Clinical use of psilocybin in mental disorders: a bibliometric analysis in Scopus and Web of Science

Uso clínico de Psilocibina en trastornos mentales: un análisis bibliométrico en Scopus y Web of Science

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Abstract

This study presents a scientometric analysis of the scientific literature on the clinical use of psilocybin in mental disorders, covering publications from 2023 to 2025. The objective is to identify research trends, collaboration networks, and the scientific impact of this rapidly evolving field. A total of 359 unique records were retrieved from Scopus and Web of Science and analyzed using Gephi and Google Colab for network modeling. Results reveal exponential growth in output, with a 1375% increase in publications between 2023 and 2024. The United States led production, contributing 44.4% of the total articles and 41.1% of citations, followed by Canada and Switzerland.

Keywords: Terapia asistida por psicodélicos; depresión resistente al tratamiento; neurofarmacología de los psicodélicos; potencial terapéutico de los alucinógenos; Scopus; Web of Science.

Resumen

Este estudio presenta un análisis cienciométrico de la literatura científica sobre el uso clínico de la psilocibina en los trastornos mentales, abarcando publicaciones del período 2023 a 2025. El objetivo es identificar tendencias de investigación, redes de colaboración e impacto científico en un campo en rápida evolución. Se recuperaron un total de 359 documentos únicos de Scopus y Web of Science, los cuales fueron analizados mediante Gephi y Google Colab para la modelización de redes y visualización mediante. Los resultados revelan un crecimiento exponencial de la producción científica, con un aumento del 1375 % en el número de publicaciones entre 2023 y 2024. Estados Unidos lideró la producción, con el 44.4 % del total de artículos y el 41.1 % de las citas, seguido por Canadá y Suiza.

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Keywords: Psychedelic-assisted therapy; treatment-resistant depression; neuropharmacology of psychedelics; therapeutic potential of hallucinogens; Scopus; Web of Science.

1. Introduction

In the field of mental health, defining what constitutes a disorder has been the subject of extensive scientific and philosophical debate. A disorder can be conceptualized as a harmful dysfunction, which refers to a failure of an internal mechanism, whether physical or mental, to perform a natural function [1]; [2]. A significant shift occurred when the concept of dysfunction was positioned as preceding and potentially taking precedence over that of harm, and it was noted that mental disorders are usually associated with distress or disability [3], [4]. Mental disorders represent a major public health concern: one in eight people worldwide, approximately 970 million individuals, live with at least one diagnosable disorder, with major depression and anxiety disorders being the most prevalent. Ned & Kalin [5] reported an annual prevalence of major depression of 7.1% among adults and 13.3% among adolescents in 2017. Additionally, it was reported that 19.1% of adults experienced anxiety over 12 months, and the prevalence among adolescents reached 31.9%. Comorbidity is the rule rather than the exception in psychiatric disorders, with anxiety and depression frequently occurring simultaneously. This overlap is largely explained by a shared genetic vulnerability, and their co-occurrence has a significant impact. It is associated with a poorer prognosis, greater depression severity, increased suicidal ideation, more severe functional impairment, and greater use of healthcare services [6], [7].

Although pharmacological strategies (e.g., selective serotonin reuptake inhibitors, atypical antipsychotics) and psychotherapeutic approaches (e.g., cognitive-behavioral therapy, EMDR, prolonged exposure therapy) are available, between 20% and 30% of patients develop partial or complete treatment resistance or experience early relapse. This reveals a pressing therapeutic gap that needs to be addressed [8]. In this context, there has been a renewed interest in classic psychedelics, particularly psilocybin as an innovative therapeutic alternative [9];[10]. This enthusiasm was further driven by the FDA's 2018 designation of COMPASS Pathways' treatment protocol for treatment-resistant depression as a Breakthrough Therapy, recognizing the molecule's potential to surpass current therapeutic standards and fast-tracking its regulatory pathway [11]; [12]. Despite the resurgence of interest and the growing body of evidence supporting psilocybin's therapeutic potential, the existing literature remains fragmented, lacking a scientometric synthesis that systematically identifies research trends, collaboration networks, and emerging thematic areas. This knowledge gap hinders the consolidation of evidence and the strategic orientation of future research and policy development.

Therefore, the aim of this study is to perform a comprehensive scientometric analysis of the scientific literature on the clinical use of psilocybin in mental disorders, published between 2023 and 2025. This analysis seeks to identify the main research trends, influential authors, journals, and collaborative networks, thereby offering an integrated overview of the field. The ultimate goal is to inform the design of future phase III clinical trials and to support the safe and evidence-based integration of psilocybin into mainstream psychiatric practice.

Literature reviews play a critical role in synthesizing existing knowledge, identifying research trends, highlighting gaps, and guiding future investigations within a given field. In the context of psilocybin-assisted therapy for mental disorders, several narrative and clinical reviews have examined its efficacy and safety; however, a gap remains in the form of a comprehensive and up-to-date scientometric analysis.

This is particularly important given the surge in scientific output between 2023 and 2025, a period marked by regulatory developments, multicenter clinical trials, and growing ethical debate. Therefore, this review is both timely and necessary, as it provides a quantitative mapping of the current research landscape, identifies leading contributors and publication venues, and offers valuable insights to inform the design of future clinical trials and policy frameworks grounded in scientific evidence.

In order to contextualize the scientometric findings and provide a more comprehensive overview of the research field, the following sections summarize the dominant thematic areas that emerge from the recent literature on psilocybin-assisted therapy. These include the compound's pharmacological mechanisms, therapeutic models, and clinical applications across different mental disorders.

2. Theoretical Framework

2.1. Chemical nature and mechanism of action

Psilocybin is a tryptamine alkaloid found in mushrooms of the genera Psilocybe, Panaeolus, and Gymnopilus [13]. Its scientific relevance lies in the fact that, once ingested, it is dephosphorylated into psilocin, a partial agonist of the serotonergic 5-HT_2A receptor, and to a lesser extent, 5-HT_1A/2C [3]; [14]. This neurochemical interaction is critical, as it induces transient cortical hyperconnectivity, increased glutamate release in fronto-limbic networks, and disruption of the default mode network (DMN). These phenomena are directly associated with enhanced cognitive flexibility and reduced affective rumination [3]; [14], which underpins its therapeutic potential in disorders characterized by rigid and persistent thought patterns.

2.2. From basic research to controlled trials

Johns Hopkins University resumed human research with psilocybin in the early 2000s, demonstrating its safety in healthy volunteers and marking the scientific revival of the field [15]; [16]. Since then, data have accumulated from over a dozen phase I–III clinical trials exploring its use in various mental disorders under the psilocybin-assisted therapy (PAT) model [17]; [18]. This model combines 1 to 3 dosing sessions (typically 10–25 mg in synthetic capsule form) with psychotherapeutic preparation and integration [19]

2.2.1. Major Depression and Treatment-Resistant Depression

Meta-analyses of randomized controlled trials (n = 403) have confirmed a significant and sustained reduction in depressive symptoms with 25 mg of psilocybin compared to placebo, showing large effect sizes (SMD ≈ –0.7) and a threefold increase in remission rates at six weeks [20]; [21]. Studies such as the COMP360 phase IIb trial (2022) and an ongoing phase III trial (2025) for treatment-resistant depression, along with protocols focused on anhedonia, further support psilocybin's therapeutic potential [22]; [23].

2.2.2. Anxiety and Depression Related to Severe Medical Illness

Two randomized controlled trials in patients with advanced-stage cancer have shown reductions of over > 50% in anxiety and hopelessness scores, sustained six months after a single dose [23-26]

2.2.3. Post-Traumatic Stress Disorder (PTSD)

A multicenter phase II study (COMP360-PTSD; n ≈ 100) reported favorable safety outcomes and clinically significant improvements on the CAPS-5 scale at four weeks, reinforcing the hypothesis that the psychedelic experience facilitates the reconsolidation of traumatic memories [27]; [28].

2.2.4. Substance Use Disorders

In Alcohol Use Disorder (AUD), a double-blind Swiss trial demonstrated a 44% reduction in drinking days at month 6 compared to placebo [29]. Regarding tobacco use, the multisite protocol NCT05163496, currently in phase III, builds on pilot results in which 59% of participants achieved continuous abstinence at 12 months following two doses of psilocybin combined with cognitive-behavioral therapy [30].

2.3. Therapeutic Models and Clinical Considerations

Psilocybin-assisted therapy (PAT) is structured into three phases: (1) psychoeducational preparation, (2) one or more dosing sessions conducted in a safe setting with cardiac monitoring and peripheral EEG, and (3) integration, aimed at translating the introspective experience into lasting behavioral change [19]. Unlike daily psychopharmacological treatments, the intervention is episodic, which reduces adherence burden and the risks associated with chronic toxicity. The most common adverse events include transient nausea, emotional lability, and post-dose headache; no cases of persistent psychosis have been reported in carefully selected populations [31]; [32]; [33].

3. Methodology

Systematic searches were conducted in the Scopus and Web of Science databases using the following search parameters, designed to maximize the relevance and coverage of the literature in the field of psilocybin and mental disorders. Table I outlines the specific criteria employed for literature retrieval, including the year range, search date, document type, and keywords used, as well as the number of results obtained from each database and the total combined count. This study adopts a scientometric approach, as recently advocated by Robledo et al. [34], as a key methodology for interpreting the progress and structural patterns of scientific production.

Table I. Search parameters used in both databases.

Parameter	Web of Science	Scopus
Range	2023-2025	
Date	April 10, 2025	
Document Type	Article	
Words	(psilocybin OR psilocibina) AND ("psychedelic-assisted therapy") AND (depression OR anxiety OR ptsd OR addiction) AND ("clinical trial" OR "systematic review" OR "review") AND PUBYEAR > 2023 AND PUBYEAR < 2026	
Results	39	341
Total (Wos+Scopus)	380	

Original research articles, systematic reviews, and narrative reviews published in journals indexed in Scopus and Web of Science between January 1, 2023, and April 10, 2025, were included. Studies had to explicitly focus on the clinical use of psilocybin in mental disorders (depression, anxiety, PTSD, substance use disorders). Editorials, letters to the editor, book chapters, conference proceedings, theses, preprints, and articles that did not directly address the clinical use of psilocybin in humans or focused on other psychedelic substances without mention of psilocybin were excluded. The workflow diagram is presented in Figure 1.

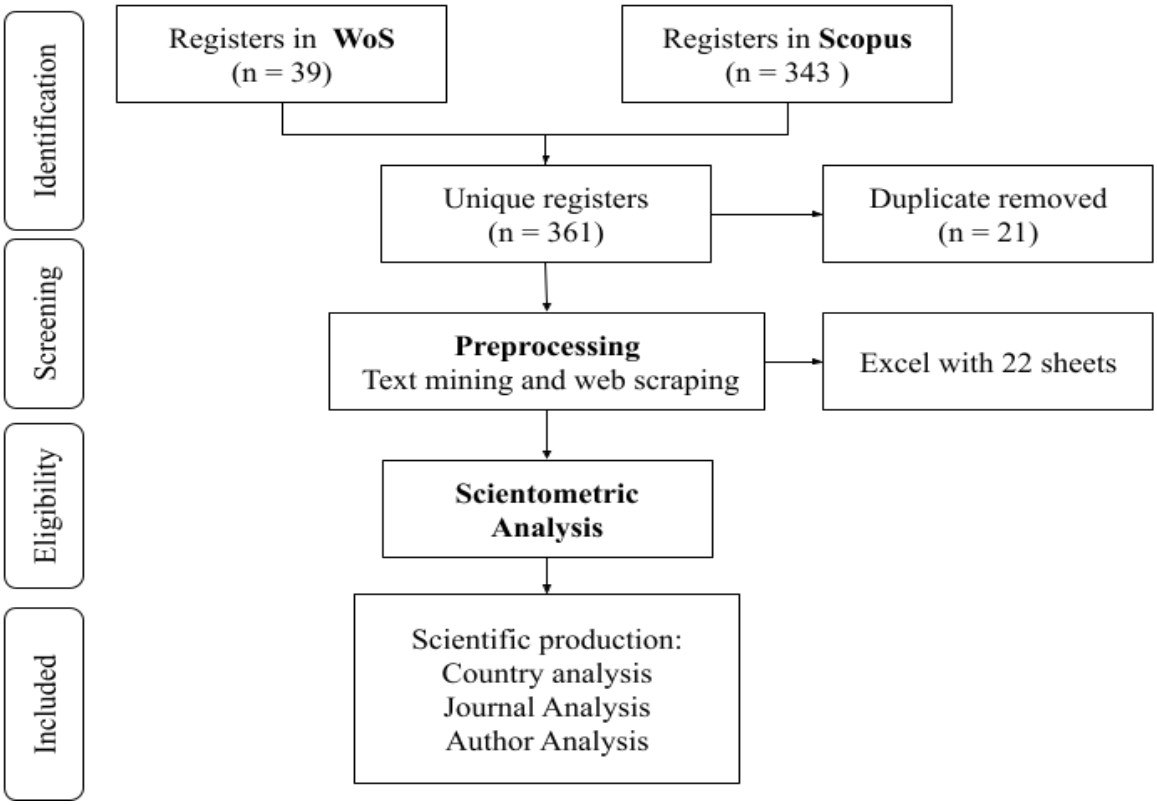

Figure 1. Workflow Diagram of the Data Collection, Processing, and Analysis for Scientometric illustrates the methodological steps followed in the study, from data collection to analysis and interpretation of results.

4. Resultados

4.1. Annual Scientific Output

The evolution of total scientific output and the number of accumulated citations for research on psilocybin in mental disorders during the 2023—2025 period is illustrated in Figure 2. The green and orange histograms represent contributions from Scopus and WoS, respectively. Data analysis reveals a clear growth trajectory in research on the clinical use of psilocybin.

Figure 2 illustrates the yearly evolution of scientific production and accumulated citations, highlighting the exponential growth of the field and the consolidation of research on psilocybin in mental disorders. The period from 2023 to 2024 was marked by a remarkable annual growth rate of 1375%. In 2023, a total of 318 citations were recorded, which increased sharply to 795 in 2024. The most cited article published during this period received 156 citations and was published in *eClinicalMedicine* [21]. This study is a controlled clinical trial

investigating the effect of a single moderate dose of psilocybin in the treatment of major depressive disorder. Regarding the year 2024, the most cited article received 29 citations and was published in SageJournals [35]. This study explored the therapeutic trajectories of cisgender gay men living with HIV and experiencing significant trauma symptoms who participated in psilocybin-assisted therapy sessions.

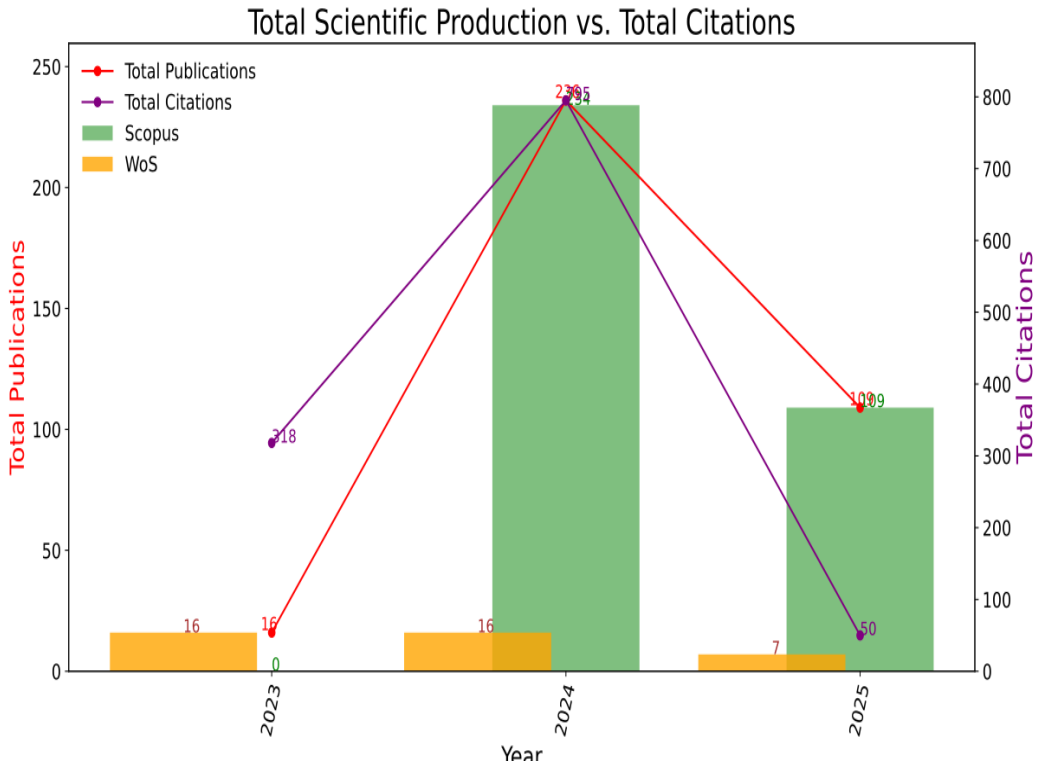

Figure 2. Annual Comparison of total scientific output and Citations in Scopus and WoS (2023-2025).

In 2023, a total of 16 publications were recorded (0 in Scopus and 16 in WoS), with 318 citations. The year 2024 shows a significant peak, with 236 publications (234 in Scopus and 16 in WoS) and 785 citations, indicating a phase of rapid expansion and consolidation in the field. For 2025, 109 publications (102 in Scopus and 7 in WoS) and 50 citations were observed, suggesting that the high research output trend continues. This surge in scientific production aligns with the growing global interest and investment in psychedelic research. The total number of unique documents analyzed amounts to 359, reflecting an intensification of research activity in this domain.

For the 2024–2025 period, a considerable increase in the total number of publications is observed, even though the 2025 data only cover the first four months. This brief time span has already reached a figure very close to 50% of the total publications from the previous year, indicating a significant rise. The most cited article in 2025 was published in *The American Journal of Bioethics*, which received 15 citations [36]. In this paper, the authors

examine whether psychedelics, when used clinically, should be considered ethically exceptional in comparison to other medical interventions.

4.2. Country-Level Analysis

Table II presents the top 10 countries by scientific output. The United States leads with 160 publications (44.44%) and 468 citations (41.12%), standing out for its high proportion of publications in first-quartile journals (Q1 = 107). Canada follows with 38 publications and 139 citations. Switzerland, with 25 publications, shows a disproportionately high impact with 196 citations and 19 Q1 articles, suggesting highly relevant contributions. The United Kingdom (24 publications), Germany (20 publications), and Australia (19 publications) are also key players. This table details the scientific output by country, highlighting the concentration of research in developed nations and the disproportionately high citation impact of Switzerland.

Table II. Top 10 countries by number of publications in psilocybin research.

Country	Production		Citation		Q1	Q2	Q3	Q4
USA	160	44.44%	468	41.12%	107	41	3	2
Canadá	38	10.56%	139	12.21%	28	6	3	0
Suiza	25	6.94%	196	17.22%	19	2	1	2
Reino Unido	24	6.67%	39	3.43%	17	5	1	0
Alemania	20	5.56%	25	2.20%	10	1	5	4
Australia	19	5.28%	23	2.02%	18	1	0	0
Países Bajos	8	2.22%	55	4.83%	8	0	0	0
Brasil	7	1.94%	5	0.44%	3	2	2	0
Francia	7	1.94%	28	2.46%	3	4	0	0
Nueva Zelanda	7	1.94%	22	1.93%	2	3	2	0

The global collaboration network between countries is shown in Figure 3. This scientific collaboration network, based on co-author affiliations within the same articles, reveals two large interconnected clusters, led by the United States and the United Kingdom. Strong collaborative ties are observed between these two countries, as well as with Canada, Germany, and Switzerland, forming a central research hub. Thicker connections and larger node sizes indicate the intensity of collaboration and the volume of joint publications. For

example, significant collaborative studies between the United States and the United Kingdom have advanced the understanding of psilocybin's long-term effects on depression [15]; [16]. Figure 3, visualizes the interconnections among leading countries in psilocybin research, highlighting the major nodes and the density of their collaborations.

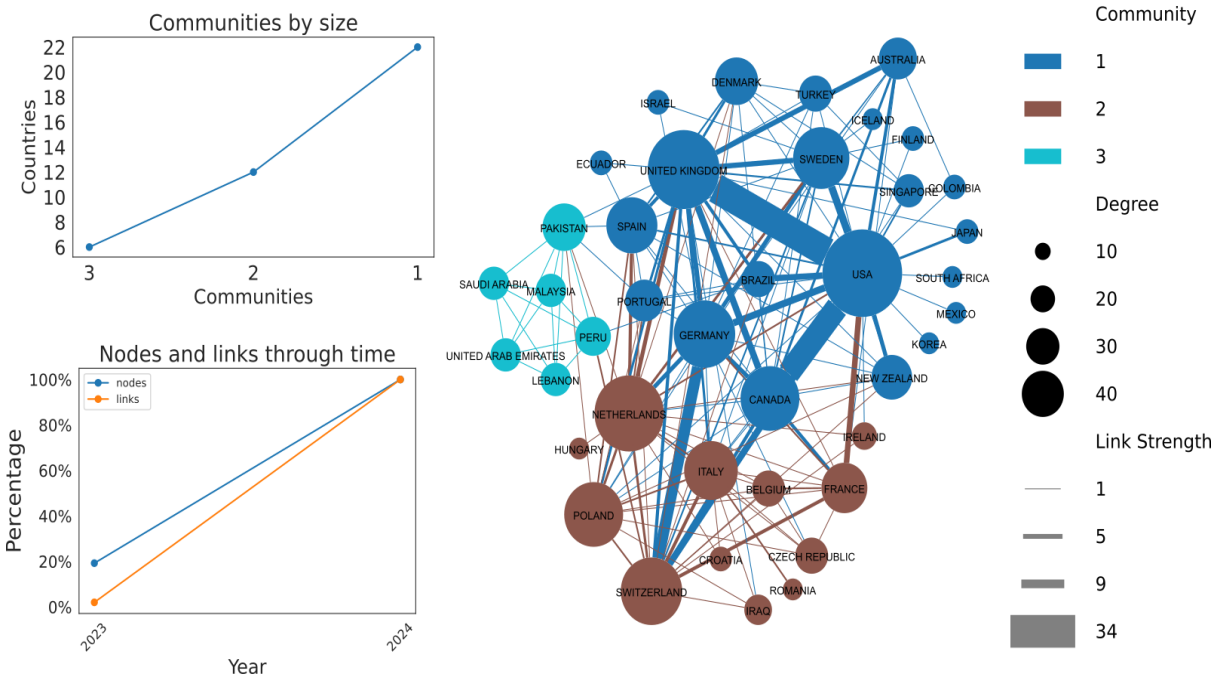

Figure 3. A global scientific research collaboration network among countries.

4.3. Journal Citation Network

Table III presents the top 10 journals by scientific output in the field of psychedelic-assisted therapies, based on combined data from Web of Science and Scopus. The *Journal of Psychedelic Studies* and the *Journal of Psychoactive Drugs* lead with 23 publications each (6% of total output), reflecting their role as specialized dissemination platforms despite their moderate impact factor (2.2). In contrast, high-impact journals such as the *Journal of Psychopharmacology* (IF 5.5) and *Psychopharmacology* (IF 3.3) contribute fewer but more influential articles, suggesting a dual strategy of publication: one focused on field-specific visibility, and another on broader scientific recognition. Interdisciplinary journals like *Scientific Reports* and *Frontiers in Psychology* indicate the diffusion of psychedelic research beyond psychiatry into cognitive science and psychology. Lastly, the presence of clinical journals such as the *Australian and New Zealand Journal of Psychiatry* and the *International Review of Psychiatry* suggests growing acceptance of these therapies within mainstream psychiatric discourse.

Table III. Top 10 journals by scientific output.

Journal	WoS	Scopus	Total	Percentage	Factor de Impacto
Journal Of Psychedelic Studies	1	22	23	0,06	2.2
Journal Of Psychoactive Drugs	1	23	23	0,06	2.2
Journal Of Psychopharmacology	1	13	13	0,04	5.5
Frontiers In Psychiatry	1	8	9	0,02	3.2
Psychopharmacology	1	8	8	0,02	3.3
Scientific Reports	0	7	7	0,02	3.9
Frontiers In Psychology	0	6	6	0,02	2.9
Australian And New Zealand Journal Of Psychiatry	0	5	5	0,01	3.7
International Journal Of Mental Health And Addiction	0	5	5	0,01	2.5
International Review Of Psychiatry	0	5	5	0,01	3.4

The citation network among journals publishing on the clinical use of psilocybin is depicted in Figure 4. The analysis reveals that a group of high-impact journals in the fields of psychiatry, neuropharmacology, and mental health serve as the primary channels for disseminating this research. Journals such as the Journal of Psychopharmacology, Molecular Psychiatry, JAMA Psychiatry, The Lancet Psychiatry, and Neuropharmacology appear prominently, forming dense clusters that indicate strong interconnection and mutual citation. The high frequency of publication and citation in these journals underscores their influence and central role in shaping the scientific discourse on psilocybin.

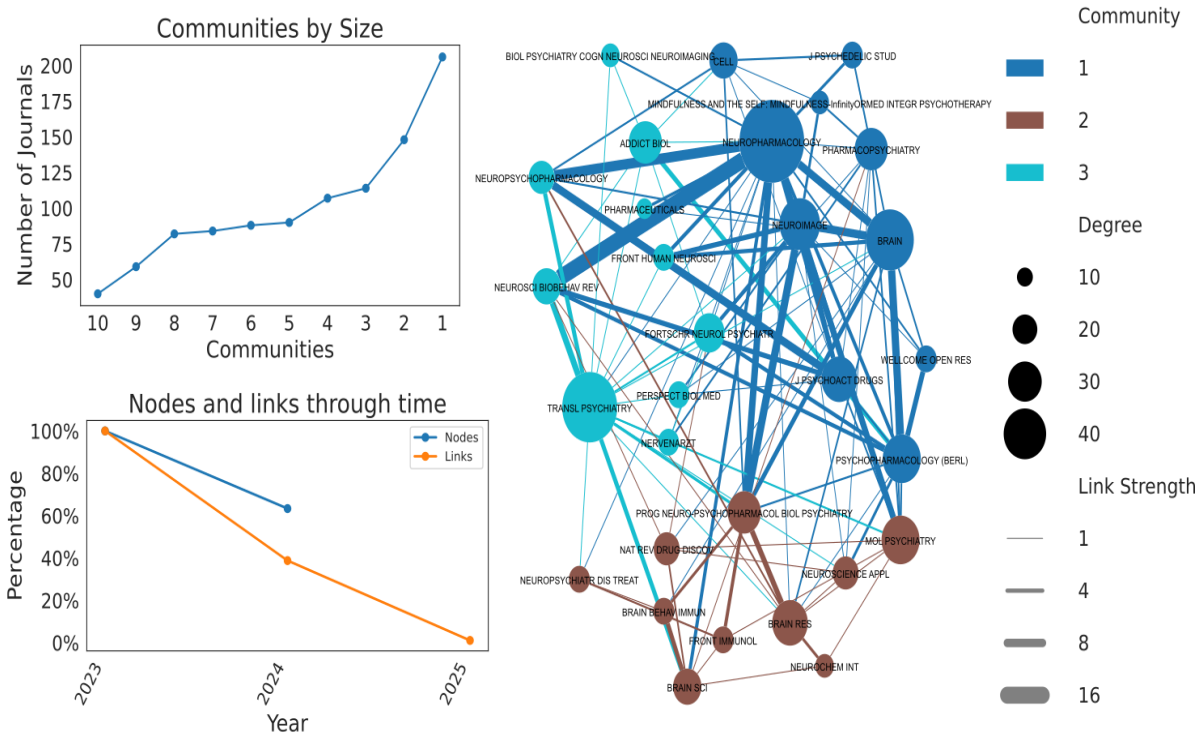

Figure 4. Journal citation network highlighting collaborative communities.

4.4. Collaboration Network Among Leading Authors

The collaboration network among the most influential authors in the field of psilocybin is illustrated in Figure 5. The co-authorship analysis identifies key researchers who have made significant contributions to the literature, establishing strong collaborative networks.

Authors such as Robin L. Carhart-Harris, David J. Nutt, Roland R. Griffiths, Albert Garcia-Romeu, and Matthew W. Johnson emerge as central figures in this network, characterized by a high volume of publications and an extensive co-authorship network. Their dominant presence suggests the formation of stable and highly productive research groups that often lead clinical trials and systematic reviews, thereby driving the psilocybin research agenda. Table IV presents the most prolific authors and their affiliations, highlighting the central figures leading research and their extensive co-authorship networks.

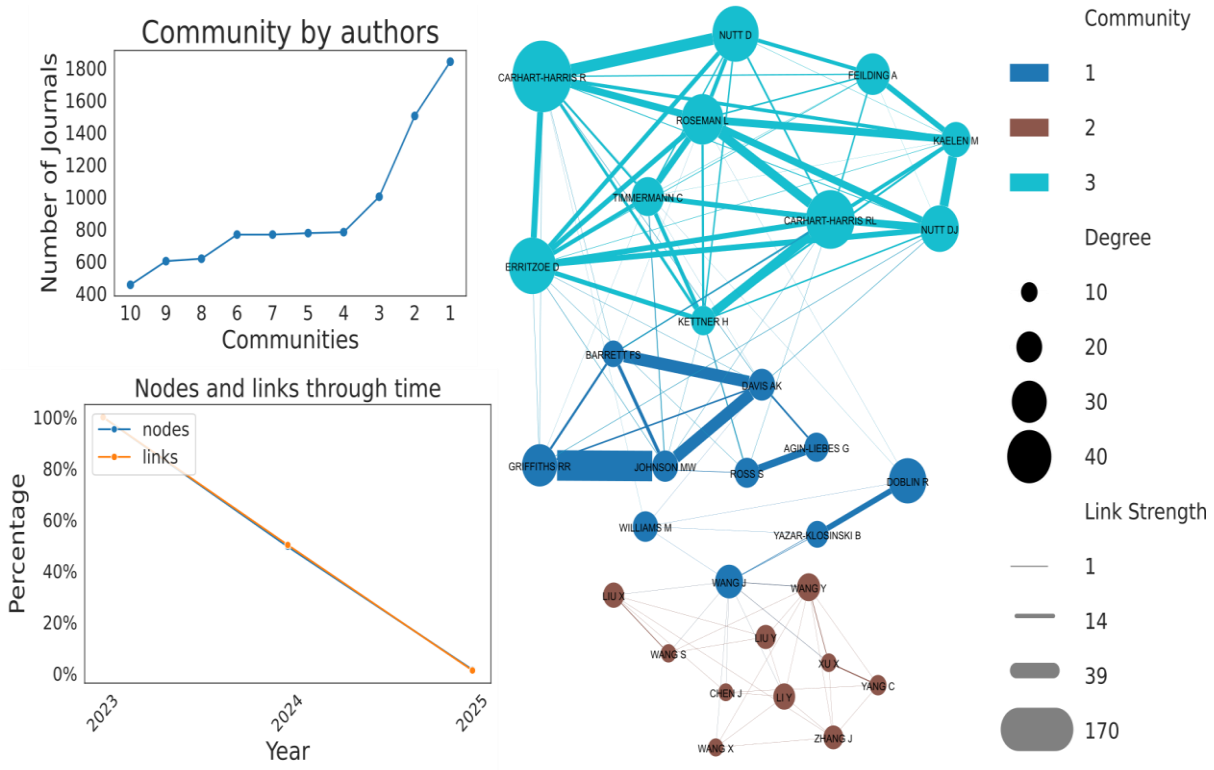

Figure 5. Collaboration network among prominent authors and their interconnections.

Table IV. Top 20 authors by number of publications/collaborations in psilocybin research.

Author	Papers Total	Total Citations	H-Index	Effective Size	Constraint	CDI
Carhart-Harris R	13	65	4	255.32	0.02	0.06
Nutt D	11	68	5	194.7	0.02	0.06
Hendricks P	9	15	2	12.47	0.19	0.28
Yaden D	9	54	4	10.08	0.22	0.25
Dunlop B	8	25	3	13.4	0.18	0.13
Erritzoe D	8	56	4	196.53	0.02	0.06
Palitsky R	8	25	3	40.88	0.08	0.11
Simonsson O	8	18	2	38.45	0.09	0.15
Cheung K	7	23	2	6.5	0.29	0.15
Garcia-Romeu A	6	14	2	89.89	0.04	0.12

Discussion

The scientometric analysis of the literature on the clinical use of psilocybin between 2023 and 2025 reveals a research field in full expansion and experiencing exponential growth. The annual growth rate of 1375% between 2023 and 2024, together with the significant increase in the number of publications and citations, underscores the growing interest and investment in this area. This surge not only reflects the therapeutic promise of psilocybin but also indicates methodological maturation and greater acceptance by the scientific and regulatory communities [8]; [12].

Scientific Leadership

Leadership in research is clearly concentrated in developed countries, with the United States leading in both publication volume and citations (Table II). However, the contribution of countries such as Switzerland—with a disproportionately high impact in citations per publication—indicates the presence of research hubs of high quality and relevance. Authors such as Robin L. Carhart-Harris, David J. Nutt, Roland R. Griffiths, Albert Garcia-Romeu, and Matthew W. Johnson [Table IV] are central figures, reflecting the importance of international collaboration and the formation of strong research networks. These investigators have been instrumental in conducting rigorous clinical trials and publishing systematic reviews that have advanced the field [20]; [37]. The emergence of studies focused on safety and efficacy in specific populations, such as older adults, along with the exploration of psychological mechanisms underlying therapy, demonstrates the increasing sophistication of the field [38]; [39].

Ethical and Regulatory Implications

The growth of the literature on psilocybin carries significant ethical, clinical, and regulatory implications. Clinically, the promising results in treatment-resistant depression, anxiety related to severe illnesses, and substance use disorders [21]; [25], [26]; Carhart-Harris et al. [29] suggest that psilocybin could offer a valuable alternative for patients who do not respond to conventional treatments. However, the nature of PAT—which involves profound psychological experiences and the need for a controlled environment and psychotherapeutic support—poses challenges regarding professional training and accessibility [19]; [33]. The discussion on integrating spiritual, existential, religious, and theological components into psychedelic-assisted therapies is also an area of growing interest [40].

From a regulatory perspective, the FDA's designation of psilocybin as a "Breakthrough Therapy" represents a significant step toward its potential approval as a medication [11]]; [12]. However, large-scale implementation will require clear regulatory frameworks addressing psilocybin's production, distribution, administration, and oversight. The debate over whether psychedelics should be considered ethically exceptional [36] is critical, as it may influence how they are regulated and integrated into healthcare systems. Ensuring equitable access to these therapies and minimizing risks—such as the possibility of adverse psychological experiences or misuse—is essential [31]; [32]. Emerging literature also

explores how regulatory policies can learn from previous experiences, such as cannabis regulation [41], and emphasizes the critical evaluation of therapy protocol components from the perspectives of patients, facilitators, and caregivers [42].

Conclusions

The scientometric analysis of recent literature (2023–2025) on the clinical use of psilocybin in mental disorders demonstrates a vibrant and rapidly expanding research field. The exponential growth in scientific output and the presence of strong international collaboration networks confirm the growing interest and investment in this area. Emerging trends focus on protocol optimization, expansion to new therapeutic indications, and the assessment of the acceptability of psychedelic-assisted therapy.

The clinical implications are significant, as psilocybin emerges as a promising alternative for complex and treatment-resistant mental disorders. However, its integration into clinical practice requires overcoming substantial regulatory and ethical challenges, including the need for clear frameworks for its administration and professional training. Methodologically, greater standardization is needed to consolidate the evidence and enable more robust comparative studies. Although still in its early stages of widespread implementation, this field has the potential to transform the mental health landscape, offering new hope to millions of individuals affected by psychiatric disorders.

In summary, the clinical use of psilocybin is in a phase of dynamic and promising growth. To fully realize its potential, future research must focus on methodological standardization, exploring its efficacy across diverse populations, and developing regulatory policies that ensure safe and equitable access. Only through a concerted effort among science, clinical practice, and regulatory frameworks can psilocybin be established as a transformative tool in mental health, opening a new chapter in the treatment of complex psychiatric disorders and offering hope to millions of patients worldwide.

References

[1]D. Telles-Correia, S. Saraiva, and J. Gonçalves, “Mental Disorder-The Need for an Accurate Definition,” Front Psychiatry, vol. 9, p. 64, Mar. 2018, doi: 10.3389/fpsyt.2018.00064. Available: http://dx.doi.org/10.3389/fpsyt.2018.00064

[2]J. C. Wakefield, “The concept of mental disorder. On the boundary between biological facts and social values,” Am Psychol, vol. 47, no. 3, pp. 373–388, Mar. 1992, doi: 10.1037//0003-066x.47.3.373. Available: http://dx.doi.org/10.1037//0003-066x.47.3.373

[3]R. L. Carhart-Harris et al., “Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin,” Proc Natl Acad Sci U S A, vol. 109, no. 6, pp. 2138–2143,

Feb. 2012, doi: 10.1073/pnas.1119598109. Available: http://dx.doi.org/10.1073/pnas.1119598109

[4]D. J. Stein, A. C. Palk, and K. S. Kendler, "What is a mental disorder? An exemplar-focused approach," Psychol Med, vol. 51, no. 6, pp. 894–901, Apr. 2021, doi: 10.1017/S0033291721001185. Available: http://dx.doi.org/10.1017/S0033291721001185

[5]N. H. Kalin, "The Critical Relationship Between Anxiety and Depression," American Journal of Psychiatry, May 2020, doi: 10.1176/appi.ajp.2020.20030305. Available: https://psychiatryonline.org/doi/10.1176/appi.ajp.2020.20030305. [Accessed: Jul. 12, 2025]

[6]J. W. G. Tiller, "Depression and anxiety," Medical Journal of Australia, vol. 199, pp. S28–S31, Oct. 2013, doi: 10.5694/mja12.10628. Available: https://onlinelibrary.wiley.com/doi/abs/10.5694/mja12.10628. [Accessed: Jul. 12, 2025]

[7]N. C. Jacobson and M. G. Newman, "Anxiety and depression as bidirectional risk factors for one another: A meta-analysis of longitudinal studies," Psychol Bull, vol. 143, no. 11, pp. 1155–1200, Nov. 2017, doi: 10.1037/bul0000111. Available: http://dx.doi.org/10.1037/bul0000111

[8]C. M. Reiff et al., "Psychedelics and Psychedelic-Assisted Psychotherapy," American Journal of Psychiatry, Feb. 2020, doi: 10.1176/appi.ajp.2019.19010035. Available: https://psychiatryonline.org/doi/10.1176/appi.ajp.2019.19010035. [Accessed: Jul. 14, 2025]

[9]A. Garcia-Romeu and W. A. Richards, "Current perspectives on psychedelic therapy: use of serotonergic hallucinogens in clinical interventions," Int Rev Psychiatry, vol. 30, no. 4, pp. 291–316, Aug. 2018, doi: 10.1080/09540261.2018.1486289. Available: http://dx.doi.org/10.1080/09540261.2018.1486289

[10]J. J. H. Rucker, J. Iliff, and D. J. Nutt, "Psychiatry & the psychedelic drugs. Past, present & future," Neuropharmacology, vol. 142, pp. 200–218, Nov. 2018, doi: 10.1016/j.neuropharm.2017.12.040. Available: http://dx.doi.org/10.1016/j.neuropharm.2017.12.040

[11]"Website." Available: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.revistavertex.com.ar/ebooks/9 Roemmers.pdf

[12]A. L. McGuire, H. F. Lynch, L. A. Grossman, and I. G. Cohen, "Pressing regulatory challenges for psychedelic medicine," Science, vol. 380, no. 6643, pp. 347–350, Apr. 2023, doi: 10.1126/science.adg1324. Available: http://dx.doi.org/10.1126/science.adg1324

[13]D. E. Nichols, M. W. Johnson, and C. D. Nichols, "Psychedelics as Medicines: An Emerging New Paradigm," Clin Pharmacol Ther, vol. 101, no. 2, pp. 209–219, Feb. 2017, doi: 10.1002/cpt.557. Available: http://dx.doi.org/10.1002/cpt.557

[14]D. B. Yaden, S. P. Goldy, B. Weiss, and R. R. Griffiths, "Clinically relevant acute subjective effects of psychedelics beyond mystical experience," Nat. Rev. Psychol., vol. 3, no. 9, pp. 606–621, Sep. 2024, doi: 10.1038/s44159-024-00345-6. Available: https://www.nature.com/articles/s44159-024-00345-6

[15]M. Johnson, W. Richards, and R. Griffiths, "Human hallucinogen research: guidelines for safety," J Psychopharmacol, vol. 22, no. 6, pp. 603–620, Aug. 2008, doi: 10.1177/0269881108093587. Available: http://dx.doi.org/10.1177/0269881108093587

[16]D. B. Yaden, D. Earp, M. Graziosi, D. Friedman-Wheeler, J. B. Luoma, and M. W. Johnson, "Psychedelics and Psychotherapy: Cognitive-Behavioral Approaches as Default," Front Psychol, vol. 13, p. 873279, May 2022, doi: 10.3389/fpsyg.2022.873279. Available: http://dx.doi.org/10.3389/fpsyg.2022.873279

[17]S. Ross et al., "Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial," J Psychopharmacol, vol. 30, no. 12, pp. 1165–1180, Dec. 2016, doi: 10.1177/0269881116675512. Available: http://dx.doi.org/10.1177/0269881116675512

[18]A. K. Davis et al., "Effects of Psilocybin-Assisted Therapy on Major Depressive Disorder: A Randomized Clinical Trial," JAMA Psychiatry, vol. 78, no. 5, pp. 481–489, May 2021, doi: 10.1001/jamapsychiatry.2020.3285. Available: http://dx.doi.org/10.1001/jamapsychiatry.2020.3285

[19]D. M. Horton, B. Morrison, and J. Schmidt, "Systematized Review of Psychotherapeutic Components of Psilocybin-Assisted Psychotherapy," Am J Psychother, vol. 74, no. 4, pp. 140–149, Dec. 2021, doi: 10.1176/appi.psychotherapy.20200055. Available: http://dx.doi.org/10.1176/appi.psychotherapy.20200055

[20]G. M. Goodwin et al., "Single-Dose Psilocybin for a Treatment-Resistant Episode of Major Depression," N Engl J Med, vol. 387, no. 18, pp. 1637–1648, Nov. 2022, doi: 10.1056/NEJMoa2206443. Available: http://dx.doi.org/10.1056/NEJMoa2206443

[21]R. E. Daws et al., "Increased global integration in the brain after psilocybin therapy for depression," Nat Med, vol. 28, no. 4, pp. 844–851, Apr. 2022, doi: 10.1038/s41591-022-01744-z. Available: http://dx.doi.org/10.1038/s41591-022-01744-z

[22]S. T. Aaronson et al., "Single-Dose Synthetic Psilocybin With Psychotherapy for Treatment-Resistant Bipolar Type II Major Depressive Episodes: A Nonrandomized Open-Label Trial," JAMA Psychiatry, vol. 81, no. 6, pp. 555–562, Jun. 2024, doi: 10.1001/jamapsychiatry.2023.4685. Available: http://dx.doi.org/10.1001/jamapsychiatry.2023.4685

[23]G. Gründer et al., "Treatment with psychedelics is psychotherapy: beyond reductionism," Lancet Psychiatry, vol. 11, no. 3, pp. 231–236, Mar. 2024, doi: 10.1016/S2215-0366(23)00363-2. Available: http://dx.doi.org/10.1016/S2215-0366(23)00363-2

[24]M. P. Bogenschutz et al., "Percentage of Heavy Drinking Days Following Psilocybin-Assisted Psychotherapy vs Placebo in the Treatment of Adult Patients With Alcohol Use Disorder: A Randomized Clinical Trial," JAMA Psychiatry, vol. 79, no. 10, pp. 953–962, Oct. 2022, doi: 10.1001/jamapsychiatry.2022.2096. Available: http://dx.doi.org/10.1001/jamapsychiatry.2022.2096

[25]S. Ross, "Therapeutic use of classic psychedelics to treat cancer-related psychiatric distress," Int Rev Psychiatry, vol. 30, no. 4, pp. 317–330, Aug. 2018, doi: 10.1080/09540261.2018.1482261. Available: http://dx.doi.org/10.1080/09540261.2018.1482261

[26]P. D. Petridis et al., "Psilocybin-assisted psychotherapy improves psychiatric symptoms across multiple dimensions in patients with cancer," Nat. Ment. Health, vol. 2, no. 11, pp. 1408–1414, Oct. 2024, doi: 10.1038/s44220-024-00331-0. Available: https://www.nature.com/articles/s44220-024-00331-0

[27]J. M. Mitchell et al., "MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study," Nat Med, vol. 27, no. 6, pp. 1025–1033, Jun. 2021, doi: 10.1038/s41591-021-01336-3. Available: http://dx.doi.org/10.1038/s41591-021-01336-3

[28]S. B. Armstrong, Y. Xin, N. D. Sepeda, M. Polanco, L. A. Averill, and A. K. Davis, "Prospective associations of psychedelic treatment for co-occurring alcohol misuse and posttraumatic stress symptoms among United States Special Operations Forces Veterans," Mil Psychol, vol. 36, no. 2, pp. 184–191, Mar-Apr 2024, doi: 10.1080/08995605.2022.2156200. Available: http://dx.doi.org/10.1080/08995605.2022.2156200

[29]R. L. Carhart-Harris et al., "Psilocybin with psychological support for treatment-resistant depression: six-month follow-up," Psychopharmacology (Berl), vol. 235, no. 2, pp. 399–408, Feb. 2018, doi: 10.1007/s00213-017-4771-x. Available: http://dx.doi.org/10.1007/s00213-017-4771-x

[30]X. Koenig and K. Hilber, "The anti-addiction drug ibogaine and the heart: a delicate relation," Molecules, vol. 20, no. 2, pp. 2208–2228, Jan. 2015, doi: 10.3390/molecules20022208. Available: http://dx.doi.org/10.3390/molecules20022208

[31]A. K. Schlag, J. Aday, I. Salam, J. C. Neill, and D. J. Nutt, "Adverse effects of psychedelics: From anecdotes and misinformation to systematic science," J Psychopharmacol, vol. 36, no. 3, pp. 258–272, Mar. 2022, doi: 10.1177/02698811211069100. Available: http://dx.doi.org/10.1177/02698811211069100

[32]G. Barber, C. B. Nemeroff, and S. Siegel, "A Case of Prolonged Mania, Psychosis, and Severe Depression After Psilocybin Use: Implications of Increased Psychedelic Drug Availability," Am J Psychiatry, vol. 179, no. 12, pp. 892–896, Dec. 2022, doi: 10.1176/appi.ajp.22010073. Available: http://dx.doi.org/10.1176/appi.ajp.22010073

[33]M. W. Johnson, "Consciousness, Religion, and Gurus: Pitfalls of Psychedelic Medicine," ACS Pharmacol Transl Sci, vol. 4, no. 2, pp. 578–581, Apr. 2021, doi: 10.1021/acsptsci.0c00198. Available: http://dx.doi.org/10.1021/acsptsci.0c00198

[34]S. Robledo, L. Valencia, M. Zuluaga, O. A. Echeverri, and J. W. A. Valencia, "tosr: Create the Tree of Science from WoS and Scopus," J. Sci. Res., vol. 13, no. 2, pp. 459–465, Aug. 2024, doi: 10.5530/jscires.13.2.36. Available: http://dx.doi.org/10.5530/jscires.13.2.36

[35]"Website." doi: 10.1007/s00213-024-06620-x. Available: http://dx.doi.org/10.1007/s00213-024-06620-x

[36]B. L. Roth and R. H. Gumpper, "Psychedelics as Transformative Therapeutics," Am J Psychiatry, vol. 180, no. 5, pp. 340–347, May 2023, doi: 10.1176/appi.ajp.20230172. Available: http://dx.doi.org/10.1176/appi.ajp.20230172

[37]R. R. Griffiths et al., "Psilocybin produces substantial and sustained decreases in depression and anxiety in patients with life-threatening cancer: A randomized double-blind trial," Journal of Psychopharmacology, Dec. 2016, doi: 10.1177/0269881116675513. Available: https://journals.sagepub.com/doi/10.1177/0269881116675513. [Accessed: Jul. 12, 2025]

[38]L. Bouchet et al., "Older adults in psychedelic-assisted therapy trials: A systematic review," J Psychopharmacol, vol. 38, no. 1, pp. 33–48, Jan. 2024, doi: 10.1177/02698811231215420. Available: http://dx.doi.org/10.1177/02698811231215420

[39]"Website." doi: 10.1007/s11469-024-01253-9. Available: http://dx.doi.org/10.1007/s11469-024-01253-9

[40]R. Palitsky et al., "Importance of Integrating Spiritual, Existential, Religious, and Theological Components in Psychedelic-Assisted Therapies," JAMA Psychiatry, vol. 80, no. 7, pp. 743–749, Jul. 2023, doi: 10.1001/jamapsychiatry.2023.1554. Available: http://dx.doi.org/10.1001/jamapsychiatry.2023.1554

[41]R. Palitsky et al., "A critical evaluation of psilocybin-assisted therapy protocol components from clinical trial patients, facilitators, and caregivers," Psychotherapy (Chic), Jan. 2025, doi: 10.1037/pst0000551. Available: http://dx.doi.org/10.1037/pst0000551

[42]R. B. Kargbo, "Psychiatric Treatments with Short-Duration Psychedelics and AI-Driven Behavioral Monitoring," ACS Med Chem Lett, vol. 16, no. 2, pp. 219–221, Feb. 2025, doi: 10.1021/acsmedchemlett.5c00031. Available: http://dx.doi.org/10.1021/acsmedchemlett.5c00031