Check for updates

OPEN ACCESS

EDITED BY Anahita Bassir Nia, Yale University, United States

REVIEWED BY Darron Smith, University of Washington, United States Bradford Martins, Yale University, United States

*CORRESPONDENCE Taylor Black Macblack@uw.edu

RECEIVED 06 February 2023 ACCEPTED 28 August 2023 PUBLISHED 20 September 2023

CITATION

Black T (2023) Lifeboat ethics, risk, and therapeutic opportunity: an appeal for equitable psychedelic therapy access in the "high-risk" addiction patient. *Front. Psychiatry* 14:1159843. doi: 10.3389/fpsyt.2023.1159843

COPYRIGHT

© 2023 Black. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Lifeboat ethics, risk, and therapeutic opportunity: an appeal for equitable psychedelic therapy access in the "high-risk" addiction patient

Taylor Black*

Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA, United States

Psychedelic-assisted treatment (PAT) for mental health is in renaissance. Psilocybin and MDMA stand near FDA approval, and US cities and states are decriminalizing or regulating the non-clinical use of psilocybin. However, neither FDA indications nor a regulated use model sufficiently address the complex needs and opportunities for an improved treatment of addiction. When paired with disability and social dispossession, addiction increasingly burdens informal care networks, public safety, and particularly healthcare systems. Stigma and mistreatment alienate people from opportunities for care and multiply the costs of providing care. This dynamic worsens socially determined resource limitations, enforcing stark ethical choices and perpetuating socioeconomic inequities, isolation, mental illness, medical illness, overdose, suicide, and violence. In order for psychedelic treatments to achieve their greatest utility to population health, we must intentionally develop regulatory, clinical, and payment systems supporting clinical research, rigorous safety monitoring, and implementation to address these immense needs and reduce the barriers to engagement for those who now bear the costs, including those who work at the front lines of addiction care. To achieve full fruition, I advocate for a collaborative approach, built from within networks of mutual social support but linked and accountable to public institutions charged with the equitable dissemination of these therapies for the greatest social and health equities. Rather than relegating PAT to the needs of the commercially insured or wellness markets, this is the moment to learn from ancient traditions of ritualized sacramental use, organized around faith in our mutual dependency and accountability, and to capture an opportunity to improve population health and equity. To miss this opportunity is to accept the status quo in the midst of a growing emergency, for lack of moral vision and intention to change our habits.

KEYWORDS

psychedelic, policy, risk, equity, addiction, cost, psychiatric, ethics

Introduction

"Love? What is it? Most natural painkiller what there is." William S. Burroughs

Addiction reflects and sustains social and health inequities and excludes the most ill from parity in care at an immense cost. A "social disease" model interrogates mechanisms (1) of social and developmental transmission via parental addiction (2), dislocation (3), and stigma (4). Adverse childhood experiences (ACEs) (5) drive somatic symptoms (6), mental illness (7), addiction (8), and treatment dropout (9). The socialized cost of addiction

such as medical expenses (10, 11), early mortality (12), and criminality (13) is a total of nearly \$1T annually in the USA (14). Despite increasing public spending (15) and high aspirations, the prevalence of addiction has doubled in one generation, now leading the world (16), and is likely to end in death rather than recovery (17).

"Safety-net" healthcare is a major venue of such alienation, despair, and self-destruction. A "revolving door" of incarceration (18), hospitalization (19), and distrustful healthcare experiences burns out patients and workers (20, 21). Forced to manage inequality, triaging high-risk and ethically complex situations, we rule a biomedical lifeboat of costly inefficiency while blaming the drowning for the tides. Our biomedical infra structure structurally fails (22) without social systems that promote belonging and recovery (23) for those with addiction.

Such systems demand mutual faith and intention. Traditional, legally-sanctioned "sincere" (24) religious groups provide safety (25–27) and regulate access (28) to sacramental psychedelic use, illustrating practical rituals of group continuity, mutual aid, intention, and preparation (29). Paired with clinical research, they should inform current policy questions around the implementation of equitable access to PAT. These cultural and legal histories are heterogenous, including psilocybin (30, 31), peyote (32–34), and ayahuasca (35), evolving in post-colonial communities sometimes in response to social disease and oppression (36) and the prevalent demands for mental health and addiction care (37–39). As the legality of PAT evolves, we should protect as such "sincere" new groups that adhere to the faith in human interdependency, cemented by the sacrament of intentional group psychedelic use.

Case example

Mr. L's development is marked by the grit of poverty, neighborhood violence, and childhood sexual abuse by his stepfather, unacknowledged by his mother. He achieved an education, career, marriage, and parenthood, but attachment insecurity and nightmares pushed him toward sedative addiction and decades of isolation, incarceration, illness, indignity, and dependency.

I met him at about 60 years of age, a self-described "gutterdrunk" and emergency department high-utilizer, after a series of dangerous intoxications and withdrawal seizures when using "street Xanax" of inconsistent purity. His goal was to manage his chronic anxiety, quit using alcohol and illicit benzodiazepines, and rebuild family relationships. He had already burned through counselors, peers, case managers, short-term detoxes, and residential treatments focused on sobriety. "I want treatment that works." We agreed to harm-reduction benzodiazepine maintenance (40) using clonazepam, buprenorphine, gabapentin, paroxetine, hydroxyzine, and prazosin, meeting regularly over two years of relative stability, warmth, and relationship growth among sober peers and with his children.

As studies proliferated, it was often wondered when or if we might access PAT to consolidate different schemas of vulnerability and self-worth that informed our many slips and boundary tests. Mr. L was trusting, motivated, wise, and tough. Then, the pandemic started to tear apart our fragile raft. Unable to quit smoking to get the hip arthroplasty and mobility he needed to cope adaptively to pain and isolation, these problems compounded into relapse after his stepfather's funeral. He suffered repeated brain injuries, over multiple nocturnal ED visits, quickly sobering and leaving to avoid our gaze. His children pulled away again, deepening his despair. His disorderly intoxication cost him eviction from a clean and sunny housing unit. At my last contact, he was cognitively impaired, barely surviving in public housing, hopelessly depressed, and using heavily.

Addiction impoverishes us all: Mr. L loses his identity, privacy, dignity, independence, and health; his clinical team is demoralized and traumatized; society bears the high cost of hospital visits and early-onset custodial care. Deprived of cure or comfort, I console myself by caring and witnessing. Such self-destruction is only meaningful, however, through intentional action to avert the next tragedy.

Clinical and policy priorities

PAT for addiction remains experimental and, despite reassuring safety signals in non-clinical use (41, 42), may have greater risks. Intentional policy work now can provide for safe and equitable access as treatment data emerge. In addition to the 20th-century trials of LSD in alcohol use disorder (AUD) (43), there are new trial data proving significant benefits of psilocybin in AUD (44), smoking cessation (45), and two US trials in recruitment for stimulant use disorders (46). Ongoing phase—three studies for PTSD and MDD will conclude within the year, with anticipated FDA approval of MDMA and psilocybin (47) for clinical use by 2024. The cost-effectiveness analysis of MDMA for PTSD costs \$12K per person for a favorable (48) \$25K (49) per QALY. Typically excluded "high-risk" patients could also yield proportionally greater margins of benefit if the efficacy is comparable to lowrisk patients.

Community-based participatory research (CBPR) clinics and coordinated registry networks (CRNs) (50) are necessary for the next quality improvement and implementation in PAT for addiction. They should have five functions:

- 1. Measure transparently and systematically in harmony with federal guidance for "harm reduction, risk mitigation, and safety monitoring" (51) to identify markers of differential risk and benefit to deftly maximize safety, economic (52), and public health benefits (53).
- 2. Provide access to higher-risk individuals in need of more complex care.
- 3. Innovate and implement cost-effective and accessible options.
- 4. Recruit and train diverse and highly effective psychedelic clinicians.
- 5. Collaborate with mutual-support groups to provide recoveryoriented PAT for step-down continuity care, where interpersonal accountability and peer support can replace institutional care and surveillance.

Various jurisdictions have decriminalized or regulated psychedelics for adult use (54). Regulated cannabis use illustrates the harms and opportunity costs of misdirected policies that promoted charlatanism (55), consumption-based businesses (56), health and psychosis risks concentrated in young socially dispossessed BIPOC men (57), and increased suicide and alcohol deaths (58). Whether concurrent declines in racially biased policing and incarceration (59) balance such harms may be "unanswerable" (60). The capitalized industry is patenting color schemes and soundtracks for private franchise PAT (61) serving the wellness "spa" market (62), while unregulated freelance "trip guides" or retreats of dubious accountability and safety (63, 64) may prioritize profit over beneficence. Lightly regulated or PAT might help many and harm few, but this commercialization severs the source of transformational, sacramental cultural power.

Conclusion

People suffering the deep spiritual wounds of chronic and complex addiction are often both pariahs *and* exemplars of grit, resilience, wisdom, and grace and may benefit from PAT if they can be prepared for its rigors and supported through catharsis and integration of change. Self-sustaining peer groups modeled on sacramental psychedelic use offer affordable and accessible continuity and social accountability when embedded in CBPR or CRNs to guide the implementation of PAT, rigorously monitor individual outcomes, and maximize community health. Such bonds are the true medicine and always have been.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

References

1. Fraser S, Pienaar K, Dilkes-Frayne E, Moore D, Kokanovic R, Treloar C, et al. Addiction stigma and the biopolitics of liberal modernity: a qualitative analysis. *Int J Drug Policy*. (2017) 44:192–201. doi: 10.1016/j.drugpo.2017.02.005

2. Ijadi-Maghsoodi R, Quan M, Horton J, Ryan GW, Kataoka S, Lester P, et al. Youth growing up in families experiencing parental substance use disorders and homelessness: a high-risk population. *J Child Adolesc Psychopharmacol.* (2019) 29:773– 82. doi: 10.1089/cap.2019.0011

3. Alexander BK. *The Globalization of Addiction: A Study in Poverty of the Spirit.* Oxford: Oxford University Press (2008).

4. Room R. Stigma, social inequality and alcohol and drug use. Drug Alcohol Rev. (2005) 24:143–55. doi: 10.1080/09595230500102434

5. Hughes K, Bellis MA, Hardcastle KA, Sethi D, Butchart A, Mikton C, et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *Lancet Public Health.* (2017) 2:e356–66. doi: 10.1016/S2468-2667(17)30118-4

 Maunder RG, Hunter JJ, Atkinson L, Steiner M, Wazana A, Fleming AS, et al. An attachment-based model of the relationship between childhood adversity and somatization in children and adults. *Psychosom Med.* (2017) 79:506– 13. doi: 10.1097/PSY.000000000000437

7. Compton MT, Zern A, Langlois S, Ashekun O. Associations between adverse childhood experiences and tobacco, alcohol, and drug use among individuals with serious mental illnesses in public-sector treatment settings. *Community Ment Health J.* (2023) 59:363–9. doi: 10.1007/s10597-022-01014-9

8. Dube SR, Felitti VJ, Dong M, Chapman DP, Giles WH, Anda RF. Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: the adverse childhood experiences study. *Pediatrics.* (2003) 111:564–72. doi: 10.1542/peds.111.3.564

Ethics statement

Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer DS declared a shared affiliation with the author to the handling editor at the time of review.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

9. Borgert B, Morrison DG, Rung JM, Hunt J, Teitelbaum S, Merlo LJ. The association between adverse childhood experiences and treatment response for adults with alcohol and other drug use disorders. *Am J Addict.* (2023) 32:254–62. doi: 10.1111/ajad.13366

10. Melek S, Norris D, Paulus J, Matthews K, Weaver A, Davenport S. *Economic Impact of Integrated Medical-Behavioral Healthcare: Implications for Psychiatry*. Seattle, WA: Milliman, Inc. (2014).

11. Peterson C, Li M, Xu L, Mikosz CA, Luo F. Assessment of annual cost of substance use disorder in US hospitals. *JAMA Netw Open.* (2021) 4:e210242. doi: 10.1001/jamanetworkopen.2021.0242

12. Alcohol-Related Disease Impact (ARDI) Application (2020). Available online at: https://nccd.cdc.gov/DPH_ARDI/default/default.aspx (accessed May 29, 2023).

13. Sacks JJ, Gonzales KR, Bouchery EE, Tomedi LE, Brewer RD. 2010 national and state costs of excessive alcohol consumption. *Am J Prev Med.* (2015) 49:e73–9. doi: 10.1016/j.amepre.2015.05.031

14. Costs Due to Abuse of Tobacco, Alcohol, Illicit Drugs, and Prescription Opioids in the United States as of 2020. (2021). Available online at: https://www.statista.com/ statistics/367863/tobacco-alcohol-and-illicit-drugs-abuse-costs-in-the-us/ (accessed May 29, 2023).

15. Substance Abuse and Mental Health Services Administration. *Projections of National Expenditures for Treatment of Mental and Substance Use Disorders*, 2010–2020. HHS Publication No. SMA-14-4883. Rockville, MD: Substance Abuse and Mental Health Services Administration (2014).

16. Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, WA: Institute for Health Metrics and Evaluation (IHME), 2021. Available online at: http://ghdx.healthdata.org/gbd-results-tool (accessed May 29, 2023).

17. Vaillant GE. A 60-year follow-up of alcoholic men. Addiction. (2003) 98:1043-51. doi: 10.1046/j.1360-0443.2003.00422.x

18. Kushel MB, Hahn JA, Evans JL, Bangsberg DR, Moss AR. Revolving doors: imprisonment among the homeless and marginally housed population. *Am J Public Health*. (2005) 95:1747–52. doi: 10.2105/AJPH.2005.065094

 Frick U, Frick H, Langguth B, Landgrebe M, Hübner-Liebermann B, Hajak G. The revolving door phenomenon revisited: time to readmission in 17'145 [corrected] patients with 37'697 hospitalisations at a German psychiatric hospital. *PLoS ONE*. (2013) 8:e75612. doi: 10.1371/journal.pone.0075612

20. Schablon A, Kersten JF, Nienhaus A, Kottkamp HW, Schnieder W, Ullrich G, et al. Risk of burnout among emergency department staff as a result of violence and aggression from patients and their relatives. *Int J Environ Res Public Health.* (2022) 19:4945. doi: 10.3390/ijerph19094945

21. Caruso R, Toffanin T, Folesani F, Biancosino B, Romagnolo F, Riba MB, et al. Violence against physicians in the workplace: trends, causes, consequences, and strategies for intervention. *Curr Psychiatry Rep.* (2022) 24:911–24. doi: 10.1007/s11920-022-01398-1

22. Hall W, Carter A, Forlini C. The brain disease model of addiction: is it supported by the evidence and has it delivered on its promises? *Lancet Psychiatry.* (2015) 2:105–10. doi: 10.1016/S2215-0366(14)00126-6

23. Davidson L, Rowe M, DiLeo P, Bellamy C, Delphin-Rittmon M. Recoveryoriented systems of care: a perspective on the past, present, and future. *Alcohol Res.* (2021) 41:09. doi: 10.35946/arcr.v41.1.09

24. Bullis RK. The "vine of the soul" vs. the controlled substances act: implications of the hoasca case. *J Psychoact Drugs*. (2008) 40:193–9. doi: 10.1080/02791072.2008.10400630

25. Celidwen Y, Redvers N, Githaiga C, Calambás J, Añaños K, Chindoy ME, et al. Ethical principles of traditional Indigenous medicine to guide western psychedelic research and practice. *Lancet Reg Health Am.* (2022) 18:100410. doi: 10.1016/j.lana.2022.100410

26. Winkelman M. Psychedelics as medicines for substance abuse rehabilitation: evaluating treatments with LSD, Peyote, Ibogaine and Ayahuasca. *Curr Drug Abuse Rev.* (2014) 7:101–16. doi: 10.2174/1874473708666150107120011

27. Bouso JC, Andión Ó, Sarris JJ, Scheidegger M, Tófoli LF, Opaleye ES, et al. Adverse effects of ayahuasca: results from the global ayahuasca survey. *PLOS Glob Public Health.* (2022) 2:e0000438. doi: 10.1371/journal.pgph.0000438

28. Garrity JF. Jesus, peyote, and the holy people: alcohol abuse and the ethos of power in Navajo healing. *Med Anthropol Q.* (2000) 14:521–42. doi: 10.1525/maq.2000.14.4.521

29. Barber GS, Aaronson ST. The emerging field of psychedelic psychotherapy. *Curr Psychiatry Rep.* (2022) 24:583–90. doi: 10.1007/s11920-022-01363-y

30. Carod-Artal FJ. Hallucinogenic drugs in pre-Columbian Mesoamerican cultures. *Neurologia.* (2015) 30:42–9. doi: 10.1016/j.nrleng.2011.07.010

31. Wikipedia. *Psilocybin decriminalization in the United States.* (2023). Available online at: https://en.wikipedia.org/wiki/Psilocybin_decriminalization_in_the_United_States (accessed May 19, 2023).

32. Long CN. Religious Freedom and Indian Rights: The Case of Oregon v. Smith. Lawrence, KS: University Press of Kansas (2000).

33. Halpern JH, Sherwood AR, Passie T, Blackwell KC, Ruttenber AJ. Evidence of health and safety in American members of a religion who use a hallucinogenic sacrament. *Med Sci Monit*. (2008) 14:SR15-22.

34. Anderson EF. *Peyote: The Divine Cactus*, 2nd ed. Tucson, AZ: University of Arizona Press (1996). doi: 10.2307/j.ctv1qwwk26

 Pontual AAD, Tófoli LF, Corradi-Webster CM, van Oorsouw K, Delgado ARO, Ramaekers JG. The influence of ceremonial settings on mystical and challenging experiences occasioned by ayahuasca: a survey among ritualistic and religious ayahuasca users. Front Psychol. (2022) 13:857372. doi: 10.3389/fpsyg.2022.857372

36. Maroukis TC. *The Peyote Road: Religious Freedom and the Native American Church*, 1st ed. Norman: University of Oklahoma (2010).

37. Bhatt SR, Armstrong M, Parker T, Maviglia M, Kass R, Leeman L, et al. Psychedelic therapies at the crossroads of trauma and substance use: historical perspectives and future directions, taking a lead from New Mexico. *Front Pharmacol.* (2022) 13:905753. doi: 10.3389/fphar.2022.905753

38. Talin P, Sanabria E. Ayahuasca's entwined efficacy: an ethnographic study of ritual healing from 'addiction'. *Int J Drug Policy.* (2017) 44:23–30. doi: 10.1016/j.drugpo.2017.02.017

39. Albaugh BJ, Anderson PO. Peyote in the treatment of alcoholism among American Indians. Am J Psychiatry. (1974) 131:1247-50. doi: 10.1176/ajp.131.11.1247

40. Weizman T, Gelkopf M, Melamed Y, Adelson M, Bleich A. Treatment of benzodiazepine dependence in methadone maintenance treatment patients: a comparison of two therapeutic modalities and the role of psychiatric comorbidity. *Aust* N Z J Psychiatry. (2003) 37:458-63. doi: 10.1046/j.1440-1614.2003.01211.x

41. Krebs TS, Johansen PØ. Psychedelics and mental health: a population study. *PLoS ONE*. (2013) 8:e63972. doi: 10.1371/journal.pone.0063972 42. Johansen PØ, Krebs TS. Psychedelics not linked to mental health problems or suicidal behavior: a population study. *J Psychopharmacol.* (2015) 29:270–9. doi: 10.1177/0269881114568039

43. Fuentes JJ, Fonseca F, Elices M, Farré M, Torrens M. Therapeutic use of LSD in psychiatry: a systematic review of randomized-controlled clinical trials. *Front Psychiatry.* (2020) 10:943. doi: 10.3389/fpsyt.2019.00943

44. Bogenschutz MP, Ross S, Bhatt S, Baron T, Forcehimes AA, Laska E, et al. Percentage of heavy drinking days following psilocybinassisted psychotherapy vs placebo in the treatment of adult patients with alcohol use disorder: a randomized clinical trial. *JAMA Psychiatry.* (2022) 79:953–62. doi: 10.1001/jamapsychiatry.2022.2096

45. Johnson MW, Garcia-Romeu A, Griffiths RR. Long-term follow-up of psilocybin-facilitated smoking cessation. *Am J Drug Alcohol Abuse.* (2017) 43:55–60. doi: 10.3109/00952990.2016.1170135

46. ClinicalTrials.gov. (2023). Available online at: clinicaltrials.gov https:// ct2/results?term=psilocybinandcond=Substance+Use+DisordersandSearch=Apply andrecrs=aandage_v=andgndr=andtype=Intrandrslt= (accessed May 29, 2023).

47. Reardon S. US could soon approve MDMA therapy - opening an era of psychedelic medicine. *Nature.* (2023) 616:428–30. doi: 10.1038/d41586-023-01296-3

48. Neumann PJ, Cohen JT, Weinstein MC. Updating cost-effectiveness-the curious resilience of the \$50,000-per-QALY threshold. *N Engl J Med.* (2014) 371:796–7. doi: 10.1056/NEJMp1405158

49. Marseille E, Mitchell JM, Kahn JG. Updated cost-effectiveness of MDMA-assisted therapy for the treatment of posttraumatic stress disorder in the United States: findings from a phase 3 trial. *PLoS ONE.* (2022) 17:e0263252. doi: 10.1371/journal.pone.0263252

50. Belouin SJ, Averill LA, Henningfield JE, Xenakis SN, Donato I, Grob CS, et al. Policy considerations that support equitable access to responsible, accountable, safe, and ethical uses of psychedelic medicines. *Neuropharmacology*. (2022) 219:109214. doi: 10.1016/j.neuropharm.2022.109214

51. Busby M. Biden administration plans for legal psychedelic therapies within two years. *The Intercept.* (2022) July 26, 2022. Available online at: https://theintercept.com/ 2022/07/26/mdma-psilocybin-fda-ptsd/ (accessed May 29, 2023).

52. Marseille E, Bertozzi S, Kahn JG. The economics of psychedelicassisted therapies: a research agenda. *Front Psychiatry.* (2022) 13:1025726. doi: 10.3389/fpsyt.2022.1025726

53. Smith WR, Appelbaum PS. Novel ethical and policy issues in psychiatric uses of psychedelic substances. *Neuropharmacology.* (2022) 216:109165. doi: 10.1016/j.neuropharm.2022.109165

54. Siegel JS, Daily JE, Perry DA, Nicol GE. Psychedelic drug legislative reform and legalization in the US. *JAMA Psychiatry.* (2023) 80:77-83. doi: 10.1001/jamapsychiatry.2022.4101

55. Nussbaum AM, Boyer JA, Kondrad EC. "But my doctor recommended pot": medical marijuana and the patient-physician relationship. *J Gen Intern Med.* (2011) 26:1364–7. doi: 10.1007/s11606-011-1840-4

56. Hasin DS, Saha TD, Kerridge BT, Goldstein RB, Chou SP, Zhang H, et al. Prevalence of marijuana use disorders in the United States between 2001-2002 and 2012-2013. *JAMA Psychiatry.* (2015) 72:1235–42. doi: 10.1001/jamapsychiatry.2015.1858

57. Sulley S, Ndanga M, Saka AK. Prevalence of cannabis use and factors related to hospitalizations in the United States: a population-based study using national inpatient sample between 2012 and 2018. *Cureus.* (2022) 14:e28361. doi: 10.7759/cureus. 28361

58. Beeche C, Singh JP, Leader JK, Gezer S, Oruwari AP, Dansingani KK, et al. U.S. state policy contexts and mortality of working-age adults. *PLoS ONE.* (2022) 17:e0275466. doi: 10.1371/journal.pone.0275466

59. ACLU. A Tale of Two Countries: Racially Targeted Arrests in the Era of Marijuana Reform. Available online at: https://www.aclu.org/report/tale-two-countries-racially-targeted-arrests-era-marijuana-reform (accessed July 19, 2023).

60. DeVylder JE, Mittal VA, Schiffman J. Balancing the public health costs of psychosis vs mass incarceration with the legalization of cannabis. *JAMA Psychiatry.* (2021) 78:246–7. doi: 10.1001/jamapsychiatry. 2020.2591

61. Jacobs A. With promise of legalization, psychedelic companies joust over future profits. *The New York Times.* (2022) October 5, 2022.

62. Wexler A, Sisti D. Brain wellness "spas"-anticipating the offlabel promotion of psychedelics. *JAMA Psychiatry*. (2022) 79:748– 9. doi: 10.1001/jamapsychiatry.2022.1619

63. Kamin D. The rise of psychedelic retreats. *The New York Times.* (2022) November 25, 2021.

64. Peluso D. Ayahuasca's attractions and distractions: examining sexual seduction in shaman-participant interactions. In Labate BC, Cavnar C, editors. *Ayahuasca Shamanism in the Amazon and Beyond*. Oxford: Oxford University Press (2014), p. 231–55. doi: 10.1093/acprof:oso/9780199341191.003.0011