

Peer Review

Review of: "Psilocybin in Alcohol Use Disorder Maintains Abstinence Efficacy: A Scoping Review"

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Thank you for allowing me to learn about your work and, as far as possible, to help you with my suggestions to make it more understandable for future readers.

The manuscript addresses a highly relevant and timely topic within addiction medicine: psilocybin-assisted therapy as a potential intervention for Alcohol Use Disorder (AUD). The burden of AUD, the limitations of current pharmacotherapies, and the increasing scientific focus on psychedelic-assisted treatments support the need for a comprehensive review in this area.

The manuscript is generally well-structured, and the authors provide a balanced and cautious interpretation of existing clinical findings. The inclusion of chemical synthesis context is original and may be of interest for translational pharmaceutics.

However, the manuscript requires substantial revisions to improve methodological transparency, coherence with scoping review standards, clarity of clinical focus, and consistency in reporting outcomes.

Methodological transparency (PRISMA-ScR compliance)

The search strategy lacks key details: full Boolean equations, number of reviewers, screening calibration, and data extraction methods. No assessment of risk of bias or study quality is provided, despite the inclusion of clinical trials.

Scope inconsistency

One included trial (Gold et al.) focuses primarily on opioid use disorder, not AUD.

Outcome measure heterogeneity

AUD outcomes are described narratively but not synthesized. It is recommended to provide a standardized comparison table summarizing primary/secondary endpoints (e.g., PHDD, PDD, craving measures), with clear interpretation of discrepancies.

Position of preclinical and chemical synthesis sections

The chemical pathways and preclinical evidence occupy significant space but are not tightly integrated into the clinical scope. It is suggested to move chemical synthesis details to an appendix or explicitly connect them to drug availability for clinical research.

Overstatement of safety conclusions

The claim that no psychedelic effects occur at clinical doses is too strong; subacute perceptual/psychological effects warrant mention. Perhaps the authors could rephrase the conclusions to acknowledge the existing requirements for safety oversight in trials involving psychedelic substances.

Minor Issues

- Several typographical and wording inconsistencies need language polishing.
- Figures and tables should include full captions, abbreviations, and sources.
- Clarify definitions of abstinence vs. relapse, as different trials use inconsistent thresholds.
- Update the Introduction to better delineate the unique mechanism of psilocybin relative to conventional AUD pharmacotherapies.

Reporting Summary Recommendations

To align with scientific paper standards, the revision should include: a PRISMA-ScR flow aligned with detailed methods; expanded tables enabling direct cross-study comparison; removal or justification of non-AUD studies; integration of safety findings with established literature.

Declarations

Potential competing interests: No potential competing interests to declare.