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Ayahuasca aka the vine of the soul as a potential new treatment for depression

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Introduction: Ayahuasca, a plant mixture from the Amazon rainforest, has been used by indigenous peoples for thousands of years. The brew is prepared by boiling a mixture of two or more plants for hours until only a concentrated liquid remains. The plants used most often are *Banisteriopsis caapi*, which contains β -carboline alkaloids with monoamine oxidase inhibitor (MAOI) properties, and *Psychotria viridis*, which contains the serotonin agonist N,N-dimethyltryptamine (DMT). In indigenous cultures, this medicine is utilized to facilitate healing, prophesy, and divination. More recently, the use of ayahuasca has spread to non-indigenous cultures, where it has been reported to produce rapid improvement in depression after only a single dose. We review the literature on the use of ayahuasca as a treatment for depression, examining the potential risks and benefits of this medicine, as well as potential mechanisms of action

Methodology: We conducted a PubMed literature search using the search terms “ayahuasca” and “depression.” The final studies selected for inclusion consisted of articles that examined the effects of ayahuasca on depression.

Findings: HAM-D (Hamilton Depression Scale) and MADRS (Montgomery-Asberg Depression Rating Scale) scores decrease rapidly following a single dose of ayahuasca, and remain decreased for up to 21 days. Scores are reduced by as much as 82%. Prior reviews have found ayahuasca is well tolerated, increases introspection and positive mood, activates frontal and paralimbic regions, and decreases default mode network activity. Long-term ayahuasca use is associated with increased cortical thickness in the anterior cingulate gyrus and thinning of the posterior cingulate cortex.

Conclusions: Ayahuasca exhibits rapid antidepressant effects. Potential mechanisms of action include: biochemical, physiological, psychological, and transcendent pathways. Other potential uses of ayahuasca in the treatment of psychiatric disorders are discussed. Further research is recommended to investigate the potential benefits and risks of ayahuasca as a treatment for psychiatric disorders.

Recent Publications:

1. Dominguez Clavé E et al. (2016) Ayahuasca: Pharmacology, neuroscience and therapeutic potential. Brain Research Bulletin. 126 (Pt 1):89-101. Doi:10.1016/j.brainresbull.2016.03.002.
2. Osorio F de L 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):13-20. Doi:10.1590/1516-4446-2014-1496.
3. Sanches R F et al. (2016) Antidepressant effects of a single dose of ayahuasca in patients with recurrent depression: a SPECT study. Journal of Clinical Psychopharmacology. 36(1):77-81. Doi:10.1097/JCP.0000000000000436.
4. Dos Santos R G et al. (2016) Antidepressive and anxiolytic effects of ayahuasca: a systematic literature review of animal and human studies. Revista Brasileira de Psiquiatria. 38(1):65-72. Doi:10.1590/1516-4446-2015-1701.
5. Morales Garcia J A et al. (2017) The alkaloids of *Banisteriopsis caapi*, the plant source of the Amazonian hallucinogen ayahuasca, stimulate adult neurogenesis in vitro. Scientific Reports. 7(1):5309. Doi:10.1038/s41598-017-05407-9

Biography

Maya is a student at Palmer Ridge High School in Monument, Colorado in the USA. She is a percussionist in her school's Wind Ensemble and plays center field for her school's softball team. She will attend university after graduating from high school in 2019 and plans to pursue a career in medicine. She is co-author of the article: “A Review of Psychiatric Disorders Associated with Celiac Disease,” which was published in 2017, and is the lead author on a current investigation entitled: “Potential Effects of Drought on Celiac Disease.”

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