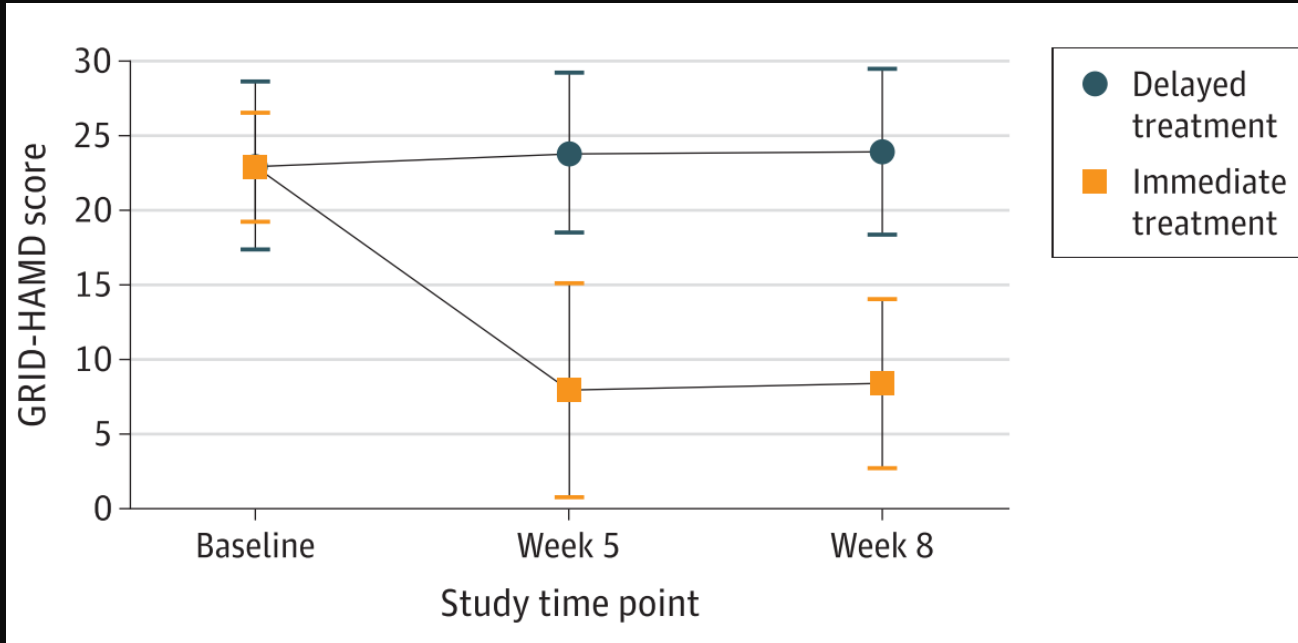
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JAMA Psychiatry: Effects of psilocybin on symptoms and cognition in a randomized clinical trial

Trial of Psilocybin for Treatment-Resistant Depression

Single-Dose Psilocybin for Treatment-Resistant Depression: A Randomized Clinical Trial





Réponse (sem1) : 71%

Rémission (sem1/sem4) : 58% / 54%

**Essai randomisé, simple aveugle**  
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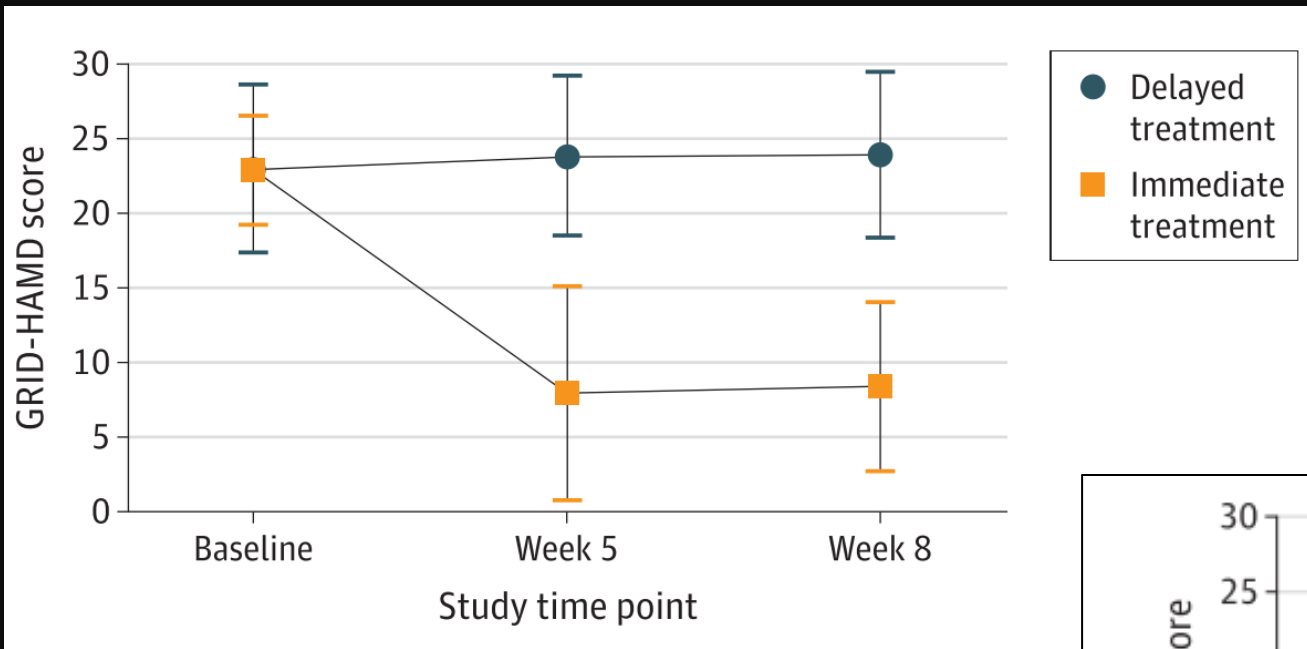
2 doses de PCB (20 et 30mg/70Kg)  
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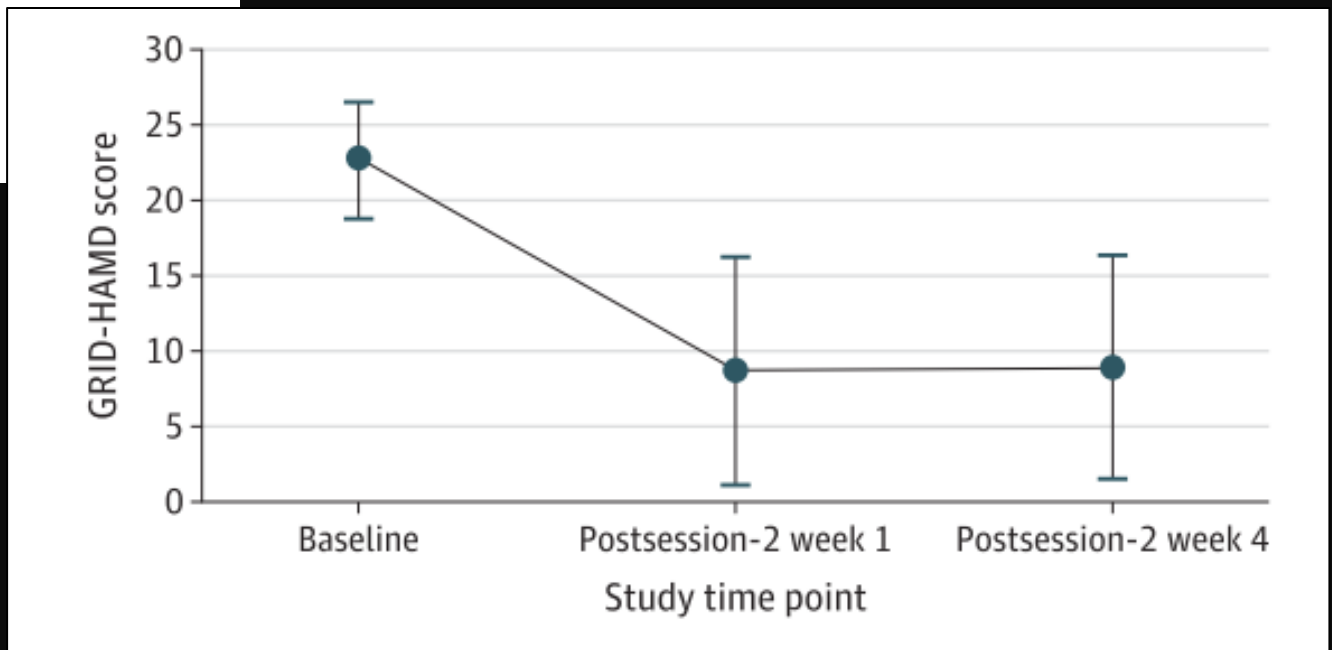
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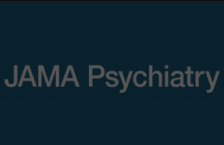
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## Essai contrôlé en double aveugle vs placebo N = 59 – MDE

- **Active** : 2 doses PCB (25mg) – interv. 1sem
- **Ct** : escitalopram 10 puis 25mg + 2 doses PCB (1mg) – interv. 1sem

# Trial of Psilocybin versus Escitalopram for Depression



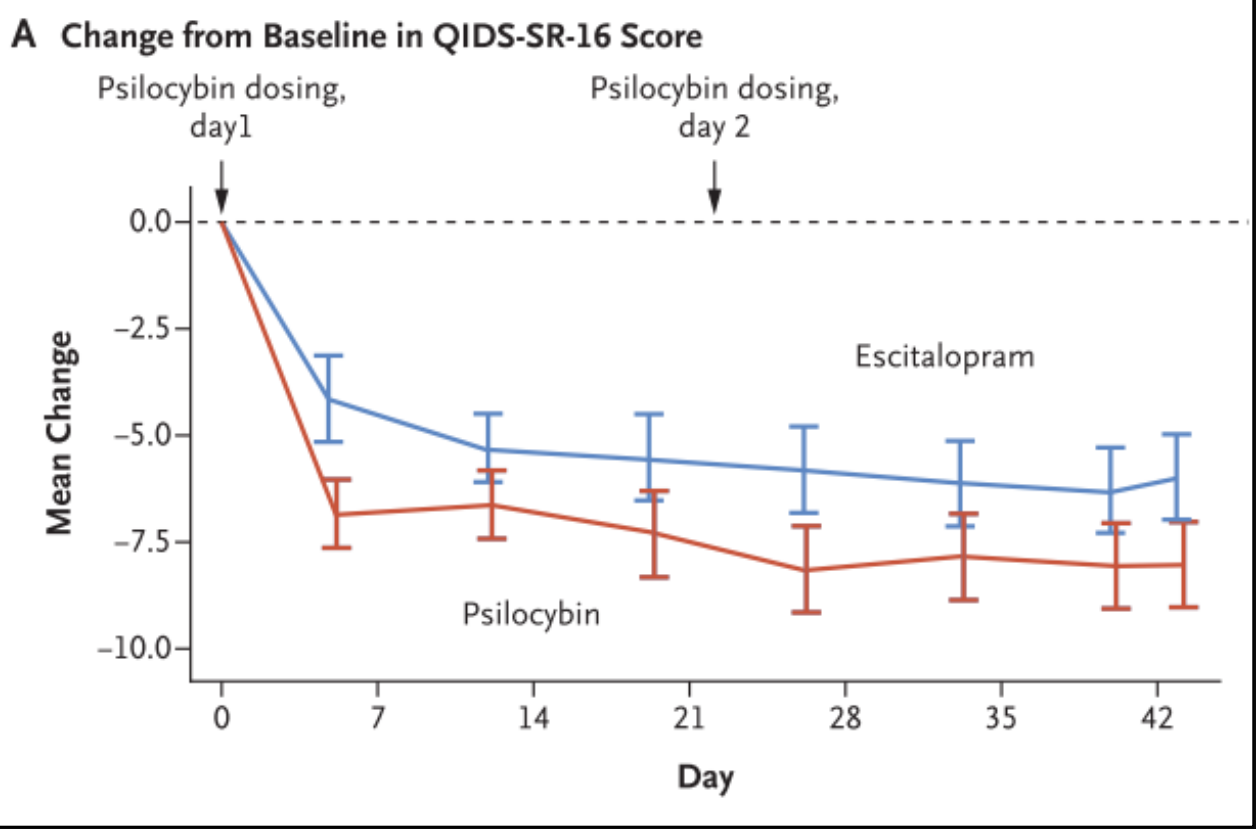
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### Différence non-sig

#### A 6 semaines

**PSC** : rep = 70% ; rem = 57%

**ESC** : rep = 48% ; rem = 28%

- 2 prises = efficacité similaire
- Potentiel effet du dosage placebo ?

#### Mais !

- Risque  $\beta = 0,2$
- Temps d'observation limité pour ESC


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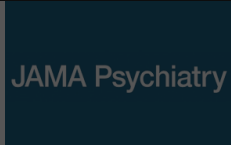
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**COMPASSION**  
 Navigating Mental Health Pathways




Guy Goodwin

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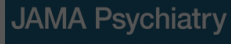
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**1<sup>er</sup> essai de grande ampleur : 233 patients TRD**  
 Contrôlé, randomisé, double aveugle

- 3 groupes :**
- PCB 25mg DU
  - PCB 10mg DU
  - PCB 1mg DU



Guy Goodwin

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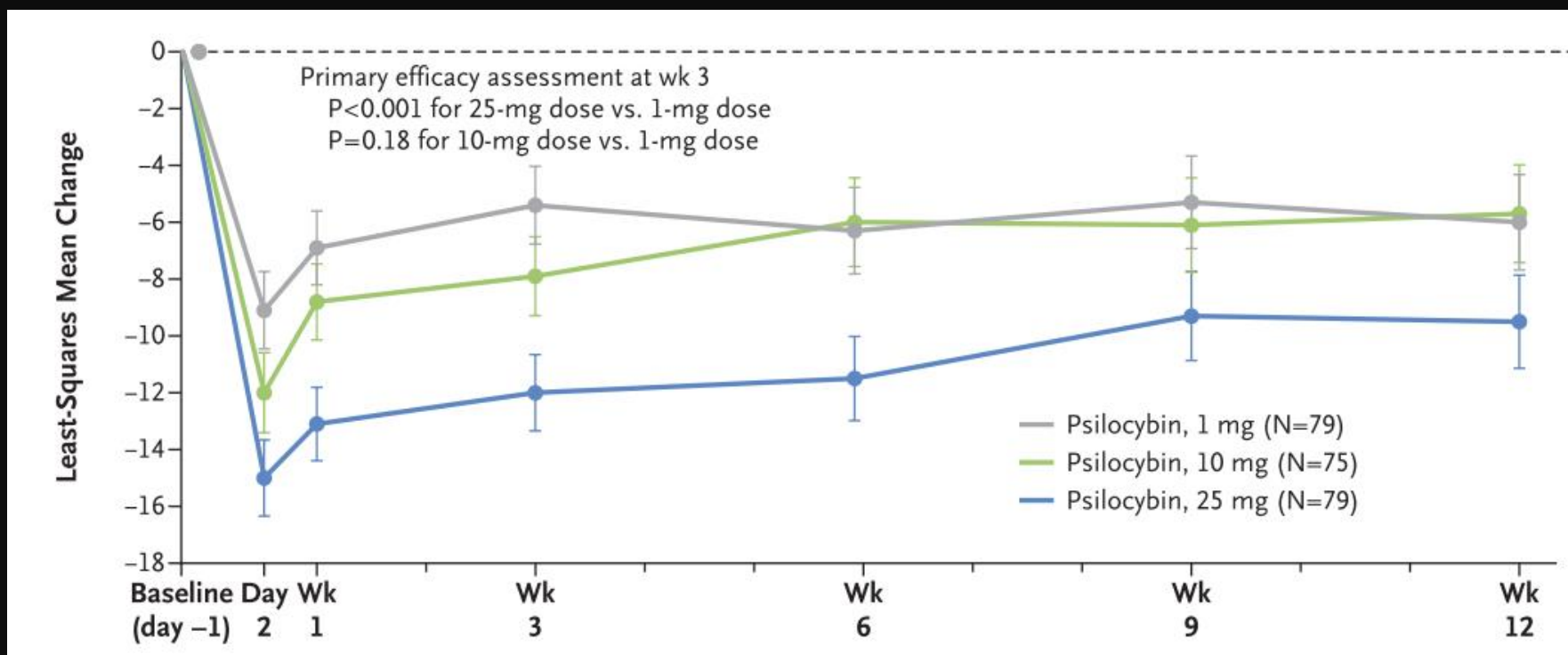


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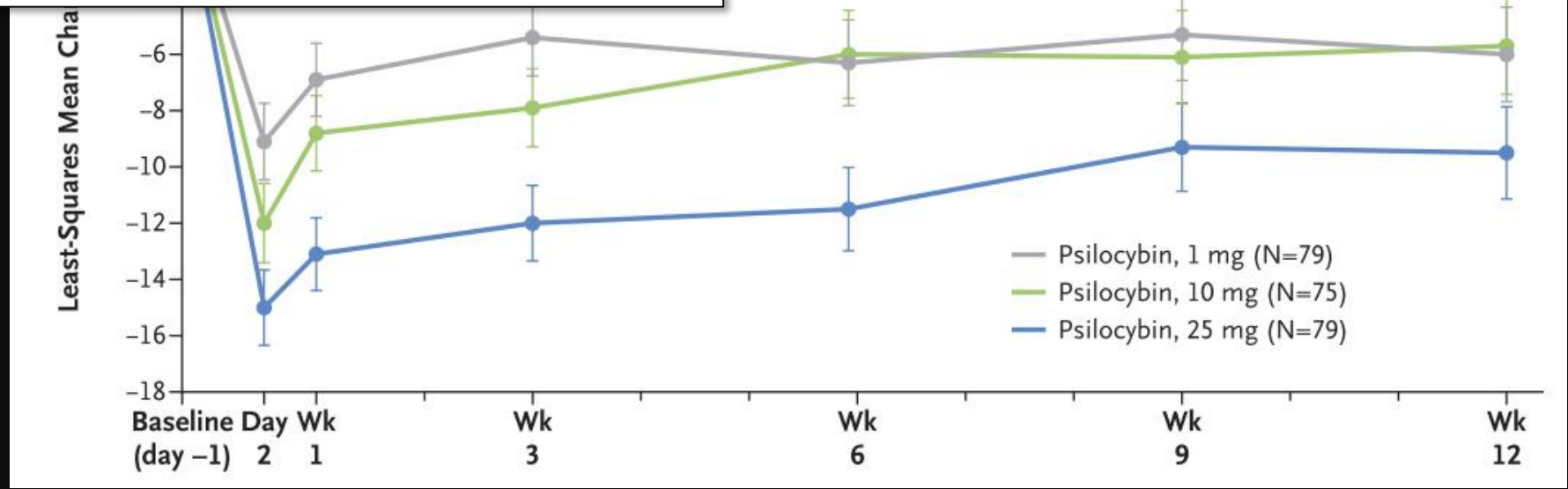
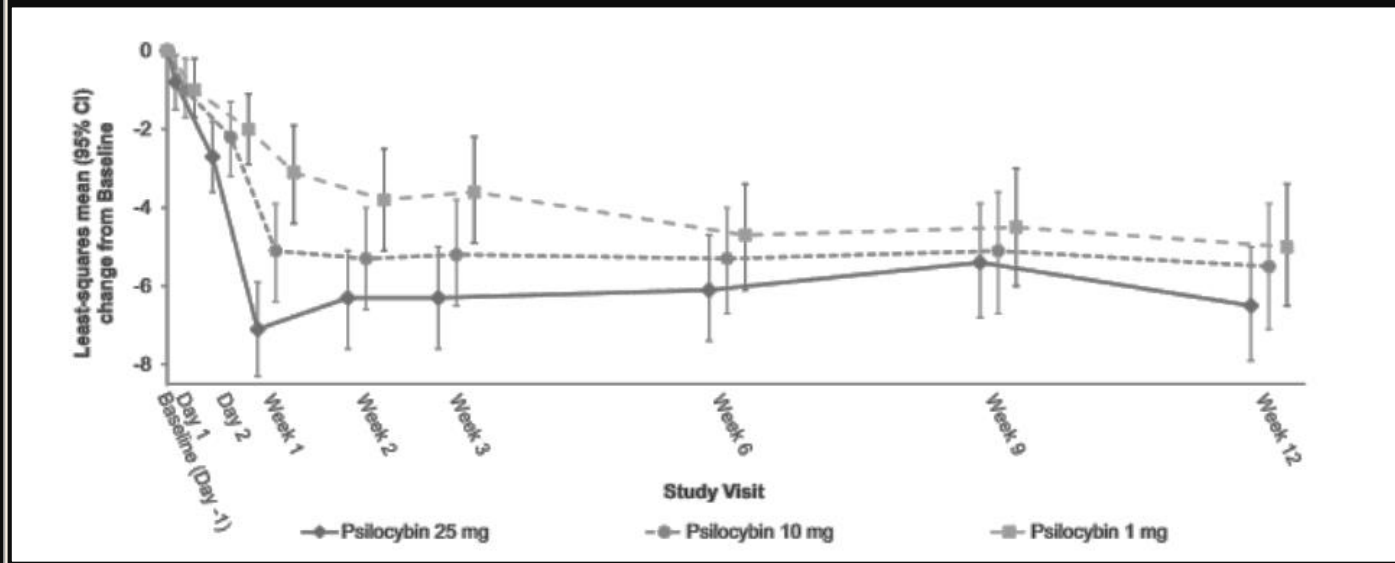
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es :  
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## Résultats clairement encourageants

### Plusieurs observations répliquées

- Effet sur l'humeur et l'anxiété
- Rapidité d'action
- La persistance dans le temps

### Données de sécurité rassurantes

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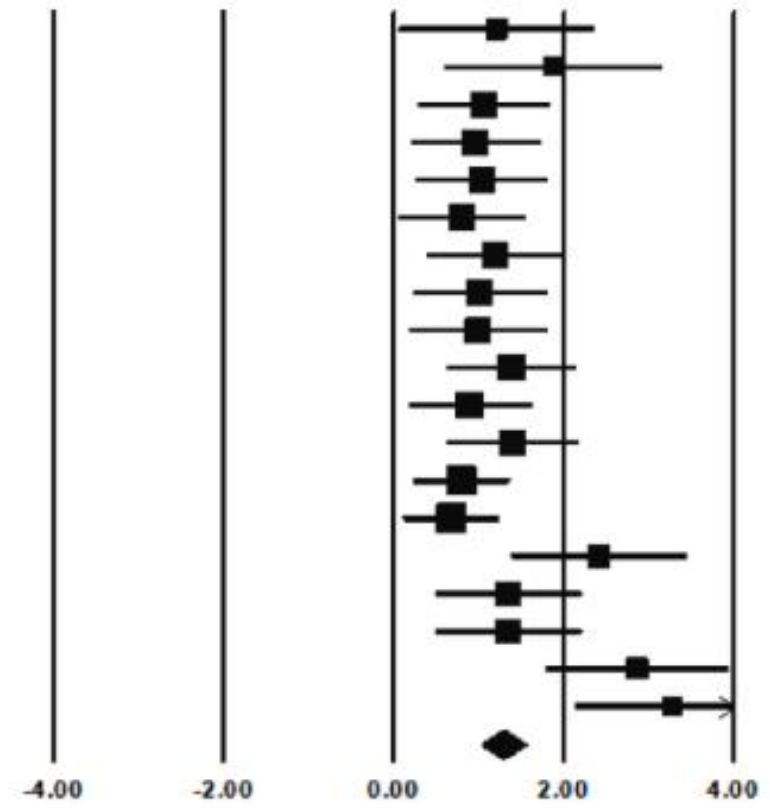
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(a)

		Hedges's g	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
Grob 2011 (a)	dosage1 duration1	1.209	0.587	0.345	0.058	2.360	2.059	0.040
Grob 2011 (b)	dosage1 duration1	1.883	0.657	0.432	0.595	3.171	2.866	0.004
Ross 2016 (a)	dosage2 duration1	1.068	0.394	0.155	0.296	1.840	2.712	0.007
Ross 2016 (b)	dosage2 duration1	0.961	0.389	0.151	0.199	1.723	2.472	0.013
Ross 2016 (c)	dosage2 duration2	1.039	0.392	0.154	0.270	1.808	2.648	0.008
Ross 2016 (d)	dosage2 duration2	0.796	0.382	0.146	0.047	1.545	2.084	0.037
Ross 2016 (e)	dosage2 duration1	1.201	0.416	0.173	0.386	2.016	2.888	0.004
Ross 2016 (f)	dosage2 duration2	1.017	0.406	0.165	0.221	1.813	2.503	0.012
Ross 2016 (g)	dosage2 duration2	0.996	0.414	0.172	0.184	1.808	2.404	0.016
Gabrielle 2020 (a)	dosage2 duration2	1.384	0.386	0.149	0.628	2.140	3.589	0.000
Gabrielle 2020 (b)	dosage2 duration2	0.896	0.368	0.135	0.175	1.617	2.434	0.015
Gabrielle 2020 (c)	dosage2 duration2	1.401	0.399	0.160	0.618	2.184	3.508	0.000
Griffiths 2016 (a)	dosage2 duration1	0.797	0.290	0.084	0.230	1.365	2.753	0.006
Griffiths 2016 (b)	dosage2 duration1	0.679	0.289	0.084	0.112	1.246	2.346	0.019
Carhart 2016 (a)	dosage3 duration1	2.414	0.526	0.277	1.383	3.445	4.588	0.000
Carhart 2016 (b)	dosage3 duration2	1.352	0.440	0.193	0.490	2.214	3.073	0.002
Carhart 2016 (c)	dosage3 duration2	1.352	0.440	0.193	0.490	2.214	3.073	0.002
Davis 2020 (a)	dosage4 duration1	2.867	0.550	0.302	1.789	3.944	5.214	0.000
Davis 2020 (b)	dosage4 duration1	3.283	0.593	0.352	2.121	4.445	5.537	0.000
		1.289	0.137	0.019	1.020	1.558	9.390	0.000



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Conclusion à ce stade :

# Les psychédéliques soignent !



*Absolument univoque ?*

# *Absolument univoque ?*

## **Persistence de certains biais méthodologiques**

- Des intérêts des investigateurs
- Un biais de sélection des patients
- Des difficultés d'élaboration des contrôles/placebo

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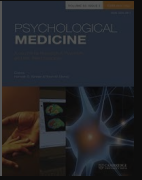
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**Auteur majeur (premier ou dernier) lié :**

- À un réseau militant
- A un laboratoire industriel



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Et toujours un risque de méconduite scientifique...

## Single-dose psilocybin-assisted therapy in major depressive disorder: A placebo-controlled, double-blind, randomised clinical trial

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### Plusieurs biais méthodologiques

Ne respectent pas la méthodologie planifiée

- Risque de p-hacking
- Puissance de l'étude inadaptée



Eiko Fried  
@EikoFried

New #depression #psiloybin has 2 severe issues.

(1) They don't adhere to their protocol registered on [clinicaltrials.gov](https://clinicaltrials.gov) & report primary outcomes at week 2, when week 4 was registered. I'm so frustrated that scientists (but also reviewers & editors) don't do their job.

#### Summary

**Background** Psilocybin has been suggested as a novel, rapid-acting treatment for depression. Two consecutive doses have been shown to markedly decrease symptom severity in an open-label setting or when compared to a waiting list group. To date, to our knowledge, no other trial compared a single, moderate dose of psilocybin to a placebo condition.

**Methods** In this double-blind, randomised clinical trial, 52 participants diagnosed with major depressive disorder and no unstable somatic conditions were allocated to receive either a single, moderate dose (0.215 mg/kg body weight) of psilocybin or placebo in conjunction with psychological support. MADRS and BDI scores were assessed to estimate depression severity, while changes from baseline to 14 days after the intervention were defined as primary endpoints. The trial took place between April 11th, 2019 and October 12th, 2021 at the psychiatric university hospital in Zürich, Switzerland and was registered with [clinicaltrials.gov](https://clinicaltrials.gov) (NCT03715127).

**Findings** The psilocybin condition showed an absolute decrease in symptom severity of -13.0 points compared to baseline and were significantly larger than those in the placebo condition (95% CI -15.0 to -1.3; Cohens'  $d = 0.97$ ;  $P = 0.0011$ ; MADRS) and -13.2 points (95% CI: -13.4 to -1.3; Cohens'  $d = 0.67$ ;  $P = 0.019$ ; BDI) 14 days after the intervention. 14/26 (54%) participants met the MADRS remission criteria in the psilocybin condition.

**Interpretation** These results suggest that a single, moderate dose of psilocybin significantly reduces depression symptoms compared to placebo in a multi-centric trial with a randomised, double-blind paradigm.

#### Outcome Measures

Primary Outcome Measures ⓘ :

1. Montgomery Asberg Depression Scale [ Time Frame: Day 32 ]  
observer-rated score for depression
2. Beck Depression Inventory [ Time Frame: Day 32 ]  
self-rated score for depression

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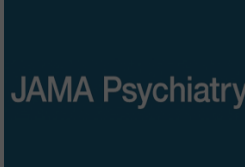
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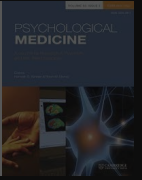
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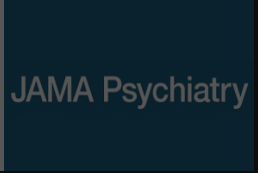
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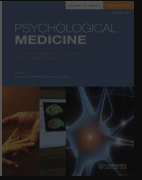
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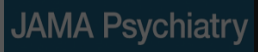
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Utilisation de réseaux pour recrutement



A priori positif  
Attentes



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## Problématique du placebo demeure

- Effet psychédélique = thérapeutique Facilement repéré par patient / investigateur
- Dose minime = potentiellement efficace
- Pas de sédation possible

## OR effet placebo probablement majeur

- Lié au biais de sélection
- Psychédéliques = hypersuggestibilité (Carhart-Harris, Kaelen et al. 2015)

## Minimum méthodologique : évaluer la qualité de l'aveugle

Ça soigne ou *ça soigne* ?

# Ce que ça ne soigne pas

- Symptômes psychotiques
- Troubles bipolaires



Clinical case	References
<ul style="list-style-type: none"><li>• 21-year-old woman</li><li>• Depression and PTSD, unmedicated</li><li>• Positive family history of bipolar disorder (father and paternal grandmother)</li><li>• Psychotic mania 36 h after ingestion of psilocybin-containing mushrooms</li><li>• Stabilized with lithium and aripiprazole, later lamotrigine</li></ul>	Hendin and Penn, <a href="#">2021</a>
<ul style="list-style-type: none"><li>• 40-year-old male psychiatrist</li><li>• Known bipolar disorder (a single previous manic episode)</li><li>• Hospitalized with psychotic mania after self-medicating for depression: 1 g daily of vaporized DMT for 6 months, then plus phenelzine (60 mg p.o.) 3 weeks before the episode</li><li>• Stabilization with lithium 1200 mg/d, paliperidone 6 mg/d, and clonazepam 3.5 mg/d</li><li>• No follow-up possible</li></ul>	Brown et al., <a href="#">2017b</a>
<ul style="list-style-type: none"><li>• 25-year-old male</li><li>• Known bipolar disorder and history of cannabis abuse</li><li>• Hospitalized with psychotic mania 2 days after ayahuasca ingestion</li><li>• Remission with benperidole, olanzapine and lorazepam</li></ul>	Zellner et al., <a href="#">2019</a>
<ul style="list-style-type: none"><li>• 30-year-old male</li><li>• Previous hypomanic episodes</li><li>• Positive first-degree family history of bipolar disorder</li><li>• Psychotic mania two days after a ayahuasca ritual</li><li>• Stabilization with risperidone 2 mg/d and clonazepam 2 mg/d</li></ul>	Szmulewicz et al., <a href="#">2015</a>

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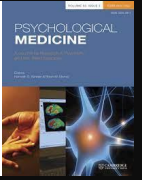
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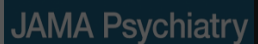
Roland R Griffiths<sup>1,2</sup>, Matthew W Johnson<sup>1</sup>, Michael A Carducci<sup>3</sup>,

Rapid antidepressant effects of the psychedelic ayahuasca in treatment-resistant depression: a randomized placebo-controlled trial



Fernanda Palhano-Fontes<sup>1,2</sup>, Dayanna Barreto<sup>2,3</sup>, Heloisa Onias<sup>1,2</sup>,

JAMA Psychiatry | Original Investigation  
Effects of Psilocybin-Assisted Therapy on Major Depressive Disorder  
A Randomized Clinical Trial



Alan K. Davis, PhD; Frederick S. Barrett, PhD; Darrick G. May, MD; Mary P. Cosimano, MSW; Nathan D. Sepeda, BS; Matthew W. Johnson, PhD; Patrick H. Finan, PhD; Roland R. Griffiths, PhD

Trial of Psilocybin versus Escitalopram for Depression



Robin Carhart-Harris, Ph.D., Bruna Giribaldi, B.Sc., Rosalind Watts, D.Clin.Psy.,

Single-Dose Psilocybin for a Treatment-Resistant Episode of Major Depression



G.M. Goodwin, S.T. Aaronson, O. Alvarez, P.C. Arden, A. Baker, J.C. Bennett, C. Bird, R.E. Blom, C. Brennan, D. Bruschi,

Characteristic	Psilocybin (N = 30)	Escitalopram (N = 29)
<b>Demographic</b>		
Age (range) — yr	43.3±11.7 (21–64)	39.1±9.7 (22–60)
Female sex — no. (%)	11 (37)	9 (31)
White race — no. (%)†	28 (93)	24 (83)
Employment status — no. (%)		
Employed	21 (70)	21 (72)
Student	2 (7)	3 (10)
Unemployed	7 (23)	5 (17)
University level education — no. (%)	22 (73)	23 (79)
No previous psilocybin use — no. (%)	22 (73)	21 (72)
Weekly alcohol use (range) — g‡	36.8±43.1 (0–160)	67.7±66.6 (0–240)
Discontinued psychiatric medication for trial — no. (%)	11 (37)	12 (41)
<b>Clinical</b>		
Duration of illness (range) — yr	22.1±10.7 (3–44)	15.1±11.0 (2–46)
No. of psychiatric medications previously used (range)	2.2±1.6 (0–6)	1.8±1.5 (0–5)
Previous use of psychotherapy — no. (%)	28 (93)	26 (90)
QIDS-SR-16 score at pretreatment baseline (range)§	14.5±3.9 (7–23)	16.4±4.1 (6–22)

- Durée longue
- Intensité modérée
- Peu traitée

Ou

- Association tbles perso
- Stresseurs externes

### Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial

Stephen Ross<sup>1,2,3,4,5,6</sup>, Anthony Bossis<sup>1,2,4</sup>, Jeffrey Guss<sup>1,2,4</sup>, Gabrielle Agin-Liebes<sup>10</sup>, Tara Malone<sup>1</sup>, Barry Cohen<sup>7</sup>,



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

Johns Hopkins  
Psychiatric Research Unit

Roland R Griffiths<sup>1,2</sup>, Matthew W Johnson<sup>1</sup>, Michael A Carducci<sup>3</sup>,

Max 35 % de dépression  
MAIS >70% de rémission

**Table 6.** Percentage of participants with clinically significant response rate and symptom remission rate as assessed with the clinician-rated measures of depression and anxiety<sup>a</sup>.

Measure	Group	Assessment time-point					
		Post-session 1		Post-session 2		6 months <sup>b</sup>	
		Clinical response	Symptom remission	Clinical response	Symptom remission	Clinical response	Symptom remission
GRID-HAMD-17 (Depression)	Low-Dose-1st (High-Dose-2nd)	32%	16%	75%	58%	77%	59%
	High-Dose-1st (Low-Dose-2nd)	92%***	60%**	84%	68%	79%	71%
HAM-A (Anxiety)	Low-Dose-1st (High-Dose-2nd)	24%	12%	83%	42%	82%	50%
	High-Dose-1st (Low-Dose-2nd)	76%***	52%**	80%	60%	83%	63%

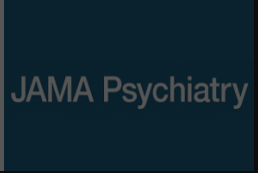
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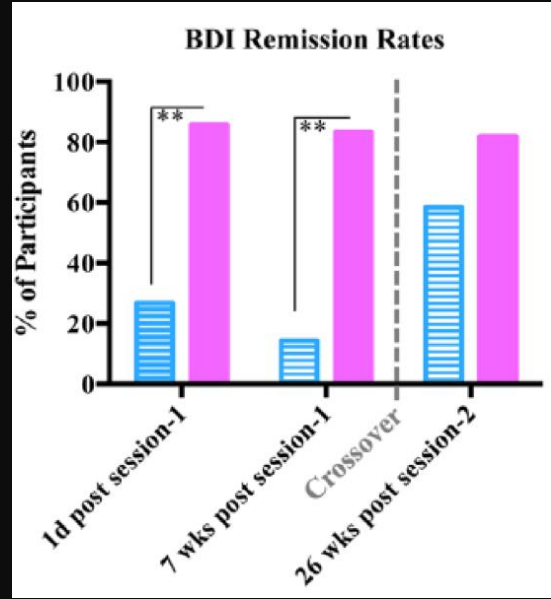
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(Griffiths, Johnson et al. 2016)

(Ross, Bossis et al. 2016)

# Deux paradigmes différents

## Modèle biomédical

*"Les maladies sont dues à une étiologie ou une physiopathologie qu'il convient de traiter"*

**Essais cliniques : établir si TTT efficace  
pour la pathologie  
→ indications**

# Deux paradigmes différents

## Modèle biomédical

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**Essais cliniques : établir si TTT efficace pour la pathologie  
→ indications**

## Modèle centré sur l'effet du produit

*"Les psychotropes ont des effets généraux, parfois ils sont utiles pour améliorer la santé"*

Ex : psychédéliques = bien être  
ISRS = anesthésie affective  
→ intérêt en cas de souffrance psychique

**Essais cliniques : démontrer l'effet du TTT  
Puis appliquer cet effet à des symptômes  
→ champs d'application, dont le normal**



**Table 2** Study summary of clinical trials included in the meta-analysis

Study	Design	N	Subject	Psychedelic	Dose	Session <sup>#</sup>	Placebo
Gasser et al. <a href="#">2014</a>	CO	12	A and LT	LSD	200 µg	2	LSD 20 µg
Schmid et al. <a href="#">2015</a>	CO	16	Healthy	LSD	200 µg	1	Mannitol**
Dolder et al. <a href="#">2016</a>	CO	16	Healthy	LSD	100 µg	1	Mannitol**
Palhano-Fontes et al. <a href="#">2019</a>	P	29	TRD	Ayahuasca	360 µg/kg	1	Zinc sulfate
Hasler et al. <a href="#">2004</a>	CO	8	Healthy	Psilocybin	&115, 215 and 315 µg/k	4	Lactose
Wittmann et al. <a href="#">2007</a>	CO	12	Healthy	Psilocybin	115 and 250 µg/kg	2	Lactose
Griffiths et al. <a href="#">2006</a>	CO	30	Healthy	Psilocybin	429 µg/kg	1	Methylphenidate
Kometer et al. <a href="#">2012</a>	CO	17	Healthy	Psilocybin	215 µg/kg	1	Not specified
Kraehenmann et al. <a href="#">2015</a>	CO	25	Healthy	Psilocybin	160 µg/kg	1	Lactose
Griffiths et al. <a href="#">2016</a>	CO	51	A, D and LT	Psilocybin	314 and 429 µg/kg	1	P* 43 and 14 µg/kg
Ross et al. <a href="#">2016</a>	CO	29	A and LT	Psilocybin	300 µg/kg	1	Niacin
Grob et al. <a href="#">2011</a>	CO	12	A and LT	Psilocybin	200 µg/kg	1	Niacin

**Table 2** Study summary of clinical trials included in the meta-analysis

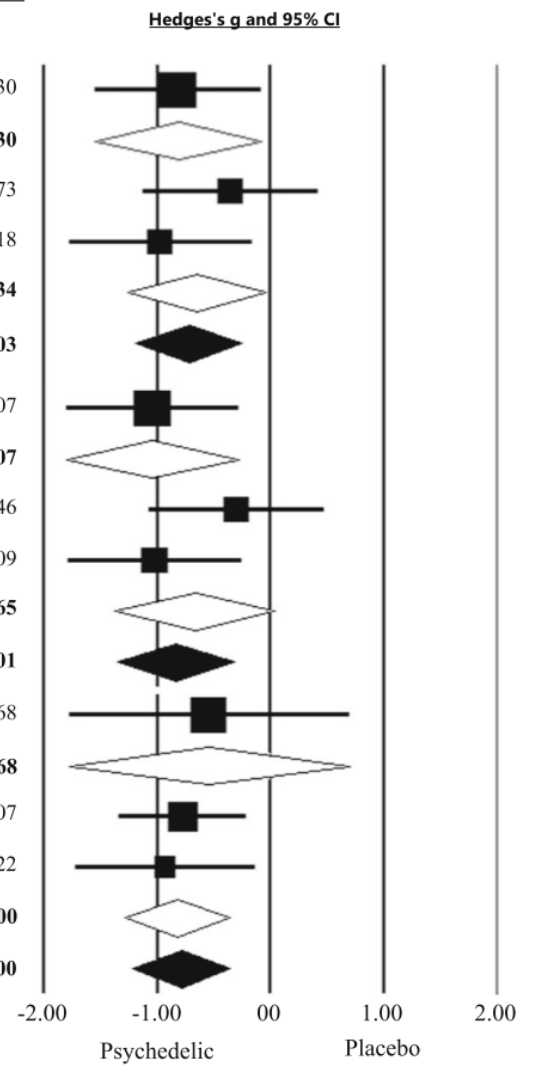
Study	<b>Acute Effects of Psychedelics for Negative Mood State</b>											
	Study	Psychedelic	Subject	Outcome	Statistic for each study							Hedges's g and 95% CI
				SMD	SE	I <sup>2</sup>	t-CI	u-CI	Z	p		
Gasser Schmid Dolder Palhano-Hasler Wittmann Griffiths Komater Kraehenmann Ross et al. Grob et al.	Dolder et al. (2016)	LSD	H	AMRS (1d)	-0.898	0.298	8.9	-1.482	-0.313	-3.009	0.003	
	Schmid et al. (2015)	LSD	H	AMRS (1d)	-0.561	0.352	12.4	-1.251	0.128	-1.596	0.111	
		<b>LSD</b>	<b>H</b>		<b>-0.757</b>	<b>0.228</b>	<b>5.2</b>	<b>-1.203</b>	<b>-0.311</b>	<b>-3.327</b>	<b>0.001</b>	
	Hasler et al. (2004)	Psilocybin	H	AMRS (c)	-0.344	0.477	22.7	-1.278	0.590	-0.721	0.471	
	Komater et al. (2012)	Psilocybin	H	PANAS (3h)	-0.945	0.354	12.5	-1.639	-0.251	-2.669	0.008	
	Kraehenmann et al. (2015)	Psilocybin	H	PANAS (3.5h)	-0.799	0.308	9.5	-1.403	-0.195	-2.593	0.010	
	Wittmann et al. (2007)	Psilocybin	H	AMRS (4.5h)	-0.343	0.397	15.8	-1.121	0.436	-0.863	0.388	
		<b>Psilocybin</b>	<b>H</b>		<b>-0.671</b>	<b>0.185</b>	<b>3.4</b>	<b>-1.034</b>	<b>-0.309</b>	<b>-3.632</b>	<b>0.000</b>	
		<b>Combined</b>	<b>H</b>		<b>-0.705</b>	<b>0.143</b>	<b>2.1</b>	<b>-0.987</b>	<b>-0.424</b>	<b>-4.916</b>	<b>0.000</b>	
	Grob et al. (2011)	Psilocybin	P	POMS (c)	-0.539	0.408	16.6	-1.338	0.260	-1.322	0.186	
	Ross et al. (2016)	Psilocybin	P	POMS (1d)	-0.709	0.373	13.9	-1.440	0.022	-1.901	0.057	
		<b>Psilocybin</b>	<b>P</b>		<b>-0.632</b>	<b>0.275</b>	<b>7.6</b>	<b>-1.171</b>	<b>-0.092</b>	<b>-2.295</b>	<b>0.022</b>	

### Effects of Psychedelics on Depressive Symptoms

Table 2 Study summary

Study	Study
Gasser	
Schmid	Study
Dolder	
Palhano	Dolder et al. (2011)
Hasler	Schmid et al. (2016)
Wittmann	
Griffiths	
Kometer	Hasler et al. (2016)
Kraehen	Kometer et al. (2016)
Griffiths	Kraehenmann et al. (2016)
Ross et	Wittmann et al. (2016)
Grob et	
Grob et al.	(2011)
Ross et al.	(2016)

Study	Psychedelic	Subject	Outcome	Statistic for each study						
				SMD	SE	I <sup>2</sup>	t-Cl	u-Cl	Z	p
<b>Acute Effects</b>										
Palhano-Fontes et al. (2018)	Ayahuasca	P	MADRS (1d)	-0.816	0.377	14.2	-1.555	-0.078	-2.167	0.030
	<b>Ayahuasca</b>	<b>P</b>		<b>-0.816</b>	<b>0.377</b>	<b>14.2</b>	<b>-1.555</b>	<b>-0.078</b>	<b>-2.167</b>	<b>0.030</b>
Grob et al. (2011)	Psilocybin	P	BDI (1d)	-0.354	0.397	15.8	-1.133	0.425	-0.891	0.373
Ross et al. (2016)	Psilocybin	P	C (1d)	-0.974	0.411	16.9	-1.779	-0.168	-2.370	0.018
	<b>Psilocybin</b>	<b>P</b>		<b>-0.655</b>	<b>0.310</b>	<b>9.6</b>	<b>-1.262</b>	<b>-0.048</b>	<b>-2.115</b>	<b>0.034</b>
	<b>Combined</b>	<b>P</b>		<b>-0.720</b>	<b>0.239</b>	<b>5.7</b>	<b>-1.189</b>	<b>-0.251</b>	<b>-3.010</b>	<b>0.003</b>
<b>Medium-term Effects</b>										
Palhano-Fontes et al. (2018)	Ayahuasca	P	C (2,7d)	-1.042	0.388	15	-1.802	-0.283	-2.690	0.007
	<b>Ayahuasca</b>	<b>P</b>		<b>-1.042</b>	<b>0.388</b>	<b>15</b>	<b>-1.802</b>	<b>-0.283</b>	<b>-2.690</b>	<b>0.007</b>
Grob et al. (2011)	Psilocybin	P	BDI (15d)	-0.302	0.397	15.7	-1.079	0.475	-0.762	0.446
Ross et al. (2016)	Psilocybin	P	C (15d)	-1.024	0.392	15.3	-1.792	-0.256	-2.615	0.009
	<b>Psilocybin</b>	<b>P</b>		<b>-0.666</b>	<b>0.361</b>	<b>13</b>	<b>-1.374</b>	<b>0.042</b>	<b>-1.844</b>	<b>0.065</b>
	<b>Combined</b>	<b>P</b>		<b>-0.841</b>	<b>0.264</b>	<b>7</b>	<b>-1.359</b>	<b>-0.323</b>	<b>-3.183</b>	<b>0.001</b>
<b>Long-term Effects</b>										
Gasser et al. (2014)	LSD	P	HADS (60d)	-0.546	0.630	3.97	-1.780	0.698	-0.867	0.368
	<b>LSD</b>	<b>P</b>		<b>-0.546</b>	<b>0.630</b>	<b>3.97</b>	<b>-1.780</b>	<b>0.698</b>	<b>-0.867</b>	<b>0.368</b>
Griffiths et al. (2016)	Psilocybin	P	C (35d)	-0.774	0.287	8.2	-1.336	-0.212	-2.701	0.007
Ross et al. (2016)	Psilocybin	P	C (42,49d)	-0.930	0.406	16.5	-1.725	-0.135	-2.292	0.022
	<b>Psilocybin</b>	<b>P</b>		<b>-0.826</b>	<b>0.234</b>	<b>5.5</b>	<b>-1.285</b>	<b>-0.367</b>	<b>-3.528</b>	<b>0.000</b>
	<b>Combined*</b>	<b>P</b>		<b>-0.792</b>	<b>0.219</b>	<b>4.8</b>	<b>-1.222</b>	<b>-0.362</b>	<b>-3.609</b>	<b>0.000</b>

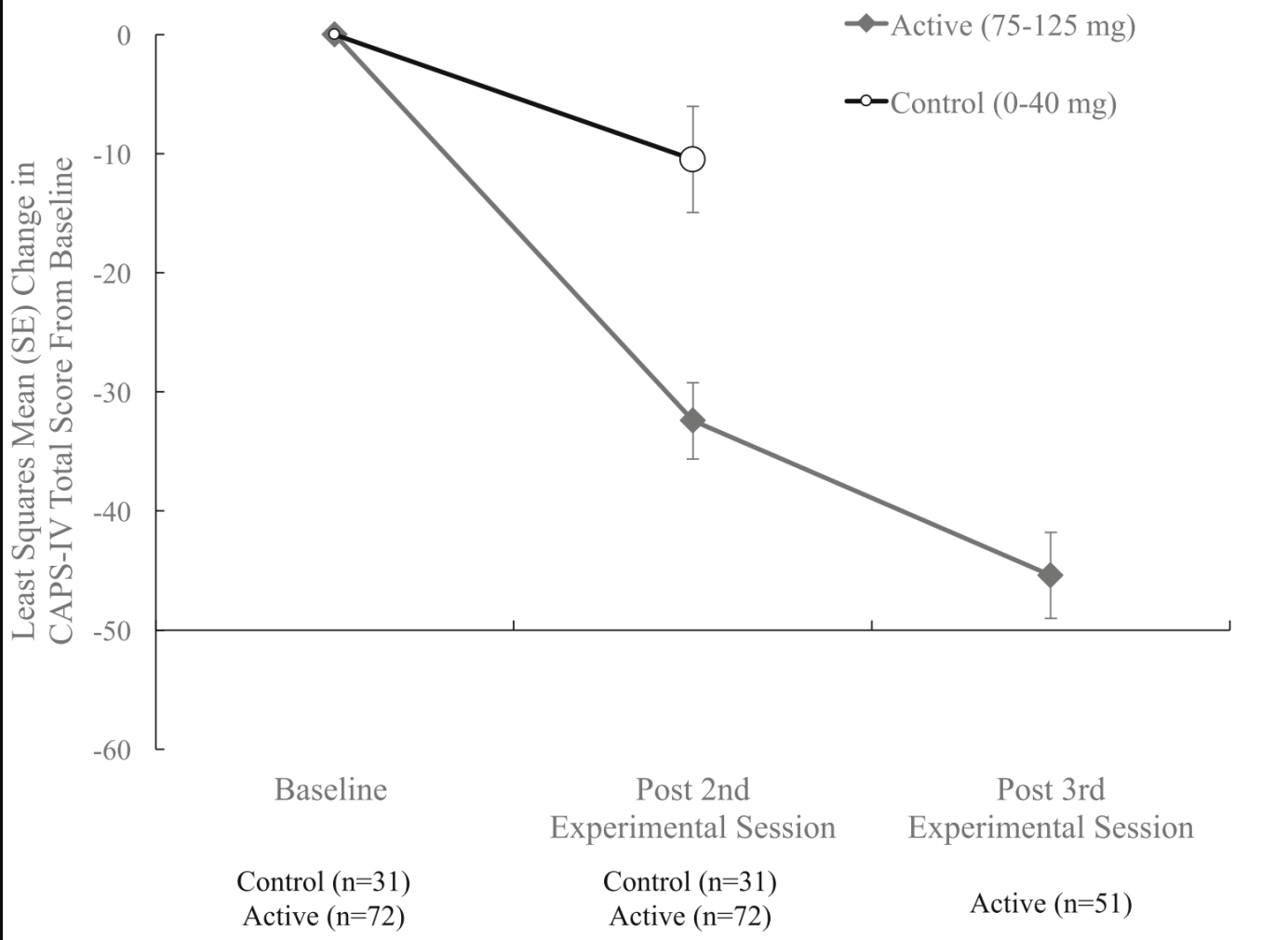


# Autre utilisation : MDMA et PTSD

Plusieurs essais de phase 2  
Phase 3 en cours

**Psychothérapie augmentée**  
Résultats encourageants

Limites idem



# Le progrès de la littérature

1950 - 1970



## Période "héroïque"

- Large diffusion, pas de contrôles méthodologiques
- Politisation / mouvement culturel

# Le progrès de la littérature

## Le retour

- Études open modestes, population et chercheurs avec a-priori (+)
- Obj : démonstration physio / psycho  
→ modèle centré sur le produit
- Recherche du placebo idéal

1950 - 1970



2005 - 2020



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## La phase scientifique / médicale

- Contrôle / rando / aveugle = norme  
↑ N, attention portée aux biais
- Obj : prouver l'effet thérapeutique,  
→ modèle psy "médical"
- Travail sur placebo



## Période "héroïque"

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# Take home messages

- \* L'effet thérapeutique des psychédéliques est régulièrement illustré par des essais dont la qualité augmente
- \* Certaines propriétés sont reproductibles : rapidité, taille d'effet, dosing...



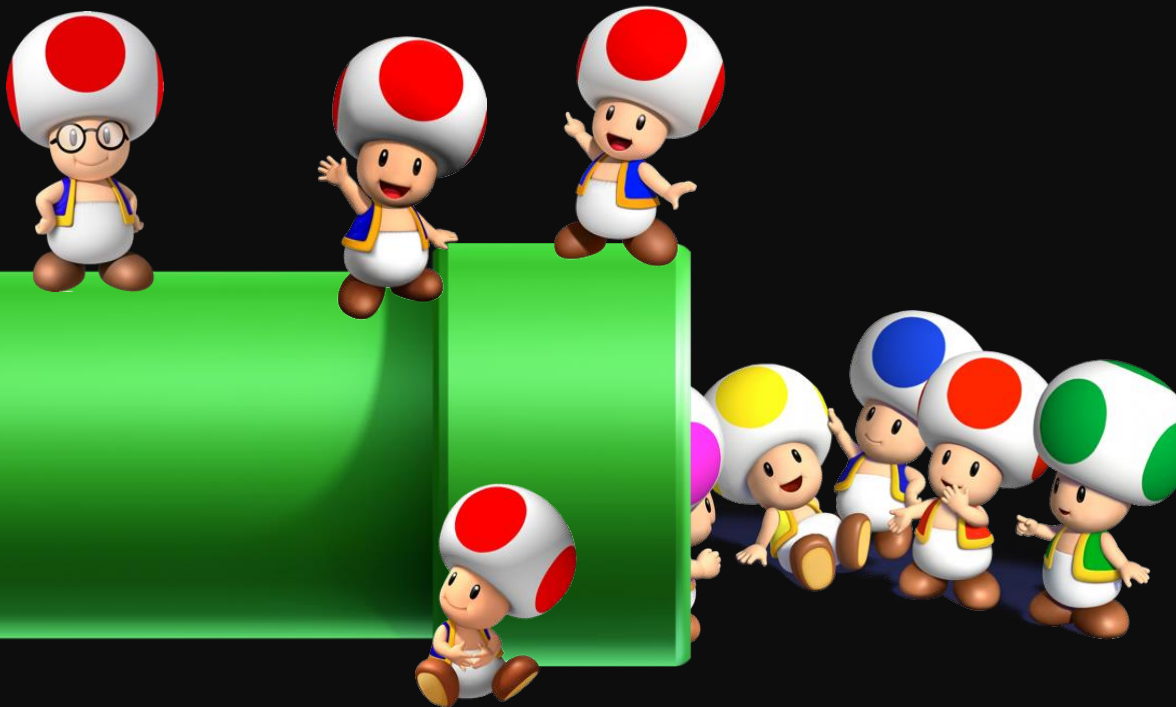
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## Mais

- \* Les erreurs du passé ont la vie dure : biais de sélection, conflits d'intérêt
- \* La littérature est issue d'un milieu bercé par un paradigme différent : centré sur le produit (et son effet) ≠ du paradigme médical habituel
- \* La mise au point d'un placebo est difficile ++ → besoin de revoir le modèle de l'EBM ?

# Merci pour votre attention



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