

CONSENT CALENDAR
September 10, 2019

To: Honorable Mayor and Members of the City Council

From: Councilmembers Rigel Robinson and Cheryl Davila

Subject: Decriminalizing Entheogenic Plants

RECOMMENDATION

Refer to the Community Health Commission for feedback regarding the aAdoption of a Resolution decriminalizing Entheogenic Plants and Fungi such as mushrooms, cacti, iboga containing plants, and/or extracted combinations of plants similar to Ayahuasca; and limited to those containing the following types of compounds: indole amines, tryptamines, phenethylamines, by restricting any city funds or resources to assist in the enforcement of laws imposing criminal penalties for the use and possession of Entheogenic Plants by adults age 21 and over.

POLICY COMMITTEE RECOMMENDATION

On July 17, 2019, the Public Safety Committee adopted the following action: M/S/C (Robinson/Wengraf) to send the item to the full Council with a Qualified Positive Recommendation that the author revise the report to refer the item to the Community Health Commission for further discussion. Vote: All Ayes.

BACKGROUND

Currently, Psilocybe mushrooms, peyote, and other hallucinogens are classified as schedule 1 drugs in the United States. This categorization indicates that there is "no currently accepted medical use [for them] and a high potential for abuse." However, the federal drug schedule does not align with current medical research or scientific consensus; this is evident when considering that marijuana, which has been used for years by over 900,000 Californians in the legitimate treatment of mental and physical health conditions, is still a schedule 1 substance. In recent years numerous studies have provided promising evidence for the usefulness of Entheogenic Plants in treating addiction, depression, recidivism, trauma, post-traumatic stress symptoms, chronic depression, severe anxiety, end-of-life anxiety, grief, diabetes, cluster headaches, and other conditions. This research comes at a crucial time when addiction and mental health issues such as veteran suicides are becoming an increasingly pressing problem (Cox, Billy). Many of these therapies are even able to improve psychological health in patients whose conditions are extremely treatment-resistant, making them a vital innovation for numerous struggling citizens.

Restrictions on natural psychedelics are not internationally consistent. The official position of the United Nations is that "No plants are currently controlled under the

Conventions. Preparations made from plants containing those active ingredients are also not under international control... Examples of such plants or plant material include ayahuasca, a preparation made from plants indigenous to the Amazon basin of South America, mainly a jungle vine (Banisteriopsis caapi) and another tryptamine-rich plant (Psychotria viridis) containing a number of psychoactive alkaloids, including DMT; the peyote cactus (Lophophora williamsii), containing mescaline; Psilocybe mushrooms, which contain psilocybin and psilocin; and iboga (Tabernanthe iboga), a plant that contains ibogaine and is native to the western part of Central Africa." Additionally, different Entheogenic plants are decriminalized or legalized in various countries, such as Brazil, Jamaica, Portugal, Gabon, New Zealand, South Africa, Mexico, Costa Rica, and the Netherlands. In particular, Portugal's decriminalization of all drugs in 2001 decreased addiction and drug-related deaths without leading to a significant increase in drug usage, and can be used as an informative model for how to effectively treat drug issues in society (Felix, Sonia et. al).

In the U.S., Denver voters recently passed Initiative 301 decriminalizing Psilocybin-containing mushrooms, and Oakland recently passed a resolution similar to this proposal decriminalizing involvement with and usage of Entheogenic Plants. In New Mexico, the cultivation of mushrooms is not prohibited by law as a result of the 2005 court case State v. Pratt. Certain groups also have explicit permission to use Entheogenic Plants for ceremonial and sacramental use under the Religious Freedom Restoration Act of 1993 and various court decisions, including O Centro Espírita Beneficente União do Vegetal (ayahuasca), the Church of the Holy Light of the Queen (ayahuasca), and the Native American Church (peyote).

In October of 2018, the FDA granted breakthrough therapy designation to psilocybin, acknowledging that it shows promise for treating resistant conditions such as depression and allowing more involved study. Internationally, investment is growing quickly in research companies focusing on psychedelic therapies for mental health such as that being done by Compass, which supports scientific and academic research into such therapies (Farr, Christina). This signals a paradigm shift in the way the global community regards the medical viability of psychedelics, as well as a promising future for further federal and international deregulation. DomesticallySimilarly, New York, Vermont, and lowa have all proposed bills in the past four years allowing further research on Ibogaine as an addiction treatment, demonstrating that American attitudes towards psychedelics as therapeutic medicines are evolving nationwideas well.

Though currently illegal in the U.S., Entheogenic Plants are increasingly showing promise in clinical research for treating myriad serious conditions. Recent research on Psilocybin for depression shows that it significantly reduces symptoms, and has promise for treating alcohol and drug addiction as well as general and end of life anxiety. Mushrooms have also historically been used to facilitate beneficial personal and spiritual growth: a John Hopkins study on neurotypical participants revealed that over 75% of the respondents considered their psilocybin experience to be among the top five most meaningful experiences of their lives. Mushrooms are also fairly low risk, with no noted addictive properties and direct overdose practically impossible, and a

2000 study by the Center for Assessment and Monitoring of New Drugs concluded that the risk to public order, individual health, and public health was low.

Other Entheogens are also showing promise for the treatment of various health issues. Ibogaine, the active ingredient in Iboga, is already used with medical supervision in countries like Mexico as an opioid addiction treatment, and a 2016 study (Brown, Thomas Kingsley and Alper, Kenneth) found that withdrawal symptoms and opioid use were significantly lessened in addicts that underwent ibogaine therapy. Ayahuasca can have profound impacts on mental outlook and hopefulness, and a 2013 study (Thomas, Gerald et. al) showed that usage significantly reduced tobacco, alcohol, and cocaine dependence as well. Peyote has been used without harm in Native American religious ceremonies for decades, and research (Halpern, John H. et. al) has shown that such usage did not result in neurophysiological impairment. Anecdotally, peyote use is associated with reduced rates of alcoholism in Native American populations, providing a promising avenue for further research into the use of peyote in treating alcohol abuse. Other promising directions for Entheogenic Plants as medicinal aids include the treatment and amelioration of cluster headaches, recidivism and intimate partner violence, diabetes, grief, and PTSD.

Unfortunately, laboratory produced compounds based on Entheogens are not yet a viable treatment for those suffering from physical and mental conditions. Furthermore, if and when they do become available they are likely to be prohibitively expensive-synthetic psilocybin can range from \$7,000-10,000 per gram--raising concerns about access and equity for low income and uninsured populations. Decriminalizing the use, possession, cultivation, distribution, and transportation of Entheogens allows individuals rather than the pharmaceutical establishment to control their interaction with these powerful psychedelics, empowering and bonding communities as a result.

In this process, the organization Decriminalize Nature (decriminalizenature.org) has worked with Oakland, and now Berkeley, to further the movement to decriminalize natural Entheogens. Their mission is to enable every person to decide on their own how to engage with traditional Entheogenic Plants, and help restore the connection between nature, individuals, and communities in the process. It is intended that this resolution empowers Berkeley residents to be able to grow their own entheogens, share them with their community, and choose the appropriate setting for their intentions instead of having to rely exclusively on the medical establishment, which is slow to adapt and difficult to navigate for many. As this national conversation on entheogens grows, is essential to influence the debate and take a stand now for disenfranchised communities who may be left out of the dominant model by opening a way for individual and community access.

FINANCIAL IMPLICATIONS

Adoption of the resolution may slightly reduce ongoing City expenditures associated with the enforcement of criminal penalties relating to Entheogenic Plant usage by adults. Some staff time to implement the resolution.

ENVIRONMENTAL SUSTAINABILITY

CONSENT CALENDAR September 10, 2019

Small to none, although allowing personal cultivation of peyote specifically could help to counteract its current classification as a vulnerable endangered plant, contributing to long-term ecological sustainability.

CONTACT PERSON

Councilmember Robinson, Council District 7, 510-981-7170 Courtney Baldwin, Intern for District 7, cbaldwin@cityofberkeley.info

Attachments:

- 1: Resolution
- 2: References

RESOLUTION NO. ##,###-N.S.

RESOLUTION SUPPORTING ENTHEOGENIC PLANT PRACTICES AND DECLARING THAT THE INVESTIGATION AND ARREST OF INDIVIDUALS INVOLVED WITH THE ADULT USE OF ENTHEOGENIC PLANTS ON THE FEDERAL SCHEDULE 1 LIST BE AMONGST THE LOWEST PRIORITY FOR THE CITY OF BERKELEY

WHEREAS, Entheogenic Plants, based on the term "entheogen", <u>were</u> originally conceived by Ott, Ruck, and other colleagues from a working group of anthropologists and ethnobotanists in 1979; and defined herein as to include the full spectrum of plants, fungi, and natural materials deserving reverence and respect from the perspective of the individual and the collective, that can inspire personal and spiritual well-being¹, can benefit psychological² and physical³ wellness, and can reestablish human's inalienable and direct relationship to nature; and

WHEREAS, substance abuse⁴, addiction, recidivism⁵, trauma, post-traumatic stress symptoms, chronic depression, severe anxiety⁶, end-of-life anxiety, grief⁷, diabetes⁸, cluster headaches⁹, and other conditions are plaguing our community and that the use of Entheogenic Plants has been shown to be <u>potentially</u> beneficial to the health and well-being of individuals and communities in addressing these afflictions via scientific and clinical studies and within continuing traditional practices, which can catalyze profound experiences of personal and spiritual growth; and

WHEREAS, practices with Entheogenic Plants have long existed and have been considered to be sacred to human cultures and human interrelationships with nature for thousands of years¹⁰, and continue to be enhanced and improved to this day by religious and spiritual leaders, practicing professionals, mentors, and healers throughout the world, many of whom have been forced underground; and

WHEREAS, those seeking to improve their health and well-being through the use of Entheogenic Plants use them in fear of arrest and prosecution; and

WHEREAS, the Entheogenic Plant practices of certain groups are already explicitly protected in the U.S. under the doctrine of religious freedom -- the Native American

¹ See Entheogens for Personal and Spiritual Growth

² See Entheogens and Psychological Wellness

³ See Entheogens and Physical Wellness

⁴ See Entheogens and Substance Abuse

⁵ See Entheogens and Recidivism

⁶ See Entheogens and Anxiety

⁷ See Entheogens and Grief

⁸ See Avahuasca and Diabetes

⁹ See Entheogens and Cluster Headaches

¹⁰ See <u>Historical Use of Entheogens</u>

Church's use of peyote and the use of ayahuasca by two other churches, a Santo Daime congregation and the Uniao do Vegetal; and

WHEREAS, The United Nations considers Entheogenic Plant material used for ritual purposes as excluded from Schedule 1 substances; and

WHEREAS, Entheogenic plants containing ibogaine, for example, have been shown to alleviate treatment resistant cases of opiate and methamphetamine addiction even when other treatments have been ineffective¹¹. In addition, ibogaine is reported to be beneficial for addiction therapy related to specific work-related PTSD encountered by first responders such as EMT, police, and firefighters, as well as military veterans; and

WHEREAS, Entheogenic Plants or combinations of plants such as ayahuasca that contain forms of DMT, a naturally occurring compound in the human body that is listed as a Schedule 1 substance, can lead to experiences that are reported as mystical or experientially similar to near death experiences, ¹² and that can be demonstrably beneficial in treating addiction ¹³, depression ¹⁴, and PTSD ¹⁵, and in that some have found to eatalyzing catalyze profound experiences of personal ¹⁶ and spiritual ¹⁷ growth; and

WHEREAS, Entheogenic cacti that contain phenethylamine compounds such as mescaline can be beneficial in healing drug and alcohol addiction¹⁸ and for individual spiritual growth¹⁹, and have been utilized in sacred initiation and community healing by diverse religious and cultural traditions for millennia and continuing use as religious sacraments in modern times; and

WHEREAS, psilocybin, naturally occurring in Entheogenic mushrooms, can alleviate end-of-life anxiety for hospice and terminal cancer patients²⁰, can reduce prison recidivism²¹, and can effectively treat substance abuse, depression²², cluster headaches²³; and

¹¹ See <u>Iboga/Ibogaine for Addiction Therapy</u>

¹² See <u>Ayahuasca Experience Similar to Near-Death Experience</u>

¹³ See <u>Ayahuasca for Addiction Therapy</u>

¹⁴ See Ayahuasca and Depression

¹⁵ See Ayahuasca and PTSD

¹⁶ See <u>Ayahuasca and Personal Growth</u>

¹⁷ See Ayahuasca and Spiritual Growth

¹⁸ See Peyote for treatment of alcohol and drug dependence

¹⁹ See Peyote

²⁰ See <u>Psilocybin for End-of-Life Anxiety</u>

²¹ See Entheogens and Reduced Recidivism

²² See <u>Psilocybin and Treatment-Resistant Depression</u>

²³ See <u>Psilocybin and Cluster Headaches</u>

WHEREAS, a Johns Hopkins University study on "healthy-normals" found that psilocybin can occasion mystical-type experiences, which were considered one of the top five most meaningful experiences in a subject's life for over 75% of their subjects within the first year after the study, and found continuing positive life-style changes after a 14-month follow-up; and

WHEREAS, the following principles, when adhered to, help to ensure safe and responsible use of entheogenic plants:

- 1. Entheogens are not for everyone. Knowledgeable clinicians caution that some people should not take entheogenic plants or fungi, including people with a personal or family history of schizophrenia or bipolar disorder or who are taking certain medications or using other recreational drugs. See https://adf.org.au/drug-facts/psychedelics/ for more information.
- Always conduct thorough research before using entheogens or other drugs. Side effects, interactions, and long term consequences are possible with any drug, including but not limited to permanent brain and personality changes.
- 3. If someone has a serious condition like major depression or PTSD, they would do well to get serious, professional help before using an entheogen and to ask that caregiver's advice. Some counselors and therapists are glad to work with a client before and after an entheogenic journey.
- 4. Unless you have expert guidance, it's best to start with small amounts, using more only after you become familiar with the material and the terrain.
- 5. **Don't go solo.** Have at least one trusted friend (called sitter, guide, or facilitator) be with you, sober during the entire journey, and commit in advance to honor that person's instructions if he or she tells you not to do something. Entheogens can amplify the whole range of human emotions, including anxiety, which can sometimes lead to panic. Having a sitter gives you a certain comfort and mental freedom, and can help keep things safe.
- 6. Reverence reduces risks and can help lead to positive outcomes. In cultures that have long used entheogenic substances beneficially, that use is approached with great respect, not haphazardly, and for life-enhancing purposes.

: and

WHEREAS, the City of Berkeley wishes to declare its desire not to expend City resources in any investigation, detention, arrest, or prosecution arising out of alleged violations of state and federal law regarding the use of Entheogenic Plants.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Mayor and City Council hereby declare that it shall be the policy of the City of Berkeley

that no department, agency, board, commission, officer or employee of the city, including without limitation, Berkeley Police Department personnel, shall use any city funds or resources to assist in the enforcement of laws imposing criminal penalties for the use and possession of Entheogenic Plants by adults of at least 21 years of age. For the purposes of this resolution, Entheogenic Plants are defined as plants and natural sources such as mushrooms, cacti, iboga containing plants and/or extracted combinations of plants similar to ayahuasca; and limited to those containing the following types of compounds: indole amines, tryptamines, phenethylamines.

BE IT FURTHER RESOLVED that this resolution does not authorize or enable any of the following activities: commercial sales or manufacturing of these plants and fungi, possessing or distributing these materials in schools, driving under the influence of these materials; or public disturbance.

BE IT FURTHER RESOLVED that the Council urges all those who decide to use entheogenic plants to consult their doctor beforehand and take the utmost medical precaution when doing so, and that no part of this resolution constitutes medical advice or a recommendation or endorsement of any drug or product.

BE IT FURTHER RESOLVED that the City Council directs the City Manager to work with the City's lobbyists to support the decriminalization of all Entheogenic Plants and plantbased compounds that are listed on the Federal Controlled Substances Schedule 1.

BE IT FURTHER RESOLVED that the City Council hereby declare that it shall be the policy of the City of Berkeley that the investigation and arrest of adult persons for planting, cultivating, purchasing, transporting, distributing, engaging in practices with, and/or possessing Entheogenic Plants or plant compounds on the Federal Schedule 1 list shall be amongst the lowest law enforcement priority for the City of Berkeley.

BE IT FURTHER RESOLVED that the City Council call upon the Alameda County District Attorney to cease prosecution of persons involved in the use of Entheogenic Plants or plant-based compounds on the Federal Schedule 1 List.

BE IT FURTHER RESOLVED that the City Council directs the City Manager to return to Council and present an assessment of community impacts and benefits within a year of passage of this resolution.

BE IT FURTHER RESOLVED that if any provision of this resolution is declared by a court of competent jurisdiction to be contrary to any statute regulation or judicial decision or its applicability to any agency person or circumstances is held invalid the validity of the remainder of this resolution and it applicability to any other agency person or circumstance shall not be affected.

CONSENT CALENDAR September 10, 2019

BE IT FURTHER RESOLVED that a copy of this resolution shall be sent to Alameda County Supervisor Keith Carson, Assemblymember Buffy Wicks, State Senator Nancy Skinner, Congresswoman Barbara Lee, Senator Dianne Feinstein, and Senator Kamala Harris, and that the Berkeley City Council formally requests that they take action to decriminalize Entheogenic plants through their respective legislative bodies.

References

Brown, Thomas Kingsley and Alper, Kenneth. "Treatment of Opioid Use Disorder with Ibogaine: Detoxification and Drug Use Outcomes." *Taylor & Francis*, www.tandfonline.com/doi/full/10.1080/00952990.2017.1320802.

Cox, Billy. "VA approves psychedelic ketamine for PTSD treatment." *Herald Tribune*, 30 June 2019, https://www.heraldtribune.com/news/20190630/va-approves-psychedelic-ketamine-for-ptsd-treatment

Farr, Christina. "Investors are starting to bet big on psychedelic medicine." *CNBC*, 27 March 2019, https://www.cnbc.com/2019/03/27/psychedelic-medicine-start-ups-vet-ketamine-psilocybin-for-depression.html

Felix, Sonia, et al. *Going after the Addiction, Not the Addicted: The Impact of Drug Decriminalization in Portugal.* IZA Institute of Labor Economics, July 2017, ftp.iza.org/dp10895.pdf.

Halpern, John H, et al. "Psychological and Cognitive Effects of Long-Term Peyote Use among Native Americans." *Biological Psychiatry*, U.S. National Library of Medicine, 15 Oct. 2005, www.ncbi.nlm.nih.gov/pubmed/16271313.

Thomas, Gerald, et al. "Ayahuasca-Assisted Therapy for Addiction: Results from a Preliminary Observational Study in Canada." *Maps.org*, 2013, maps.org/research-archive/ayahuasca/Thomas_et_al_CDAR.pdf.

Entheogens for Personal and Spiritual Growth

Frecska, E., et al. (2012). Enhancement of Creative Expression and Entoptic Phenomena as After-Effects of Repeated Ayahuasca Ceremonies. *Journal of Psychoactive Drugs* 44(3), pp. 191-199.

Hartogsohn, I. (2018). The Meaning-Enhancing Properties of Psychedelics and Their Mediator Role in Psychedelic Therapy, Spirituality, and Creativity. *Frontiers in Neuroscience*, *12* (129). doi:10.3389/fnins.2018.00129

MacLean, K., et al. (2011). Mystical experiences occasioned by the hallucinogen psilocybin lead to increases in the personality domain of openness. *Journal of Psychopharmacology*, *25*(11) 1453–1461.

Móró, L., et al. (2011) Voice of the Psychonauts: Coping, Life Purpose, and Spirituality in Psychedelic Drug Users. *Journal of Psychoactive Drugs, 43* (3), pp. 188-198. DOI: 10.1080/02791072.2011.605661

Nour, M., et al. (2017): Psychedelics, Personality and Political Perspectives. *Journal of Psychoactive Drugs*. DOI:10.1080/02791072.2017.1312643

Sweat, N., et al. (2016). The Associations of Naturalistic Classic Psychedelic Use,

Mystical Experience, and Creative Problem Solving. *Journal of Psychoactive Drugs*, 48 (5), pp. 344-350, DOI: 10.1080/02791072.2016.1234090

Entheogens and Psychological Wellness

Frecska E., et al., (2016). The Therapeutic Potentials of Ayahuasca: Possible Effects against Various Diseases of Civilization. *Frontiers in Pharmacology*, *7*(35). doi:10.3389/fphar.2016.00035

McKenna, D. (2004). Clinical investigations of the therapeutic potential of ayahuasca: rationale and regulatory challenges. *Pharmacology & Therapeutics 102*(2), pp. 111-129.

dos Santos, R. et al. (2017). Effects of the Natural β- Carboline Alkaloid Harmine, a Main Constituent of Ayahuasca, in Memory and in the Hippocampus: A Systematic Literature Review of Preclinical Studies. *Journal of Psychoactive Drugs, 49* (1), pp. 1-10, DOI: 10.1080/02791072.2016.1260189 Wilcox, J. (2014). Psilocybin and Obsessive-Compulsive Disorder. *Journal of Psychoactive Drugs, 46* (5), pp. 393-395. DOI: 10.1080/02791072.2014.963754

Entheogens and Physical Wellness

Djamshidian, A., et al. (2015). "Banisteriopsis caapi, a Forgotten Potential Therapy for Parkinson's Disease?" Movement Disorders Clinical Practice: n/a-n/a.

Liu, X., et al., (2017) Harmine is an inflammatory inhibitor through the suppression of NF-kB signaling. *Biochemical and Biophysical Research Communications*, http://dx.doi.org/10.1016/j.bbrc.2017.05.126

Ly et al. (2018). Psychedelics Promote Structural and Functional Neural Plasticity. *Cell Reports* 23, pp. 3170–3182.

McCleary, J., et al., (1960). Antibiotic activity of an extract of peyote (Lophophora Williamii). *Economic Botany*, *14*(3), pp. 247-249.

dos Santos, R. (2014) Immunological Effects of Ayahuasca in Humans. *Journal of Psychoactive Drugs*, 46 (5), pp. 383-388.

Samoylenkoa, V., et al. (2010). Banisteriopsis caapi, a unique combination of MAO inhibitory and antioxidative constituents for the activities relevant to neurodegenerative disorders and Parkinson's disease. *Journal of Ethnopharmacology*, 127 (2), pp. 357–367. doi:10.1016/j.jep.2009.10.030.

Entheogens and Substance Abuse

Bogenschutz, M., et al. (2015). Psilocybin-assisted treatment for alcohol dependence: A proof-of-concept study. *Journal of Psychopharmacology* 29(3), pp. 289-299. Bogenschutz, M., and Forcehimes, A. (2017). Development of a Psychotherapeutic Model for Psilocybin-Assisted Treatment of Alcoholism. *Journal of Humanistic Psychology*, 57(4), pp. 389–414.

Johnson, M. et al. (2017). An online survey of tobacco smoking cessation associated with naturalistic psychedelic use. *Journal of Psychopharmacology 31* (7), pp. 841-850.

de Veen, B. (2017) Psilocybin for treating substance use disorders? *Expert Review of Neurotherapeutics*, 17 (2), pp. 203-212. DOI: 10.1080/14737175.2016.1220834

Entheogens and Recidivism

Romero, S. (March 28, 2015). In Brazil, some inmates get therapy with hallucinogenic tea. *The New York Times*.

Entheogens and Anxiety

Sarris, J., et al. (2013). "Plant-based medicines for anxiety disorders, part 2: a review of clinical studies with supporting preclinical evidence." CNS Drugs 27(4), pp. 301-319.

Entheogens and Grief

González, D., et al. (2017). Potential Use of Ayahuasca in Grief Therapy. *OMEGA—Journal of Death and Dying*, pp. 1-26.

Ayahuasca and Diabetes

Wang, P. et al., (2015). A high-throughput chemical screen reveals that harmine-mediated inhibition of DYRK1A increases human pancreatic beta cell replication. *Nature Medicine 21*, pp. 383–388.

Entheogens and Cluster Headaches

Schindler, E., et al. (2015) Indoleamine Hallucinogens in Cluster Headache: Results of the Clusterbusters Medication Use Survey, Journal of Psychoactive Drugs, 47:5, 372-381, DOI: 10.1080/02791072.2015.1107664

<u>Historical Use of Entheogens</u>

El-Seedi, H., et al. (2005). Prehistoric peyote use: Alkaloid analysis and radiocarbon dating of archaeological specimens of *Lophophora* from Texas. *Journal of Ethnopharmacology* 101(1), pp. 238-242.

Guzmán, G. (2008). Hallucinogenic Mushrooms in Mexico: An Overview. *Economic Botany*, *62*(3), pp. 404-412.

Miller, L. et al., (2019). Chemical evidence for the use of multiple psychotropic plants in

a 1,000-year-old ritual bundle from South America. *Proceedings of the National Academy of Sciences*. DOI:10.1073/pnas.190217411
Samorini, G. (1992). The Oldest Representations Of Hallucinogenic Mushrooms In The World (Sahara Desert, 9000 – 7000 B.P.). *Integration, Journal of Mind-moving Plants and Culture 2/3.*

Iboga/Ibogaine for Addiction Therapy

Alper, K., et al. (1999). Treatment of acute opioid withdrawal with ibogaine. American Journal of Addictions, 8(3), 234–242. doi:10.1080/105504999305848 Brown, T. K. (2013). Ibogaine in the treatment of substance dependence. Current Drug Abuse Reviews, 6(1), 3-16. doi:10.2174/15672050113109990001 Brown, T. and Alper, K. (2017): Treatment of opioid use disorder with ibogaine: detoxification and drug use outcomes. The American Journal of Drug and Alcohol Abuse. DOI: 10.1080/00952990.2017.1320802 Luciano, D. (1998). Observations on treatment with ibogaine. American Journal of Addictions, 7(1), pp. 89–89. doi:10.1111/j.1521-0391.1998.tb00472.x Mash, D., et al. (2001). Ibogaine in the treatment of heroin withdrawal. In K. Alper, & G. A. Cordell (Eds.), The alkaloids: Chemistry and biology (1st ed., Vol. 56, pp. 155-171). London: Academic Press/Elsevier. Mash, D., et al., (2018) Ibogaine Detoxification Transitions Opioid and Cocaine Abusers Between Dependence and Abstinence: Clinical Observations and Treatment Outcomes. Frontiers in Pharmacology. 9:529. doi: 10.3389/fphar.2018.00529 Sheppard, S. G. (1994). A preliminary investigation of ibogaine: Case reports and recommendations for further study. Journal of Substance Abuse Treatment. 11(4), 379–385. doi:10.1016/0740-5472(94)90049-3

<u>Ayahuasca Experience Similar to Near-Death Experience</u>

Liester, M. B. (2013). Near-death experiences and ayahuasca-induced experiences – two unique pathways to a phenomenologically similar state of consciousness. *Journal of Transpersonal Psychology 45*(1), p. 24.

Ayahuasca for Addiction Therapy

Barbosa, P. et al. (2018) Assessment of Alcohol and Tobacco Use Disorders Among Religious Users of Ayahuasca. *Frontiers in Psychiatry*, 9 (136). doi:10.3389/fpsyt.2018.00136

Brierley, D., and Davidson, C. (2012). Developments in harmine pharmacology – Implications for ayahuasca use and drug-dependence treatment. *Progress in Neuro-psychopharmacology & Biology* 39(2), pp. 263-272.

Liester, M. and Prickett, J. (2012) Hypotheses Regarding the Mechanisms of Ayahuasca in the Treatment of Addictions. *Journal of Psychoactive Drugs, 44* (3), pp. 200-208. DOI: 10.1080/02791072.2012.704590

Loizaga-Velder, A. and R. Verres (2014). Therapeutic effects of ritual ayahuasca use in the treatment of substance dependence--qualitative results. *Journal of Psychoactive Drugs* 46(1), pp. 63-72.

Mabit, J., et al. (1996). Takiwasi: The Use of Amazonian Shamanism to Rehabilitate Drug Addicts. *Yearbook of Cross-Cultural Medicine and Psychotherapy*. W. Andritzky. Berlin, International Institute of Cross-Cultural Therapy Research. Talina, P., and Sanabriab, E. (2017). Ayahuasca's entwined efficacy: An ethnographic study of ritual healing from addiction. *International Journal of Drug Policy 44*, pp. 23–30.

Thomas, G., et al. (2013). Ayahuasca-assisted therapy for addiction: results from a preliminary observational study in Canada. *Current Drug Abuse Review 6*(1), pp. 30-42.

Ayahuasca and Depression

Anderson, B. (2012). Ayahuasca as Antidepressant? Psychedelics and Styles of Reasoning in Psychiatry. *Anthropology of Consciousness*, *23* (1), pp. 44–59. de L. Osório, F., et al. (2015). Antidepressant effects of a single dose of ayahuasca in patients with recurrent depression: a preliminary report. *Revista Brasileira de Psiquiatria 37*(1), pp. 13-20.

Palhano-Fontes, F., et al. (2014). The Therapeutic Potentials of Ayahuasca in the Treatment of Depression. *The Therapeutic Use of Ayahuasca*. B. C. Labate and C. Cavnar, Springer: Berlin, Heidelberg, pp. 23-39.

dos Santos, R., et al. (2016). Anti-depressive, anxiolytic, and anti-addictive effects of ayahuasca, psilocybin and lysergic acid diethylamide (LSD): A systematic review of clinical trials published in the last 25 years. *Therapeutic Advances in Psychopharmacology, 6*(3), pp. 193–213. doi:10.1177/2045125316638008

Ayahuasca and PTSD

Nielson, J. and Megler, J. (2014). Ayahuasca as a Candidate Therapy for PTSD. *The Therapeutic Use of Ayahuasca*. B. C. Labate and C. Cavnar, Springer: Berlin, Heidelberg, pp. 41-58.

Ayahuasca and Personal Growth

Bouso, J. C., et al. (2012). "Personality, Psychopathology, Life Attitudes and Neuropsychological Performance among Ritual Users of Ayahuasca: A Longitudinal Study. *PLoS ONE 7*(8).

Kuypers, K., et al. (2016). Ayahuasca enhances creative divergent thinking while decreasing conventional convergent thinking. *Psychopharmacology*. DOI 10.1007/s00213-016-4377-8

Soler J., et al. (2018). Four Weekly Ayahuasca Sessions Lead to Increases in "Acceptance" Capacities: A Comparison Study With a Standard 8-Week

Mindfulness Training Program. *Frontiers in Pharmacology, 9* (224). doi: 10.3389/fphar.2018.00224

Ayahuasca and Spiritual Growth

Harris, R., and Gurel, L. (2012). A Study of Ayahuasca Use in North America. *Journal of Psychoactive Drugs* 44(3): 209-215.

Trichter, S., et al. (2009). Changes in spirituality among ayahuasca ceremony novice participants. *Journal of Psychoactive Drugs* 41(2), pp. 121-134.

Tupper, K. (2010). Entheogenic healing: The spiritual effects and therapeutic potential of ceremonial ayahuasca use. *The healing power of spirituality: How faith helps humans thrive, Volume 3.* J. H. Ellens. Santa Barbara, Praeger: pp. 269-282. Tupper, K. W. (2002). Entheogens and Existential Intelligence: The Use of Plant Teachers as Cognitive Tools. *Canadian Journal of Education 27*(4), pp. 499-516.

Peyote for treatment of alcohol and drug dependence

Winkelman, M. (2014). Psychedelics as Medicines for Substance Abuse Rehabilitation: Evaluating Treatments with LSD, Peyote, Ibogaine and Ayahuasca. *Current Drug Abuse Reviews* 7, pp. 101-116.

Peyote

Calabrese, J. (2007). The Therapeutic Use of Peyote in the Native American Church Chapter 3 in Vol. 1 of *Psychedelic Medicine: New Evidence for Hallucinogens as Treatments.* Michael J. Winkelman and Thomas B. Roberts (editors). Westport, CT: Praeger/Greenwood.

Feeney, K. (2007). The Legal Basis for Religious Peyote Use. Chapter 13 in Vol 1 of *Psychedelic Medicine: New Evidence for Hallucinogens as Treatments.* Michael J. Winkelman and Thomas B. Roberts (editors). Westport, CT: Praeger/Greenwood.

Psilocybin for End-of-Life Anxiety

Blinderman, C. (2016). Psycho-existential distress in cancer patients: A return to entheogens. *Journal of Psychopharmacology 30* (12), pp. 1205-1206. Kelmendi, B., et al. (2016). The role of psychoelelics in palliative care reconsidered: A case for psilocybin. *Journal of Psychopharmacology 30*(12), pp. 1212-1214. Ross, S., et al. (2016). Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: a randomized controlled trial. *Journal of Psychopharmacology, 30*(12), pp. 1165-1180.

Entheogens and Reduced Recidivism

Hendricks, P., et al. (2014). Hallucinogen use predicts reduced recidivism among

substance-involved offenders under community corrections supervision. *Journal of Psychopharmacology* 28(1), pp. 62-66.

Walsh, Z., et al. (2016). Hallucinogen use and intimate partner violence: Prospective evidence consistent with protective effects among men with histories of problematic substance use. *Journal of Psychopharmacology*, pp. 1-7. DOI:10.1177/0269881116642538.

Psilocybin and Treatment-Resistant Depression

Hendricks, P., et al. (2015). Psilocybin, psychological distress, and suicidality. *Journal of Psychopharmacology*, *29*(9), pp. 1041–1043.

Lyons, T. and Carhart-Harris, R. (2018). Increased nature relatedness and decreased authoritarian political views after psilocybin for treatment-resistant depression. *Journal of Psychopharmacology*, 32(7), pp. 811–819.

Psilocybin and Cluster Headaches

Schindler, E. et al., (2015) Indoleamine Hallucinogens in Cluster Headache: Results of the Clusterbusters Medication Use Survey, *Journal of Psychoactive Drugs*, *47*(5), pp. 372-381. DOI:10.1080/02791072.2015.1107664