# Recommendations for Police Response

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### AyahuascaCanada April, 2024

### White Paper – Recommendations for Police Response to Ayahuasca – April, 2024

#### Contents

| 1. | EXECUTIVE SUMMARY  | 3        |
|----|--|----------|
|    | General  | .3       |
|    | About AyahuascaCanada3   |          |
|    | What is Ayahuasca?   |          |
|    | History  |          |
|    | Legal Status   |          |
|    | Use in Canada4   |          |
|    | Danger to the Canadian Public – Health Canada4   |          |
|    | Deaths Attributed to Ayahuasca (DMT)5  |          |
|    | Public Perception of Ayahuasca   |          |
|    | Scientific Research  |          |
|    | Alberta Blue Cross Covers Psychedelic Therapies  |          |
|    | AyahuascaCanada's Recommendations on Policing Priorities   | .6       |
| 2. | HISTORY, CURRENT PRACTICES, BACKGROUND and SOCIETAL BENEFITS                                     |          |
|    | Ayahuasca – Composition and Use  | .7       |
|    | History  |          |
|    | Ayahuasca Legal Status in Canada   |          |
|    | Ayahuasca Churches   |          |
|    | Criminalization of Ayahuasca   | .9       |
|    | DMT Abuse and Deaths   | 11       |
|    | Peruvian Government Declaration  |          |
|    | BC Harm Reduction, Street Drug Decriminalization   |          |
|    | Canadian Association of Chiefs of Police Support for Decriminalization                           |          |
|    | Ontario Association Chiefs of Police Statement on Decriminalization                              |          |
|    | Statement - Police Magazine in Spain13   |          |
|    | Ayahuasca Use in Canada  | 14       |
|    | Ayahuasca Ceremonies   |          |
|    | Danger to the Canadian Public  | 15       |
|    | Health Canada – Potential for Abuse15  |          |
|    | The Opioid Crisis and Ayahuasca  | 16       |
|    | Alberta Ayahuasca Arrest – Operation Dear Santa  |          |
|    | Operation Dear Santa – Retraumatization  |          |
|    | Ayahuasca Safety   | 17       |
| 3. | SUMMARIES – SCIENTIFIC STUDIES   | 18       |
|    | Takiwasi - Center for the Rehabilitation of Drug Addicts and Research on Traditional Medicines   | 518      |
|    | Results  |          |
|    | The Therapeutic Potentials of Ayahuasca: Possible Effects against Various Diseases of Civilizati |          |
|    | Research on Traditional Indigenous Medicine within an intercultural medicine model               | 19<br>20 |
|    | research on fractional mugenous meticine within an intercultural medicine model                  | 20       |

| Ayahuasca and Public Health: Health Status, Psychosocial Well-Being, Lifestyle, and Coping         |
|--|
| Strategies in a Large Sample of Ritual Ayahuasca Users   |
| New Insights into the Chemical Composition of Ayahuasca  |
| Ayahuasca and public health II: health status in a large sample of Ayahuasca ceremony participants |
| in the Netherlands   |
| Ayahuasca's entwined efficacy: An ethnographic study of ritual healing from addiction              |
| Associations between ayahuasca consumption in naturalistic settings and current alcohol and drug   |
| use: Results of a large international cross-sectional survey                                       |
| Ayahuasca-assisted therapy for addiction: results from a preliminary observational study in Canada |
|  |
| Psychotherapeutic and neurobiological processes associated with ayahuasca: A proposed model and    |
| implications for therapeutic use   |
| Changes in mental health, well being and personality following ayahuasca consumption: Results of   |
| a naturalistic longitudinal study  |
| Potential Use of Ayahuasca in Grief Therapy24  |
| Ayahuasca Global Consumption and Reported Deaths in the Media                                      |
| Deaths Attributed to Ayahuasca25   |
| Therapeutic Effects of Ceremonial Ayahuasca Use for Methamphetamine Use Disorders and Other        |
| Mental Health Challenges: Case Studies in an Indigenous Community in Sonora, Mexico25              |
| Influence of Context and Setting on the Mental Health and Well being Outcomes of Ayahuasca         |
| Drinkers: Results of a Large International Survey  |
| Ayahuasca use and reported effects on depression and anxiety symptoms: An international cross-     |
| sectional study of 11,912 consumers26  |
| Psychedelic Medicine: A Rapid Review of Therapeutic Applications and Implications for Future       |
| Research (Canada)  |
| The Impact of Ayahuasca on Suicidality: Results From a Randomized Controlled Trial                 |
| Ayahuasca Treatment Outcome Project (ATOP): One Year Results from Takiwasi Center and              |
| Implications for Psychedelic Science   |
| Neuropharmacology of N,N-Dimethyltryptamine  |
| 4. RECOMMENDATIONS   |
| Contact  |
| 5. Study References and Citations  |

#### **1. EXECUTIVE SUMMARY**

#### General

This white paper presents AyahuascaCanada's (AC) recommendations regarding policing issues around the use of ayahuasca, an ancestral Amazonian medicine used by our members. This document presents information about ayahuasca based on historical and current use in Canada and globally, scientific studies and typical ayahuasca user scenarios based on AC member experiences and published studies.

#### About AyahuascaCanada

AyahuascaCanada is a national advocacy organization representing our members, facilitators, practitioners, researchers and ayahuasca churches in Canada. AC also liaises with international ayahuasca organizations and medical research institutions and agencies.

#### What is Ayahuasca?

Ayahuasca is a psychoactive brew that originated in the Amazon jungle and is used by over 160 distinct indigenous cultures. Since the early 1900s, the use of ayahuasca has spread worldwide. The use of ayahuasca is typically within formally-structured shamanic ceremonies or in ritualistic ayahuasca churches which can now be found throughout the world.

Ayahuasca is also used therapeutically to treat drug and alcohol addictions, grief issues, PTSD, depression, anxiety, traumas and other problematic or treatment-resistant mental health issues.

#### History

The oldest traces of ayahuasca use have been found in the Azapa desert in the north of Chile, where an ingredient in the ayahuasca vine was found in hair analyzed from mummies dating between 500 and 1000 BC. Ayahuasca vines do not grow in the Azapa valley which indicates commerce between the prehistoric populations of Chile and the Amazonian peoples.

National Geographic also provides scientific verification of ayahuasca dating back over 1,000 years. (NG <u>1</u>) The traditional use of ayahuasca extends from Panama to Bolivia, including Peru, Ecuador, Colombia, and Brazil, countries in which its medicinal use is intensely present in urban centers (Luna, 1986, 2011).

The worldwide spread of ayahuasca began with the emergence of ayahuasca churches in the early 1900s when rubber cutters and other forest workers were introduced to ayahuasca ceremonies. Ayahuasca churches can now be found in most countries around the world. Ayahuasca subsequently gained the worldwide attention of ethnobotanists, doctors, pharmacologists, clinicians and researchers.

#### Legal Status

In 1971, the United Nations issued a convention that outlawed Dimethyltryptamine (DMT). However, natural plant materials including ayahuasca were never part of the UN Convention, according to the International Narcotics Control Board and Health Canada documents. (see *Criminalization of Ayahuasca*, below). While ayahuasca is currently regulated in Canada, ayahuasca churches have been granted the legal right to serve ayahuasca in their ceremonies.

In Canada Ayahuasca is subject to provisions which prohibit the use of Dimethyltryptamine (DMT) which is classified as a Schedule III substance in Canada. DMT in its refined form is a yellowish crystalline powder which can be smoked, injected or snorted.

DMT is a minor component in the ayahuasca tea which contains numerous medicinal compounds and is ingested orally. In two kilograms of ayahuasca paste, which can be used to make approximately 50 individual servings of ayahuasca, the total amount of DMT is just under 3 grams or approximately 60 milligrams/serving. (AC  $\underline{2}$ ).

#### Use in Canada

The overwhelming reason AC members cite for wanting to use ayahuasca is for healing from problematic mental health conditions (AC user survey, unpublished). These findings are consistent with a large cross-sectional study of over 11,000 ayahuasca users where therapeutic motivation was the primary reason given for taking ayahuasca. (see - Science Direct study (SC <u>24</u>)

Typical use scenarios in Canada among AC members are either through traditional Amazonian shamanic ceremonies being offered in 'underground' ceremonies by ayahuasca facilitators or in ayahuasca churches which have been given legal Health Canada exemptions to serve ayahuasca. No AC member has ever reported taking ayahuasca outside of a ceremonial setting.

#### Danger to the Canadian Public – Health Canada

There is no recreational or black market for ayahuasca according to Health Canada's official Policies and Procedures for religious exemptions for ayahuasca, obtained by AC through the Freedom of Information Act - Health Canada File Number - A-2022-001575 / MC2) (AC 3.):

- There is no evidence of risk to public safety associated with Daime tea/Ayahuasca, in terms of illicit production and trafficking, even in countries where it has been used for centuries.
- There is no evidence of widespread use and diversion in Canada
- Daime tea/Ayahuasca specifically does not appear to be the object of common abuse.
- Physical dependence and tolerance to Daime tea/Ayahuasca do not appear to develop.
- Consumption of Daime tea/Ayahuasca induces vomiting, which limits the amount that can be ingested at one time and thus its abuse potential.

#### Deaths Attributed to Ayahuasca (DMT)

ICEERS.org is an organization that studies issues related to ayahuasca and other ancestral medicines. ICEERS has special NGO consultative status with the United Nations' Economic and Social Council (ECOSOC) and is a registered non-profit foundation. In 2023 they published the results of a three-year study entitled Ayahuasca Global Consumption and Reported Deaths (ICEERS <u>4</u>). As part of the study they examined media-reported deaths attributed to ayahuasca. One of the conclusions of the study was that:

To date worldwide, no forensic examination or toxicological analysis has determined the combination of Banisteriopsis caapi and Psychotria viridis or Diplopterys cabrerana (the traditional ayahuasca brew) has caused poisoning leading to death.

Refined Dimethyltryptamine (DMT) usually comes in the form of a white, yellowish or pink crystalline powder. Refined DMT can be smoked, vaporized, or snorted. The DMT found in ayahuasca is from plant sources and is not a refined form of DMT.

DMT does not play any significant role in drug-related deaths in Canada. Canada.ca (Gov't of Canada website) published a study entitled - Substance-related acute toxicity deaths in Canada from 2016 to 2017: A review of coroner and medical examiner files (CAN <u>31</u>) In that study they list the substances involved in toxicity deaths in Canada. DMT is not listed.

#### Public Perception of Ayahuasca

Ayahuasca has gained worldwide media attention though its use by celebrities as well as through researchers and clinicians. In the 1990s Dr. Gabor Mate, a world-renowned Canadian addiction specialist was using ayahuasca to cure East Side (Hastings) Vancouver street addicts of substance addictions with results that were far more effective than conventional medical interventions (YT <u>5</u>).

In 2019 Matt Chorny, a serving Ontario Provincial Police Officer went public with treatment of his PTSD through the use of ayahuasca (GN <u>6</u>). Typically ayahuasca does not have a high public profile other than when it gains some type of media attention.

#### Scientific Research

Modern scientific and medical interest around ayahuasca as a therapeutic agent was sparked by reports of recoveries from drug and alcohol addictions, PTSD, traumas, treatment-resistant depression, anxiety and other problematic mental health issues. Research specialists from around the world began studying the use of ayahuasca as a therapeutic agent with scientific and clinical evidence dating back over the past three decades. See Scientific Research Summaries (below) for further information and links to studies.

#### Alberta Blue Cross Covers Psychedelic Therapies

ATMA CENA Psychedelic Healthcare Solutions (PHS) is a collaboration of ATMA Journey Centers Inc. ("ATMA"), Cena Life Inc. and partners across Canada to advance and expand access of psychedelic-assisted therapy (PaT) through the establishment of a clinic network. (Link Here AC36)

ATMA CENA PHS would like to congratulate Alberta Blue Cross on its landmark decision, effective immediately, to begin covering psychedelic-assisted therapy (PaT) in Alberta. This pivotal policy shift by Alberta Blue Cross marks a monumental leap forward in advancing access to evidence-based novel mental health solutions for Albertans.

Alberta Blue Cross has become the first insurance provider in Canada to embrace PaT within its health coverage options. This decision is a testament to the visionary Blue Cross leadership, who have bravely ventured beyond traditional healthcare models to support essential, innovative care. This initiative not only serves the organizations supported by Blue Cross but profoundly impacts the lives of individuals across Alberta, providing them with much-needed access to advanced therapeutic options.

#### AyahuascaCanada's Recommendations on Policing Priorities

The objective of this document is to provides credible and publicly-verifiable information about ayahuasca which can be taken into account when prioritizing community policing resources.

Far from being a danger to the Canadian public an argument can be made that ayahuasca provides benefits to society. This is certainly the accepted viewpoint in Amazonian countries where ayahuasca use is legal and is seen as having ancestral, religious and community benefits. Ayahuasca is used to treat substance abuse disorders and other problematic or treatment-resistant mental health issues.

However, a recent very sophisticated undercover police operation and arrest of an AC member in Alberta - Operation Dear Santa - which involved the United States Border Services, United States Homeland Security, Canadian Border Services Agency and the Calgary Police Services undercover and SWAT teams has prompted AC to undertake an information and education campaign.

As part of this campaign AC is hoping to engage in meaningful and respectful dialogue with policy and decision makers in the political and enforcement communities concerning an appropriate police response to this substance. For specific recommendations see the Recommendations section in this document (below).

#### 2. HISTORY, CURRENT PRACTICES, BACKGROUND and SOCIETAL BENEFITS

#### Ayahuasca - Composition and Use

Ayahuasca is a sacred ceremonial substance used by over 160 indigenous Amazonian groups and is considered a medicine by mestizo healers throughout South America and worldwide. Ayahuasca is a liquid produced by the slow decoction of the Banisteriopsis caapi vine, which contains harmine, harmaline and tetrahydroharmine, and the leaves of the Psychotria viridis shrub, which contains Dimethyltryptamine (DMT) (Schultes & Hofmann, 1992).

The traditional use of ayahuasca extends from Panama to Bolivia, including Peru, Ecuador, Colombia, and Brazil, countries in which its medicinal use is intensely present in urban centers (Luna, 1986, 2011). Ayahuasca is presently used as a medicine in ceremonies officiated by Indians, mestizos, and diverse professionals who have learned to use it in its places of traditional origin (Labate et al., 2009; Labate & Jungaberle, 2011; Luna, 2011; Labate & Bouso, 2013).

While originating in the Amazon, ayahuasca is now used worldwide. The therapeutic properties of ayahuasca are due to its action on the brain: it activates the cerebral areas related to episodic memory and awareness of emotions and internal sensations (Riba et al., 2006; de Araujo et al., 2011).

#### History

The oldest traces of possible use of ayahuasca have been found in the Azapa desert in the north of Chile, where residues of harmine have been found in hair analyzed from mummies from the Tiwanaku period between 500 and 1000 BC. The ayahuasca vine does not grow in the Azapa valley nor does any other harmine-containing plant which indicates commerce between the ancient populations of Chile and the Amazonian peoples.

National Geographic has also scientifically verified the use of ayahuasca to at least 1,000 years. (NG <u>1</u>). The modern spread of ayahuasca began with the emergence of ayahuasca churches in the early 1900s when rubber cutters and others who came into contact with Amazonian Indian tribes were introduced to ayahuasca ceremonies.

World-wide awareness and use of ayahuasca in a religious context was due in large part to retreat programs and organized religious movements such as Santo Daime and the União do Vegetal (UDV). The use of ayahuasca subsequently gained the attention of western ethnobotanists, doctors, pharmacologists, clinicians and researchers because of its reported therapeutic effects.

#### Ayahuasca Legal Status in Canada

In Canada, ayahuasca is considered a Schedule III drug under the same classification as DMT. Schedule III drugs include amphetamines and hallucinogens.

**Factors that Determine the Seriousness of the Drug Offence** - When an accused is charged with the possession of a scheduled drug, the Crown can proceed to prosecute the accused by way of indictment or summary conviction. Typically, the Crown proceeds to prosecute by way of indictment when the circumstances of the offence are more serious. For example, factors include the quantity and type of drugs possessed, and whether the accused has previous drug charges or convictions.

**Sentencing** – For a summary conviction - for a first offence: a fine not exceeding \$1,000 or imprisonment for a term not exceeding six months, or both. For an indictable offence - imprisonment not exceeding three years.

#### Ayahuasca Churches

There are a number of ayahuasca churches that have been given legal exemptions to serve ayahuasca in Canada through the Office of Controlled Substances of Health Canada. These include churches operated by Santo Daime and the Uniao de Vegetal (UDV), which are syncretic churches founded in the early 1900s in Brazil. Most recently the Companionship of the Sacred Vine was also granted an exemption to conduct legal shamanic (Amazonian) ceremonies in Canada.

#### Criminalization of Ayahuasca

In 1971, the United Nations issued a convention that outlawed Dimethyltryptamine (DMT). However, natural plant materials including ayahuasca were never part of the UN Convention, according to the United Nations Narcotics Control Board and Health Canada documents.

See – International Nations Narcotic Control Board Report – 2010, page 46, paragraphs 284 and 285 (INCB <u>27</u>):

In contrast, although some active stimulant or hallucinogenic ingredients contained in certain plants are controlled under the 1971 Convention, no plants are currently controlled under that Convention or under the 1988 Convention. Preparations (e.g. decoctions for oral use) made from plants containing those active ingredients are also not under international control.285.

Examples of such plants or plant material include khat (Catha edulis), whose active ingredients cathinone and cathine are listed in Schedules I and III of the 1971 Convention; 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 UN Narcotics Control Board in June 2010 sent a letter to Mr. Lousberg, Ministry of Public Health in the Netherlands to clarify the legal status of ayahuasca. In the letter Herbert Schaepe, Secretary of the Board, states:

"No plants (natural materials) containing DMT are at present controlled under the 1971 Convention on Psychotropic Substances. Consequently preparations (e.g. dococtions) made of these plants, including ayahuasca are not under international control and, therefore, not subject to any of the articles of the 1971 Convention."

| INTERNATIONAL NARCOTICS<br>CONTROL BOARD |  |                                      | CONTROLE DES STUPÉFIANTS |                      |          |
|--|--|--------------------------------------|--------------------------|----------------------|----------|
| Telephone: +4                            | tional Cantre, P.O. Box 500, A<br>3-1-28060, Telefax: +43-1-260<br>Mariatetincb.ong Internet Add | 160-5867 / 5868, Tolex: 136612 uno a |                          |                      | Telefax  |
| To:                                      | Mr. Lousberg, Chier  | ť,                                   | Date:                    | 17 Janua             | ary 2001 |
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| From:                                    | Herbert Schaepe, S<br>International Narcot   |                                      | ă.                       |                      |          |

Subject: International control of the preparation "ayahuasca"

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Dear Mr. Lousberg,

I would like to refer to your facsimile of 20 December 2000 concerning the-traditional use of controlled substances, in particular the use of a preparation called "ayahuasca" by religious groups in the Netherlands.

The above mentioned issue was consuited by the INCB Secretariat with the Scientific Section and the Legal Advisory Section of the United National International Drug Control Programme (UNDCP). It is our understanding that "ayahuasca" is the common name for a liquid preparation (decoction) for oral use prepared from plants indigenous to the Amazon basin of South America, essentially the stem bark of different species of a jungle vine (Banisteriopsis sp.) and the tryptamine-rich plant Psychotria viridis. According to the scientific literature, ayahuasca commonly contains a number of psychoactive alkaloids, including DMT which is a substance included in Schedule I of the 1971 Convention on Psychotropic Substances.

No plants (natural materials) containing DMT are at present controlled under the 1971 Convention on Psychotropic Substances. Consequently, preparations (e.g. decoctions) made of these plants, including ayahuasca are not under international control and, therefore, not subject to any of the articles of the 1971 Convention.

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Yours sincerely.

Herbert Schaepe Secretary of the Board

This contradiction between DMT and ayahuasca is also reflected in the official Health Canada Policies and Procedures for Religious Exemptions\* in which Health Canada states:

United Nations Drug Co

Daime tea/Ayahuasca and its plant ingredients remain uncontrolled under the United Nations drug control conventions.

Despite these clarifications by the INCB, in the 1970s most countries around the world outlawed DMT and included ayahuasca as a restricted substance.

\*Freedom of Information Release Package A-2022-001575, 2023-06-05. Unpublished. <u>Contact AC</u> for a copy of this file.

#### **DMT Abuse and Deaths**

Synthetic Dimethyltryptamine (DMT) usually comes in the form of a white, yellowish or pink crystalline powder. Synthetic DMT can be smoked, vaporized, or snorted.

DMT does not have any significant role in drug-related deaths in Canada. Canada.ca (Gov't of Canada website) published a study entitled - Substance-related acute toxicity deaths in Canada from 2016 to 2017: A review of coroner and medical examiner files (CAN <u>31</u>) In that study they list the substances involved in toxicity deaths in Canada. DMT is not listed.

DMT appears to have limited neurotoxicity and other adverse effects except for intense cardiovascular effects when administered intravenously in large doses. See - Neuropharmacology of N,N-Dimethyltryptamine (National Library of Medicine <u>33</u>)

The DMT found in ayahuasca is from plant sources and is not a synthetic form of DMT. It is found in low concentrations in the ayahuasca brew. A study entitled. Detection and Quantification of Psychoactive N,N-Dimethyltryptamine in Ayahuasca Brews by Ambient Ionization High-Resolution Mass Spectrometry (ACS <u>32</u>) breaks down the amount of DMT found in ayahuasca brews.

If we take the median value (the average value of the DMT) found in the ayahuasca brews tested in the study, the amount of DMT in two kilograms of ayahuasca paste, the amount of ayahuasca allegedly delivered to Chad Gillies in Alberta, the actual amount of DMT would be 2.95 grams.

To put that in context, two kilograms of ayahuasca paste would make about 3.25 litres of the ayahuasca brew or about 50 to 60 individual servings. The amount of DMT in a single serving of plant-based ayahuasca would be approximately 60 milligrams.

DMT seems to be a relatively rare street drug and isn't a common drug of abuse, according to the Analytics Manager at the Calgary Police Services. AC queried the Corporate Data and Analytics Division of the Calgary Police Service and asked for any relevant statistics and risk assessments by the CPS for DMT.

Specifically we requested "the number of arrests and seizures of DMT in Calgary in the past year; perceived public threat and policing priorities regarding DMT and statistics related to arrests, abuse and seizures of DMT in Calgary" over the past year.

The very succinct answer provided by Rebecca Davidson, Manager, Corporate Data and Analytics for the CPS was "Thank you for your research request. I have checked with our Drug Unit and we do not have data that would inform your research."

#### Peruvian Government Declaration

On June 24, 2008, the Peruvian government under the Peruvian National Institute of Culture issued a UNESCO declaration on ayahuasca as part of the Intangible Cultural Heritage - Recognition and declarations of current cultural manifestations as cultural heritage. (No. 1207/INC)

In that declaration they state:

Said plant (ayahuasca) is known to the indigenous Amazonian people as a wise or teacher plant that teaches initiates the very foundations of the world and its components. The effects of its consumption constitute the entrance to the spiritual world and its secrets, so that around the Ayahuasca ritual it is structured medicine.

The effects produced by Ayahuasca, widely studied due to their complexity, are different from those usually produced by hallucinogens. Part of this difference consists of the ritual that accompanies its consumption, which leads to diverse effects, but always within a culturally delimited margin and with religious, therapeutic and culturally affirmative purposes.

The practice of Ayahuasca ritual sessions constitutes one of the fundamental pillars of the identity of the Amazonian peoples and its ancestral use in the ritualistic tradition, guaranteeing cultural continuity, is linked to the therapeutic virtues of the plant.

#### **BC Harm Reduction, Street Drug Decriminalization**

From the Government of British Columbia website (BC <u>11</u>) - Health Canada granted an exemption under the *Controlled Drugs and Substances Act* to the Province of B.C. From January 31, 2023 until January 31, 2026, adults in B.C. are not subject to criminal charges for the personal possession of small amounts of certain illegal drugs.

Under this exemption, adults (18 years and older) in B.C. are not arrested or charged for possessing small amounts of certain illegal drugs for personal use. The illegal drugs covered by the exemption are:

- Opioids (such as heroin, morphine, and fentanyl)
- Crack and powder cocaine
- Methamphetamine (Meth)
- MDMA (Ecstasy)

Available evidence suggests that decriminalization can be an effective way to reduce the harms associated with substance use and criminalization.

Decriminalization is not associated with increased rates of substance use. In Portugal, since decriminalization, rates of substance use and overdose deaths have remained below the European Union averages.

Decriminalization is expected to provide cost savings to the criminal justice system. In Portugal, since decriminalization, the proportion of prisoners sentenced for drugs has fallen from 40% to 15%; and the substantial reduction in arrests and charges alleviates pressure on the criminal justice system.

#### Canadian Association of Chiefs of Police Support for Decriminalization

An official policy statement by the Canadian Association of Chiefs of Police on the British Columbia decriminalization exemption states (CACP <u>12</u>) - (it) is an excellent way to offer an immediate solution to an urgent opioid crisis, where it has been felt the most, while assessing the impact, challenges, and unintended consequences of this exception to the Controlled Drugs and Substances Act. Doing so, supports an evidence-based approach to determining whether decriminalization for simple possession of illicit drugs is a viable solution that can successfully be adopted in all regions of the country.

In the meantime, police services across Canada will continue to focus on organized crime and criminal networks trafficking dangerous substances and jeopardizing the health and safety of Canadians.

#### **Ontario Association Chiefs of Police Statement on Decriminalization**

Substance Use Disorder is a public health issue and requires a coordinated and collaborative approach. (OACP <u>13</u>) This is why the Ontario Association of Chiefs of Police (OACP) supports the Canadian Association of Chiefs of Police (CACP) report entitled Decriminalization for Simple Possession of Illicit Drugs: Exploring Impacts on Public Safety & Policing. The OACP also calls on the Ontario Ministry of Health and Long-Term Care to, in a timely way, establish and invest in robust evidence based treatment programs and other support services to assist in the recovery of those persons dealing with problematic substance use.

Communities across our province are dealing with the challenges associated with addiction, not only for affected individuals, but also those living and working in communities where people are struggling with Substance Use Disorder. Any decriminalization/diversion discussion must include direct pathways to recovery and a health system that is able to support this approach.

#### Statement - Police Magazine in Spain

Following several high-profile SWAT team arrests in Spain at ayahuasca ceremonies, a Spanish Supreme Court ruling confirmed the legality of ayahuasca in Spain. The national Spanish Police Magazine subsequently printed a 40-page article\* outlining the legality, history, effects and expansion of use in Spain.

\*The Spanish National Police magazine recognizes that ayahuasca is not illegal in Spain and "brings benefits to those who consume it." (PF <u>26</u>)

#### Ayahuasca Use in Canada

The overwhelming reason most AC members cite for wanting to use ayahuasca is for healing from problematic mental health conditions (AC user survey, unpublished). These findings are consistent with a large cross-section study of over 11,000 ayahuasca users where therapeutic motivation was the primary reason given for taking ayahuasca. (see - Ayahuasca use and reported effects on depression and anxiety symptoms: An international cross-sectional study of 11,912 consumers. Journal of Effective Disorders Reports – Science Direct (SC <u>24</u>)

These conditions include treatment for addictions, deeply-seated childhood traumas, PTSD, treatmentresistant depression and anxiety, suicidal ideation, traumatic events, grief events (the loss of a loved one) and other persistent or problematic mental health conditions. AC members report that the use of ayahuasca for these conditions is typically as a 'last resort' where other treatment modalities have been tried or have been found to be insufficient.

There are two options for Canadians wanting to undertake an ayahuasca ceremony in Canada without traveling to South American countries where ayahuasca is legal. This includes 'underground' ceremonies typically presided over by ayahuasca facilitators (curanderos or ayahuasceros) that have undergone an initiation process or, alternately through legal ceremonies conducted by ayahuasca churches.

Initiations into the medicine by facilitators in Canada typically include working with established facilitators (maestros) in South America. The facilitators often spend years learning how to navigate within this medicine world and many have spent years or decades in South America working with their maestros. Most Canadian facilitators have taken ayahuasca on hundreds of occasions and understand the ayahuasca healing process at an advanced level.

Ayahuasca churches also have their own initiation process where people wishing to serve the medicine are advanced through various levels of initiations. In Santo Daime churches, these levels are indicated by the number of stars (progressions) that the initiate has accumulated. Other ayahuasca churches have their own systems of initiation.

#### Ayahuasca Ceremonies

Ayahuasca is used in ceremonial settings in Canada led by an experienced facilitator that has typically undergone an initiation in South America or with other trained curanderos (AC user survey, unpublished), or in ceremonies at legal ayahuasca churches in Canada.

No AC member has ever reported taking ayahuasca by themselves outside of these types of ceremonies. An ayahuasca ceremony can be a daunting undertaking and requires dietary preparation and a commitment to an experience that can be personally challenging. Vomiting during a ceremony is a typical reaction and is considered part of the healing process by facilitators.

#### Danger to the Canadian Public

The use of ayahuasca in Canada is largely self-regulating in that most people who embark on the ayahuasca journey do so as a last resort when mental health treatments or pharmaceutical interventions have not provided satisfactory results.

The International Center for Ethnobotanical Education, Research, and Service (ICEERS) studies traditional Indigenous medicines, such as ayahuasca, iboga, and others. In 2023 ICEERS published the results of a three-year study entitled *Ayahuasca Global Consumption and Reported Deaths* (ICEERS <u>4</u>). ICEERS has special NGO consultative status with the United Nations' Economic and Social Council (ECOSOC), and is a registered non-profit foundation.

As part of the study they examined media-reported deaths attributed to ayahuasca. One of the conclusions of the study was that:

To date worldwide, no forensic examination or toxicological analysis has determined the combination of Banisteriopsis caapi and Psychotria viridis or Diplopterys cabrerana (the traditional ayahuasca brew) has caused poisoning leading to death.

Synthetic Dimethyltryptamine (DMT) usually comes in the form of a white, yellowish or pink crystalline powder. Synthetic DMT can be smoked, vaporized, or snorted. The DMT found in ayahuasca is from plant sources and is not a synthetic form of DMT.

DMT does not play any significant role in drug-related deaths in Canada. Canada.ca (Gov't of Canada website) published a study entitled - Substance-related acute toxicity deaths in Canada from 2016 to 2017: A review of coroner and medical examiner files (CAN <u>31</u>) In that study they list the substances involved in toxicity deaths in Canada. DMT is not listed.

#### Health Canada – Potential for Abuse

Unlike drug trafficking or criminal enterprises structured around the use of legal or illegal 'recreational' substances, there is no recreational or black market for ayahuasca according to Health Canada documents. In Health Canada's official policies and procedures for religious exemptions for ayahuasca, obtained by AC through the Freedom of Information Act (AC 3.) (Health Canada File Number - A-2022-001575 / MC2):

- There is no evidence of risk to public safety associated with Daime tea/Ayahuasca, in terms of illicit production and trafficking, even in countries where it has been used for centuries.
- There is no evidence of widespread use and diversion in Canada
- Daime tea/Ayahuasca specifically does not appear to be the object of common abuse.
- Physical dependence and tolerance to Daime tea/Ayahuasca do not appear to develop.
- Consumption of Daime tea/Ayahuasca induces vomiting, which limits the amount that can be ingested at one time and thus its abuse potential.

#### The Opioid Crisis and Ayahuasca

From a Parliament of Canada report, see: The Opioid Crisis in Canada (PC 30)

Opioid-related harms have reached crisis proportions in Canada. Almost 23,000 Canadians died due to apparent opioid toxicity between January 2016 and March 2021. Many other people faced life-threatening medical emergencies or other harms.

Opioid toxicity deaths have not been equally distributed across the country. Western Canada has been the most affected region since 2016, although rates of opioid toxicity deaths have climbed in other parts of the country, including in Ontario. In 2020 British Columbia, Alberta and Saskatchewan experienced the highest rates of apparent opioid toxicity deaths per 100,000 population, and 85% of all apparent opioid toxicity deaths took place in British Columbia, Alberta and Ontario.

One of the earliest clinical-based centers using ayahuasca is Takiwasi in Tarapoto Peru which has over 30 years of experience with addiction treatments (see Scientific Studies below). Many ayahuasca churches and retreat centers in the Amazon also offer addiction treatment services as part of their operation. Ayahuasca churches can be found in most Amazonian cities and have now spread to most countries around the world.

#### Alberta Ayahuasca Arrest – Operation Dear Santa

In February, 2024, one of AyahuascaCanada's members, Mr. Chad Gillies, was arrested by Calgary Police Services and charged with importing DMT (ayahuasca) into Canada. This arrest was the culmination of a police operation entitled Operation Dear Santa which began in Florida when US Customs seized a DHL package bound for Canada. The package was then turned over to US Homeland Security. Homeland Security officers then delivered the package to a Canadian border crossing in Alberta where it was subsequently picked up by an officer from Calgary Police Services.

As part of the undercover operation a court order was obtained ordering DHL to co-operate with Canadian Border Services Agents and CPS undercover officers who posed as DHL delivery workers. The court order required DHL to supply undercover officers with DHL uniforms, a DHL storefront operation and a DHL delivery van. DHL was also ordered to make changes to their online tracking system to account for delays in the package delivery.

The package delivered to Mr. Gillies was monitored with a remote GPS sensor that could also detect when the package was opened. After the package was opened, the Calgary SWAT team executed an arrest. Mr. Gillies was subsequently charged with importing ayahuasca (DMT) into Canada.

After the arrest, AC contacted the analytics division of the CPS and requested the number of DMT arrests in Calgary in the past year and whether DMT was an identified policing priority and/or an identified threat to the public in Calgary. In all cases, the answer was negative according to the Manager, CPS Analytics Division.

#### **Operation Dear Santa – Retraumatization**

Mr. Gillies initially started taking ayahuasca in Costa Rica some 20 years ago for depression. He had tried all the available pharmaceutical options, talk therapy and other modalities available in the Canadian mental health care system. When he started taking ayahuasca his depressive symptoms disappeared and he was better able to deal with the underlying issues. This could be considered a typical experience for people with depression (see the Scientific Studies section below).

The SWAT arrest in which Mr. Gillies was apprehended by rifle-toting police officers who handcuffed him and were screaming at him to get on his knees and that they would punch him in the face if he looked at them was a re-traumatizing event for Mr. Gillies. He is now back in therapy and trying to deal with the aftermath of this violent arrest.

#### Ayahuasca Safety

ICEERS has published an Ayahuasca Safety Profile Fact Sheet (ICEERS <u>8</u>). ICEERS has special NGO consultative status with the United Nations' Economic and Social Council (ECOSOC), and is a registered non-profit foundation.

From the Fact Sheet:

Studies in both animals and healthy humans have shown that ayahuasca is a physically and psychologically safe substance when its composition is known, and when it is administered in controlled doses in appropriate environments with the necessary support.

ICEERS indicates contraindications for people who have serious cardiovascular problems:

In medical terms, ayahuasca has few contraindications. Only if you have a serious cardiovascular disorder should you not take ayahuasca, as it slightly increases blood pressure. No alterations of liver function and other biochemical parameters have been observed after the administration of ayahuasca in the laboratory. Only a modulation of the immune system has been detected, but this is temporary and does not seem to have clear effects on health.

Psychological contraindications include people with severe psychosis. Wikipedia defines psychosis as a condition of the mind that results in difficulties determining what is real and what is not real. Symptoms may include delusions and hallucinations, among other features. Additional symptoms are incoherent speech and behavior that is inappropriate for a given situation.

**Pre-Ceremony Health Questionnaire** - People who serve the medicine typically require a health questionnaire to be filled out by potential ceremony participants. For an example see Companionship of the Sacred Vine's questionnaire which must be filled out prior to acceptance at a ceremony. (CSV <u>9</u>). Also see CSV's Ayahuasca Decision-Making Guide (CSV <u>10</u>)

#### **3. SUMMARIES – SCIENTIFIC STUDIES**

**Please note** - This is a small sample of a large volume of ayahuasca studies that have been published in English in various government, medical and pharmacological journals. Non-English studies dating back over four decades can also be found in institutions such as the University of Madrid in Spain and in other South American medical and pharmacological journals.

Much of the initial interest from western researchers, pharmacologists, ethnobotanists and clinicians started with anecdotal reports of the positive effects of ayahuasca in the treatment of addictions, PTSD, treatment-resistant depression and other problematic mental health issues.

#### **Takiwasi - Center for the Rehabilitation of Drug Addicts and Research on Traditional Medicines**

#### See – (TW <u>7</u>)

One of the original evidence-based South American ayahuasca mental health centers is Takiwasi located in Tarapoto, Peru which has over 30 years of practical and clinical experience. Their focus is on Drug Addiction Rehabilitation and Traditional Medicine.

From their website - Takiwasi is considered the oldest institution to combine the use of psychotherapy and medicinal plants for the treatment of mental health. With over three decades of experience in this field, our model, in perfect balance between medicine, psychology and spirituality, has been the subject of study in more than 60 international research projects, articulating an interdisciplinary academic community made up of scientific institutions of world excellence.

#### Results

Over 30 years of clinical experience indicate that the interaction between traditional Amazonian medicine, psychotherapy and spirituality, proposed by the therapeutic model of the Takiwasi Center, turns out to be very successful in the treatment of addictions and other mental health disorders. We believe that the articulation of these different therapeutic approaches greatly benefits the outcome of the treatment and thus is showing a path to follow in the global search for mental well-being and good living.

It is the initial vocation of the Takiwasi Center to associate clinical practice with research as it appears in its full name: Center for the Rehabilitation of Drug Addicts and Research on Traditional Medicines. Since the beginning of its operation, the Takiwasi Center has permanently evaluated its activities, its patient population and the results of its therapeutic interventions (Giove 1996, 2002; Mabit, 2007; Mabit & González, 2013) in order to constantly improve its model. A study published by Dr. Rosa Giove in 2002 shows that in a group of 100 former patients contacted two years after leaving the Center, the recovery rate is 54%, reaching 67% considering only those patients who completed the treatment receiving therapeutic discharge.

### The Therapeutic Potentials of Ayahuasca: Possible Effects against Various Diseases of Civilization

(National Library of Medicine <u>34</u>)

As a sacrament, ayahuasca is still a central element of many healing ceremonies in the Amazon Basin and its ritual consumption has become common among the mestizo populations of South America. Ayahuasca use amongst the indigenous people of the Amazon is a form of traditional medicine and cultural psychiatry.

During the last two decades, the substance has become increasingly known among both scientists and laymen, and currently its use is spreading all over in the Western world. In the present paper we describe the chief characteristics of ayahuasca, discuss important questions raised about its use, and provide an overview of the scientific research supporting its potential therapeutic benefits.

A growing number of studies indicate that the psychotherapeutic potential of ayahuasca is based mostly on the strong serotonergic effects, whereas the sigma-1 receptor (Sig-1R) agonist effect of its active ingredient dimethyltryptamine raises the possibility that the ethnomedical observations on the diversity of treated conditions can be scientifically verified. Moreover, in the right therapeutic or ritual setting with proper preparation and mindset of the user, followed by subsequent integration of the experience, ayahuasca has proven effective in the treatment of substance dependence.

This article has two important take-home messages: (1) the therapeutic effects of ayahuasca are best understood from a bio-psycho-socio-spiritual model, and (2) on the biological level ayahuasca may act against chronic low-grade inflammation and oxidative stress via the Sig-1R which can explain its widespread therapeutic indications.

### Research on Traditional Indigenous Medicine within an intercultural medicine model

(Nierka A.C. <u>35</u>)

The Nierika Institute of Intercultural Medicine promotes scientific research on the therapeutic potential of the ceremonial use of sacred plants in therapeutic contexts and their interdisciplinary and intercultural integration in public health. The institute brings together researchers in psychology, medical anthropology, ethno-psychiatry and pharmacology, to collaborate in developing a multidisciplinary and intercultural scientific approach to the study of sacred plants.

Recent studies conducted in other countries indicate that participation in indigenous peyote and ayahuasca ceremonies can have clinically positive effects on different mental conditions in patients receiving treatment with these plants. The integration of ayahuasca rituals in different psychotherapeutic treatment models has proven to be effective for patients with substance dependence problems, depression, eating disorders, post-traumatic stress and complicated grief, among other conditions.

Currently, the Nierika cultural institute collaborates in the ATOP project (Ayahuasca Treatment Outcomes Project), an international research project that evaluates the effectiveness of Ayahuasca in the treatment of addictions, depression and anxiety; AC is also collaborating on an international study evaluating the effects of ceremonial use of Ayahuasca in the treatment of eating disorders with Laurentian University, and the University of British Colombia, as well as UNAM

#### Ayahuasca and Public Health: Health Status, Psychosocial Well-Being, Lifestyle, and Coping Strategies in a Large Sample of Ritual Ayahuasca Users

This study involved a sample of long-term ritualistic ayahuasca users in Spain. To our knowledge, this is the first study to assess regular ayahuasca users from a communitarian public health perspective. The data suggest that the study participants had high levels of general, mental, and positive health, and showed excellent levels in terms of adjustment and coping strategies, in addition to having healthy lifestyle habits. Study results do not suggest the possible effects of ayahuasca, but they show how the ritualistic use of a drug considered a hallucinogen is not associated with negative consequences in terms of adjustment or physical and psychological health. ResearchGate (RG <u>14</u>)

#### New Insights into the Chemical Composition of Ayahuasca

National Library of Medicine (NIH <u>15</u>)

Recently, ayahuasca has captured the attention of the scientific community as part of the "renaissance of psychedelic studies". Several reports highlight its potential therapeutic applications in clinical and nonclinical settings for the treatment of depression, grief, eating disorders and substance use disorders (SUDs). In addition, preclinical studies have shown that DMT,  $\beta$ -carbolines, and ayahuasca preparations present antidepressant-like effects in animal models and that administration of the beverage can block ethanol (alcohol) preference in an animal model of dependence.26

Ayahuasca, commonly translated from the Quechua language as "vine of the spirits" or "vine of the dead", is a psychedelic beverage originally from the Amazon rainforest used in different shamanic settings for a variety of medicinal, spiritual, and cultural purposes.1 It is prepared by boiling in water an admixture of the vine Banisteriopsis caapi, which is a source of  $\beta$ -carboline alkaloids, and other plants containing N,N-dimethyltryptamine (DMT), usually Psychotria viridis (Figure Figure11) or Diplopterys cabrerana, (where the preparation name is usually referred to as yagé).2

Almost four decades ago, ayahuasca traveled from its traditional uses in the Amazon basin to religious, therapeutic, and spiritual centers with a worldwide distribution.3,4 Brazilian churches that use ayahuasca as part of their religious practices, such as the Santo Daime and União do Vegetal, as well as shamanic practices involving the ingestion of the beverage in group rituals, have expanded globally within the psychospiritual transnational networks.4–7

### Ayahuasca and public health II: health status in a large sample of Ayahuasca ceremony participants in the Netherlands

Leisen University Scholarly Publications (LU <u>16</u>) - The findings of this study indicate that long-term participants in ayahuasca ceremonies have better general well-being, fewer chronic and lifestyle diseases, and are more physically active compared to the normative Dutch data, as well as having a more balanced diet. (according to national dietary guidelines; Health Council of the Netherlands 2015).

Other studies that investigated the health of ayahuasca ceremony participants similarly reported differences in lifestyle, well being, nutrition, and physical activity (Kaasik and Kreegipuu 2020; Ona et al. 2019). It had been suggested that hallucinogens may promote healthful behaviors and may reduce the risk of developing "lifestyle diseases" such as diabetes, high cholesterol and blood pressure, which contribute to personal suffering, premature mortality, and public health costs (Teixeira et al. 2021).

Two recent studies report an association between classic hallucinogens and lower odds of being overweight or obese, and lower odds of having diabetes, cardiometabolic diseases, and/or cancer (Simonsson et al. 2021; Simonsson, Sexton, and Hendricks 2021). In addition, observational studies reported improvements of indicators of mental health and overall well-being among ayahuasca ceremony participants (Gonzalez et al. 2021; Kaasik and Kreegipuu 2020; Maia, Daldegan-Bueno, and Tófoli 2020).

### Ayahuasca's entwined efficacy: An ethnographic study of ritual healing from addiction

PubMed – NIH Library of Medicine (NIH <u>17</u>)

Background: A range of studies has demonstrated the efficacy of the psychoactive Amazonian brew ayahuasca in addressing substance addiction. These have revealed that physiological and psychological mechanisms are deeply enmeshed. This article focuses on how interactive ritual contexts support the healing effort. The study of psychedelic-assisted treatments for addiction has much to gain from ethnographic analyses of healing experiences within the particular ecologies of use and care, where these interventions are rendered efficacious.

## Associations between ayahuasca consumption in naturalistic settings and current alcohol and drug use: Results of a large international cross-sectional survey

National Library of Medicine – (NIH 18)

In the context of both expanding naturalistic use and academic research interest in the therapeutic use of ayahuasca, our dataset of 8,629 ayahuasca drinkers from more than 40 countries provides a unique opportunity to investigate associations between ayahuasca consumption in naturalistic settings and the use of alcohol and other drugs.

We identified a strong positive association between the consumption of ayahuasca and the likelihood of never or rarely drinking alcohol, never or rarely engaging in risky drinking (>4 standard drinks on one occasion) and having not consumed a range of drugs in the past month.

Our findings suggesting anti-substance use effects are consistent with those reported in several smaller studies. Analysis of outcomes for 36 patients at the Takiwasi (therapeutic community) drug treatment centre in Peru, which uses ayahuasca along with other traditional plants, identified significant decreases in addiction severity outcomes for drug and alcohol use, as well as reduced emotional distress and enhanced wellbeing [60].

Similarly, an observational study of First Nations young people in Canada provided with ayahuascaassisted treatment for problematic substance use reported psychological and wellbeing benefits as well as reductions in tobacco, alcohol and cocaine use at 6 months [30].

A global survey of drug users, including 527 ayahuasca drinkers, found this group to have lower problematic alcohol consumption than other psychedelic users, but not non-psychedelic users; however, heterogeneity of groups was noted [61].

A number of studies have also reported lower rates of alcohol and other drug use among members of ayahuasca churches in Brazil, when compared to a comparison group or the Brazilian population, with these effects visible even among samples with a higher lifetime incidence of illicit drug use or dependence.

### Ayahuasca-assisted therapy for addiction: results from a preliminary observational study in Canada

PubMed National Library of Medicine (NIH <u>19</u>)

This paper reports results from a preliminary observational study of ayahuasca-assisted treatment for problematic substance use and stress delivered in a rural First Nations community in British Columbia, Canada.

Ayahuasca-assisted therapy appears to be associated with statistically significant improvements in several factors related to problematic substance use among a rural aboriginal population. These findings suggest participants may have experienced positive psychological and behavioral changes in response to this therapeutic approach, and that more rigorous research of ayahuasca-assisted therapy for problematic substance use is warranted.

### Psychotherapeutic and neurobiological processes associated with ayahuasca: A proposed model and implications for therapeutic use

Frontiers in Neuroscience (FN 20)

Observational and qualitative studies investigating ayahuasca's therapeutic effects have identified improvements in some psychological skills or traits such as decentring (Franquesa et al., 2018; Domínguez-Clavé et al., 2019); certain mindfulness capabilities (acceptance, non-judgmental and non-reactive processing, and improved observation) (Thomas et al., 2013; Soler et al., 2016; Uthaug et al., 2018); cognitive flexibility (Stemme et al., 2008; Murphy-Beiner and Soar, 2020); and emotional regulation (Domínguez-Clavé et al., 2019).

Broader psychological and well being benefits have also been identified among those drinking ayahuasca. These include increased confidence, optimism, independence, and positive mood (Barbosa et al., 2009), higher levels of self-transcendence and lower harm avoidance (Bouso et al., 2012), increased satisfaction with life (Uthaug et al., 2018) as well as increased openness to therapeutic interventions and improvements in both anxiety and depression (Perkins et al., 2021a).

Beneficial effects have also been reported in relation to interpersonal relationships, sense of self, creativity, somatic perception, sense of connection, substance use, and other health behaviors (Thomas et al., 2013; Lafrance et al., 2017; Bathje et al., 2021; Perkins et al., 2021a).

Additional benefit may also be associated with the reported modulation of some personality traits after ayahuasca consumption including increased agreeableness, openness to experience, and extraversion, and reduced neuroticism and negative emotionality (Mendes Rocha et al., 2021

### Changes in mental health, well being and personality following ayahuasca consumption: Results of a naturalistic longitudinal study

Frontiers in Pharmacology (FP 21)

Fifty-three attendees (32 women, 21 men) completed pre and post ayahuasca assessments with 55.6% of the sample reporting a complete mystical experience based on the MEQ-30. One-month postayahuasca, significant reductions were identified in depression, anxiety, stress, alcohol and cannabis use, body dissociation, accepting external influence, self-alienation, impulsivity, and negative affect/emotionality.

Significant increases were identified in positive mood, self-efficacy, authentic living, extraversion, agreeableness, open-mindedness, spirituality, and satisfaction with relationships. While facets of the mystical experience held little predictive validity on outcome measures, baseline traits, particularly high negative emotionality and body dissociation, and low sense of self-efficacy, robustly predicted improvements in mental health, well being and personality following ayahuasca consumption: Results of a naturalistic longitudinal study.

#### Potential Use of Ayahuasca in Grief Therapy

ResearchGate (RG 22)

This is the first study to explore the therapeutic potential of ayahuasca in grieving processes. The findings from this study indicate that people who used ayahuasca reported lower level of grief than people who attended a peer-support group. This result stems from the fact that although both groups were comparable in the level of grief at the moment of death, the level of grief presented in the Present Feelings scale (TRIG) was lower in the ayahuasca group. Also, a significantly greater proportion of ayahuasca participants reported direct benefits on some of the psychological and interpersonal dimensions that are central to grief processes.

#### Ayahuasca Global Consumption and Reported Deaths in the Media

See - The 67<sup>th</sup> session of the UN Commission on Narcotic Drugs <u>Ayahuasca Global Consumption and</u> <u>Reported Deaths</u>, June 2023.

For years, a number of concerns have been raised in the field of ayahuasca research that, so far, no one has tried to systematically resolve. The first consideration:

How many people in the world have taken ayahuasca in their lifetime? How many people take ayahuasca each year? How many servings of ayahuasca are taken each year? And another important question:

What do we know about the deaths the media has attributed to ayahuasca?

It seems that answering the first question by estimating the prevalence of ayahuasca consumption globally is valuable to understand ayahuasca's expansion and its social, economic, and environmental implications. Comparing these numbers alongside an analysis of the deaths the media attributed to ayahuasca would amplify the value of this information collectively. It can also help shed light on the alleged danger of ayahuasca which can be a tool to guide public policies.

#### Deaths Attributed to Ayahuasca

As part of this three-year study ICEERS examined media-reported deaths attributed to ayahuasca. One of the conclusions of the study was that:

To date worldwide, no forensic examination or toxicological analysis has determined the combination of Banisteriopsis caapi and Psychotria viridis or Diplopterys cabrerana (the traditional ayahuasca brew) has caused poisoning leading to death.

#### Therapeutic Effects of Ceremonial Ayahuasca Use for Methamphetamine Use Disorders and Other Mental Health Challenges: Case Studies in an Indigenous Community in Sonora, Mexico

ResearchGate (RG 23)

The cases presented above suggest that the application of traditionally used entheogens within a culturally adapted community-based therapeutic programme for Indigenous mental health can be an effective therapeutic resource for supporting recovery from depression, grief, anxiety, PTSD and systemic trauma, and substance use disorders. The selected cases show specifically how ceremonial use of ayahuasca within a culturally adapted, community-based treatment program may be safe, tolerable, and demonstrates therapeutic potential.

Perhaps, most significant is the way in which this intervention has potential to support recovery from diverse mental health challenges among family and community members in addition to, and often as part of, individual recovery. Incorporating family members and community practices into treatment is of utmost importance for improving quality of life and well-being among historically oppressed Indigenous communities.

#### Influence of Context and Setting on the Mental Health and Well being Outcomes of Ayahuasca Drinkers: Results of a Large International Survey

Frontiers In Pharmacology (FP 24)

Our study has a number of important strengths, including a large sample size, international crosscultural sampling frame, and inclusion of ayahuasca drinkers from a range of different contexts of consumption Therapeutic motivation was the most consistently associated of the motivation variables, including with a greater number of self-insights, stronger subjective spiritual experience and higher PWG. Moreover, unlike previous studies, we are also able to identify and consider separately the sizable wellbeing and mental health benefits associated with the social and community aspects of ayahuasca drinking, on which ceremony practices, additional support, and drinkers motivations also have an influence.

### Ayahuasca use and reported effects on depression and anxiety symptoms: An international cross-sectional study of 11,912 consumers

Journal of Effective Disorders Reports – Science Direct (SC 24)

Of participants reporting depression (n = 1571) or anxiety (n = 1125) at the time of consuming Ayahuasca, 78% reported that their depression was either 'very much' improved (46%), or 'completely resolved' (32%); while 70% of those with anxiety reported that their symptoms were 'very much' improved (54%), or 'completely resolved' (16%).

A range of factors were associated with greater reported affective symptoms improvement, including subjective mystical experience, number of Ayahuasca sessions, and number of personal psychological insights experienced. 2.7% and 4.5% of drinkers with depression or anxiety, respectively, reported worsening of symptoms.

#### Psychedelic Medicine: A Rapid Review of Therapeutic Applications and Implications for Future Research (Canada)

Homewood Research Institute, Guelph, ON. (HRI 25)

Amidst growing medico-therapeutic interest in psychedelics, the socio-political factors of the 1960s and 70s driven by racist policy and political persecution led to these drugs being declared illegal, including in Canada, despite a lack of evidence for toxicity or addictive potential. Their designation as Schedule I substances under the UN Convention on Psychotropic Substances, and consequently within the Canadian Controlled Drugs and Substances Act, meant that they were considered as having a high potential for non-medical use1, no currently accepted therapeutic application, and a lack of accepted safety for use under medical supervision.

The combination of the socio-political climate, shrinking funding opportunities, and methodological issues have severely limited new research and development since the 1970s. The past 15 years has seen a rapid resurgence of work in both basic and clinical psychedelic science, with the majority of the work focused on substance use, mental health, and related conditions. A wide range of topics are being covered within the domains of: neuroscience and psychopharmacology; treatment effectiveness with associated mechanisms of action and safety considerations; palliative, end-of-life, and spiritual care; treatment guidelines; training and certification of therapists and other practitioners; health policy and prevention; as well as anthropology, sociology, and global health.

### The Impact of Ayahuasca on Suicidality: Results From a Randomized Controlled Trial

Frontiers in Pharmacology (FP 28)

Interestingly, within the ayahuasca group, the relationship between changes in suicidality and changes in nonsuicide-related depressive symptoms approached significance, with a large effect size (i.e., r = .53). These findings suggest that the impact of ayahuasca on suicidality may, in part, be due to its impact on nonsuicide-related depressive symptoms or mechanisms overlapping both non-suicide-related depressive symptoms or mechanisms overlapping both non-suicide-related depressive symptoms and suicidality. Research suggests that suicide functions as a means of escaping intense emotional distress (Baumeister, 1990; Shneidman, 1998). Extant research indicates that psychedelics in general, and ayahuasca in particular, leads to decreases in emotional distress (for a review, see dos Santos et al., 2018). Similarly, a recent study found that the administration of ayahuasca led to decreases in emotion dysregulation, within a community sample and among individuals with BPD traits (Domínguez-Clavé et al., 2019). Similarly, among males in a community sample, lifetime use of psychedelics was associated with lower levels of emotion dysregulation (Thiessen et al., 2018). One particular means through which ayahuasca may decrease emotion dysregulation is via increased mindfulness-related capacities (e.g., acceptance and decentering), which have been shown to increase after administration of ayahuasca (Thomas et al., 2013; Soler et al., 2016; Sampedro et al., 2017; Domínguez-Clavé et al., 2018; Uthaug et al., 2018).

### Ayahuasca Treatment Outcome Project (ATOP): One Year Results from Takiwasi Center and Implications for Psychedelic Science

(PubMed 29)

**Results:** The group change from baseline to the one-year follow up was significant and in the anticipated direction for alcohol and drug use severity, depression and anxiety, and some dimensions of quality of life. There was considerable individual variation in outcomes and treatment duration. The majority of participants rated all aspects of the program as important, including the spiritual and therapeutic significance of the ayahuasca experience which was rated as very significant.

**Conclusion:** Based on the positive one-year outcomes, and within the limitations of an uncontrolled observational study design, the findings suggest promise for the effectiveness of the use of ayahuasca in a multifactorial treatment context for individuals with significant treatment histories, high levels of comorbidity and treatment motivation. Results highlight considerable variation in individual experience that merit in-depth qualitative analysis. Implications for ayahuasca-assisted and other psychedelic-assisted treatment alternatives are discussed.

#### Neuropharmacology of N,N-Dimethyltryptamine

(National Library of Medicine <u>33</u>)

This paper reviews the current literature of both the recreational use of DMT and its potential roles as an endogenous neurotransmitter. DMT appears to have limited neurotoxicity and other adverse effects except for intense cardiovascular effects when administered intravenously in large doses. Because of its role in nervous system signaling, DMT may be a useful experimental tool in exploring how brain works, and may also be a useful clinical tool for treatment of anxiety and psychosis.

#### 4. RECOMMENDATIONS

Far from being a danger to the Canadian public an argument can be made that ayahuasca provides benefits to society. This is certainly the accepted viewpoint in Amazonian countries where ayahuasca use is legal and is seen as having ancestral, religious and community benefits.

There are cost-savings to the Canadian health care system associated with ayahuasca use. Numerous studies point out that ayahuasca users are more family and community oriented and are better adjusted within society both physically and mentally. Numerous South American centers use ayahuasca to treat substance abuse disorders and other problematic or treatment-resistant mental health issues with results far exceeding conventional North American pharmaceutical interventions.

According to Health Canada documents ayahuasca poses no danger to the Canadian public and there is no diversion of ayahuasca into black markets (NG <u>1</u>). From all sources ayahuasca is recognized as having an excellent safety profile that far exceeds most legal and illegal substances available in Canada.

In terms of policing priorities, AyahuascaCanada's recommendation to policy-makers is that there are far more pressing police priorities than making arrests for ayahuasca offences.

#### Contact



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Allan Finney, Executive Director

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31. Substance-related acute toxicity deaths in Canada from 2016 to 2017: A review of coroner and medical examiner files (CAN <u>31</u>)

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35. Research on Traditional Indigenous Medicine within an intercultural medicine model (Nierka A.C. 35)

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