

## 4 AMERICAN PLANTS

### 4.1 PLANTS OF SOUTH AMERICA

#### 4.1.1 Traditional Indigenous Medicine of the Peruvian Amazon and its Potential for Psychological Treatment and Personal Growth

*Kavenská, V.*

##### Acknowledgment

This contribution is based on the results of research carried out at the Department of Psychology, Philosophical Faculty, Palacký University Olomouc, Czech Republic (FF UP). The study was supported by a number of research grants. The most important is the Fund for the support of scientific activities FF UP, SPP: 452100061, titled: Ayahuasca Shamanic Tourism – Analysis of the Current Phenomenon. The authors are thankful for the financial assistance during the preparation of this contribution.

**Keywords:** traditional indigenous medicine, ayahuasca, psychological treatment, shamanic tourism, benefits, risks, motivation

##### Abstract

This contribution explains the context and basic principles of traditional medicine of the Amazon. In particular, it focuses on the hallucinogenic vine ayahuasca, traditionally used by indigenous communities in the Amazon as a tool for healing, establishing contact with spiritual life, and for many other purposes. In the last decades, there is rapidly growing interest in ayahuasca observed among people from other cultures (Europe and the US in particular), who come to the Amazon to undergo the ayahuasca ritual. This contribution demonstrates ayahuasca's psychotherapeutic potential, and shows the possibilities of ayahuasca in structured therapeutic community for drug addicts (Takiwasi). There are potential benefits and risks for individuals undertaking ayahuasca expeditions on their own ("shamanic tourism"). The motivation of these individuals is mentioned in the text.

##### Traditional Medicine of the Peruvian Amazon

The traditional medicine of the Peruvian Amazon belongs to the area known as "shamanism". Interest in this phenomenon in recent decades has increased among the general public and among professionals. It was first mentioned in the scientific research by researchers such as Lévi-Strauss, Mircea Eliade or Michael Harner. Other important factors are represented by the psychedelic movement, books by Carlos Castaneda and also due to the rapid dissemination of information across cultures, and the reduction of travel costs. Michael Harner (Nicholson, 1987) assumes that this interest is related to the necessity for free spiritual growth.

The word "shaman" probably originated in the Tungusic languages, in East Siberia, and means "The one who knows". It was used to describe a religious specialist who goes into trance and communicates with "spirits" in order to recover souls, ensure fertility, and to protect or accompany the souls of the dead (Bowie, 2008). In the Peruvian Amazon, this professional is usually called a medicine man, vegetalista or curandero (from the Spanish word "curar" – to heal). Because the name "curandero" predominates in South America, we will prefer it in this article.

The most important role of the shaman is healing. Its nature is not always exclusively magical. It is also based on knowledge of plants and animals, medicinal effects, massage, etc. Arguably, some people have assumed that most diseases are spiritual (Eliade, 1997).

Traditional medicine of South America has several major characteristics:

1. To ensure that someone becomes a real shaman, he or she must pass through shamanic training and an initiation processes. The anthropological literature describes the process of "initiation" to become a curandero professional (Eliade, 1997; Luna, 2002; Grof, 2006; Bowie, 2008). It is mainly based on personal experience and long-term isolation in the jungle (so-called "diets"), as well as an "initiation crisis" (often in the form of illness) or the experience of a symbolic death.
2. With the use of local plants for diagnosis and treatment of the diseases (Llamazares & Sarasola, 2003). In the shamanism of the Amazon, plants are considered "spirits-teachers" with the ability to "teach" people drinking their extracts, in particular through altered states of consciousness (Aedo, 2009). The contents revealed by plants are not considered a deviation from reality, but the authentic fact, that would otherwise remain hidden in normal waking consciousness. Arguably, the altered state of consciousness must be extended for it to be observed (Vitebsky, 2006).
3. There is also another specific approach to understanding disease identified in the Amazon. However, the approach does not distinguish between physical and mental illness and is perceived as an inseparable complex (Mabit, 1997; Bowie, 2008; Gómez, 2009; Grof, 2009). Disease is seen as a distortion within the organism or a disruption of balance between the organism and its surroundings. This imbalance is likely to be caused by various factors (Gómez, 2009), e.g. God's intention, karma (the concept of cause and effect), enchantment or bewitchment, personal history, including energy injuries or traumas, or by the interruption of contact with a spirit.
4. The treatment of disease usually occurs in altered states of consciousness of the healer, the sick person, or both. This change of consciousness is likely to be induced in different ways, the most frequent of which is the use of psychoactive plants, hallucinogens in particular.

## Ayahuasca

The most common hallucinogen used for medicinal purposes in the Amazon is ayahuasca. On the coast of Peru, the traditional administration of the hallucinogenic San Pedro cactus (*Echinopsis pachanoi*) is widespread.

Ayahuasca (*Banisteriopsis caapi*) is a hallucinogenic vine growing in humid areas in the South American tropics and subtropics (Fig. 12). It is used in combination with other plants in the form of a tea known under the same name as the vine itself. According to the often quoted archeological evidence by Naranjo (1986), the history of ayahuasca use on the South American continent is more than 2,000 years long.<sup>7</sup> During this time, ayahuasca was considered sacred by local tribes and played a central role in their lives. It serves as a tool for prevention diagnosis and treatment of diseases; for communication with gods and the spirit world; for identification of malicious agents responsible for disease; and for improving hunting techniques and understanding the fundamentals of the indigenous social system, including its religious background (Schultes & Hofmann, 1996; Luna, 2002; Dobkin de Rios & Rumrill, 2008).

The preparation process and use of ayahuasca are strictly formalized and controlled by a number of ceremonial regulations (Furst, 1996). Ayahuasca may contain different

---

<sup>7</sup> However, there is no valid indication of ayahuasca use (Brabec de Mori in Labate & Jungaberle, 2001: 24) (Ed.).

,ingredients, and, therefore, have a different chemical composition. The most frequently-used combinations in Peru are a mixture of the ayahuasca plant (*Banisteriopsis caapi*) and chacruna (*Psychotria viridis*). Chacruna is a source of DMT, a substance belonging to the group of tryptamine hallucinogens, that is also naturally excreted in the human brain, e.g. in connection with the sleep cycle, production of dreams, during mystical experiences or spontaneous psychosis (Smythies *et al.* in Narby, 2006; Luke, 2011). The ayahuasca vine provides monoamine oxidase inhibitors (IMAO) – beta-carboline alkaloids harmine, harmaline, and tetrahydroharmine, which allow DMT to take effect in the body (McKenna, Towers & Abbott, 1985). These alkaloids consumed alone at sufficiently high doses produce hallucinogenic effects too.



12: Ayahuasca vine growing in the Takiwasi Center, Tarapoto – San Martín, Peru

Source: Author's Archive

The effects of ayahuasca usually manifest on the physical, psychological and spiritual levels. Research on the physiological effects demonstrate that the use of ayahuasca is safe (Callaway *et al.*, 1999), and there is a minimum risk of psychological damage or of the emergence of addiction (Gable, 2007). The most frequently reported subjectively perceived physical symptoms include dizziness, feelings of weakness, tingling, nausea, increased sensitivity, palpitations, light tremors, feeling cold or hot, dry mouth and self-regulation mechanisms – vomiting and diarrhea (Riba *et al.*, 2001; Giove, 2002; Melho, 2006; Horák, 2013).

On the psychological level, changes are found in cognitive functions. It is common to perceive vivid and vibrant colors, lights, images, cross-perception (synesthesia), additional dissociation, confusion and altered perception of time and space (Melho, 2006; Horák, 2013). Research on the impact of long-term use of ayahuasca on cognitive functions does not confirm any deterioration in cognitive or other psychological functions, but, on the contrary, shows better results in comparison with the control group (Grob *et al.*, 1996; Callaway *et al.*,

1999). The psychotherapeutic effects of ayahuasca are particularly valuable. In the scientific literature, there is information on the positive effect of ayahuasca in the treatment of depression (Mercante, n. d.), alcoholism and drug addiction (Grob *et al.*, 1996; Winkelman, 2002; McKenna, 2004; Mabit, 2007; Viegas, 2009; Gonzaga, 2009; Kavenská, 2013) and on its anxiolytic effect (Jacob & Presti, 2005).

Approximately 30% of people describe deep spiritual experiences during the ayahuasca use (Dobkin de Rios & Rumrill, 2008). Common acute symptoms include a feeling of cosmic consciousness, and a connection with the transcendent, respect for life and the sacred, and a feeling of harmony and unity with the world (Giove, 2002; Villaescusa, 2006; Horák, 2013). These experiences are so intense, and they have such a strong impact, that Krippner and Sulla (2000) even compare ayahuasca sessions to spiritual psychotherapy. It seems that the use of ayahuasca also arouses a long-term interest in spiritual practices (Trichter, 2006–2007).

States induced by ayahuasca are different from psychotic illness or other pathologies. Berlanda and Virgas (2012) declared that there is no deterioration of intellect or of cognitive and executive functions while using ayahuasca (in contrast to the development of pathology). According to some studies (e.g. Bouso *et al.*, 2012), it is even the opposite which obtains. Furthermore, it is essential that the manifested symbols be interpretable, understandable and comprehensible for the subject experiencing them. Arguably, its effect is not perceived as something “outer” and disturbing. These experiences can be integrated and made further transferable.

### Psychotherapeutic Effects of Ayahuasca

In recent decades, there has been an increase in information on the psychotherapeutic potential of ayahuasca. Mabit and Sieber (2006) even consider ayahuasca as an accelerator of mental transformation. According to some research, ayahuasca sessions are mainly perceived by the participants as an essential tool for self-discovery (Kavenská, 2013). This occurs through visions, bodily sensations, feelings, thoughts, insights and remembering.

During ayahuasca sessions, we encountered extraordinary psychological experiences, especially with a temporary **reduction of defense mechanisms**. Torres (Mujica, 1997: 33) compares the effects of ayahuasca to dreams, in particular for their potential to “suppress the rational side of patients’ thinking.” Reference is made in some studies, to the fact that ayahuasca reduces levels of rational criticism. It allows the patient to gain access to other psychological levels, more emotional and less conscious.

Reduction of defense mechanisms thus enables **contact with unconscious or other suppressed contents**. The subjects often re-experience emotionally-demanding events from different life stages and have a chance to reintegrate them in the absence of censorship. Confronting face to face with their traumas and unpleasant experiences, they may **release a strong emotional charge** from these contents, which were previously hidden in the deep layers of unconsciousness, by “getting through” repressed emotions (for example, through crying, vomiting, laughter etc.). The subject experiences a feeling of relief, reconciliation and subsequent integration of already-processed material.

Ayahuasca also helps **to disclose broader context** – for example, what effect should unprocessed topics have on the previous life of a patient and on the development of his problems (Giove, 2002; Kavenská, 2013). This understanding happens because the subject can see what his soul is, and can lead an internal dialogue with himself (Ballón, 1999). This authentic experience of “seeing instead of believing” is different from the experience of being confronted with these contents through another person (e.g. psychotherapist).

Furthermore, ayahuasca allows us to observe reality from new points of view and finding original solutions to problems (Mabit & Sieber, 2006; Mabit, 2002; Shannon, 2002; Frecska *et al.*, 2012). From a Jungian perspective, it is possible to say that produced visions are related to patients’ personal and collective unconscious, and they also display aspects of their

shadow (Ojeda, 2002). These shadow aspects are sometimes displayed in the personified symbolic form, e.g. as a struggle with the demon or an aggressive animal.

In addition to these mechanisms, there are also other phenomena which occur during ayahuasca sessions such as knowledge of personal needs, saturation of particular needs, making contact with the body, insight into the situation, corrective experiences of safety, feelings of unity, etc. A frequently observed phenomenon that is paramount from the point of view of patients is a feeling of cleansing at all levels – physical, mental and spiritual.

Ayahuasca sessions are also associated **with the development of patients' spirituality**. The experience of being in contact with the spiritual world, deep spiritual experiences or awareness of the need to develop the spiritual personality happens during sessions (Kavenská, 2013). There are also **extraordinary experiences** of symbolic death and rebirth, which are significant in psychotherapy, because they are subsequently perceived to be significant life milestones (Giove 2002; Villaescusa, 2006).

### Therapeutic Community Takiwasi

The Takiwasi Center represents an example of the organized and structured use of traditional medicinal in psychotherapy. Takiwasi is a therapeutic community for drug addicts, founded in 1992 in the Peruvian city of Tarapoto. The concept of treatment in Takiwasi interconnects two basic principles – traditional medicine of the Amazon (shamanism, curanderismo) and modern psychotherapy. Both paradigms are equivalent, irreplaceable and complementary in the treatment model. During the entire treatment time, they are very closely intertwined. The use of plants in Takiwasi relies not only on the knowledge of the effects of specific plants, but also on the way in which they are administered. It is always associated with strict compliance with the rules that are accompanied by the appropriate rituals.

There are over 50 species of plants used in the Takiwasi treatment (Harrington 2008). They are used continuously for the entire treatment period, although, in each stage, some of them dominate. These plants can be divided into three basic categories:

1. Firstly, plants with purging effects serving primarily to bring about physical detoxification. They also have a psychological and energy cleansing effect.
2. Consciousness-altering ayahuasca, administered during sessions, is used here mainly for the psychotherapeutic purposes.
3. Plants administered during retreats in the jungle, aimed at deep psychological work ("plantas maestras").

Hallucinogenic ayahuasca use in the treatment of drug addiction may seem somewhat controversial to the professional public without deeper insight to the topic. Here, the importance of the context in which the substance is used, should be noted. Dr. Mabit (2007), founder of the Takiwasi Center, with a long-standing clinical experience, speaks of the benefits of using ayahuasca to treat drug addiction:

- The visionary effect of ayahuasca permits access to the realities of the invisible world that are made visible or perceptible and are discovered as active elements in the subconscious of the subject. It can be very helpful for patients with low potential for symbolization, and for whom verbal therapies are less effective.
- There is no loss of consciousness while drinking ayahuasca in sessions so that the patient is at the same time the observer and the observed. He can actively intervene in his internal process and thus return to direct protagonist of his treatment. Arguably, this provides him with a notable improvement in self-esteem and a powerful sense of self-confidence.
- Ayahuasca has acted as a revealer of intimate truths without ever violating the intimacy of one's being. It permits the displacement of the life problems of patients into the scenery of the imaginary, where it re-elaborates the intra-psychic conflicts in another way.
- Ayahuasca is focused directly on the transpersonal and trans-generational psychic matrices.

- It generates cathartic physical and psychological effects concomitantly with a re-equilibrium in the autonomous nervous system and reparative effects at the emotional level.
- Many other positive results can be observed. For instance, in the reduction of anxiety, increase in intellectual ability and concentration, stimulation of dream life, identification of the personal “shadow”, reduction in projective phenomenon, an increase in tolerance for frustration, improvements in self-esteem or facilitation of the process of differentiation or individuation.
- Results of research (e.g. Aedo, 2009; Giove, 2002; Kavenská, 2013) confirm the potential of ayahuasca for treating drug addicts.

### Shamanic Tourism

The number of people who have decided to undergo the experience of traditional medicine of the Amazon “on their own” and travelled alone to the rainforest is rapidly rising in recent years. This phenomenon has grown so much since the 1980’s that it is known among anthropologists as “shamanic tourism” (Dobkin de Rios, 1994).

Many studies (e.g. Owen, 2006; Winkelman, 2007; Fotiou, 2010) pointed out how beneficial such experience can be to the participants. However, the prerequisite is to ensure its safe structure, in particular based on the character of a qualified and responsible curandero. Arguably, this framework cannot be taken lightly. For example, Dobkin de Rios & Rumrill (2008: 88) concluded in their study (interviews with 26 neo-shamans): “Many of these so-called shamans are sociopaths with no experience, individual ability, training or appropriate personality structure for this work.” In practice, some clients end up with mental injury. Owen (2006) also speaks about cases of rape and other psychological or physical abuse of people who visited such “shamans”.

In order to achieve the objective of this research, 77 respondents were selected; out of which 47 were men while 30 were women. 47 respondents were Czechs while the remaining 30 were from other countries in Europe, South America and the USA. Searching for this experience was mainly motivated by a desire for the treatment of (usually long-term) psychological problems, which some people were unable to “cure” in our society. These included deep depression, suicidal tendencies, anxiety and panic states, different types of dependence (including relational), deep emotional traumas or injuries and the need for coping with death of a close relative. Considering the reason to undergo the ayahuasca experience, the second most stated was the need for self-discovery. Frequently, the need for spiritual development or the desire to clarify the direction of one’s life was also mentioned.

Respondents evaluated the experience with ayahuasca as subjectively very significant. In this respect, the greatest benefit was said to be self-knowledge and an overall improvement in relation to oneself (including self-acceptance, love for the other, integration of “inner child”, injury, etc.) has been considered. Furthermore, respondents indicated significant changes at the spiritual and relational levels (improved relations with other people, reconciliation, greater sensitivity and empathy, openness to others, greater compassion, separation from the mother). Considering the treatment of mental health problems, respondents indicated positive changes as well, e.g. the disappearance of depression, anxiety, suicidal thoughts or panic attacks. They also reported the release of long-suppressed emotions, the reliving of unconscious memories, abandoning negative patterns of behavior, addressing specific issues of personal history, the healing of trauma, getting rid of the so-called “inner demons” and fear (of death, the future, etc.), psychic cleansing, a sense of clear mind, relaxation and a feeling of serenity. Respondents also reported that the experience with ayahuasca brought them awareness and subsequent change of values and priorities. They know how better to enjoy their life and feel more “enthusiasm” and energy.

Only one of respondents reported a significantly negative experience (related to the personality of the curandero who led the session). Others reported that they neither had a negative experience nor did they consider it significant.

The respondents stated some less subjective significant issues about their experiences such as loss of confidence in the curandero or session organizer, receiving misleading information or exposure to threatening situations. In other words, they mentioned issues such as the threat of assault by locals, dirt, wetness, cold and discomfort during an ayahuasca sessions. They also complained about the quick end of the session, panic in solitude towards the end of the effects after the session, uncontrolled departures of respondents into the forest during the ceremony, ayahuasca sessions on high cliff, combining ayahuasca and the hallucinogenic San Pedro cactus.

## Conclusions

It is clear that use of traditional medicine of the Amazon by Europeans is mainly limited to the hallucinogenic vine ayahuasca, which provides a high potential for the treatment of mental health problems and for personal growth. However, it is the context of its use which determines whether there is damage to the patient or not. The ayahuasca session might be only a fascinating aesthetic experience or a real journey into the heart of a person, and only in latter case it will be possible to integrate the experience and bring a real positive impact on the life of the individual.

Another factor that might have a significant impact on this experience could be different historical, cultural and social context. People from the West are likely to understand the lasting knowledge of indigenous Amazonian tribes. Some psychological approaches, such as that of C. G. Jung and his followers, consider the language of soul as universal. All the people on this planet, regardless of their origin or geographical location, have access in their deep psychological structure to the space, where all human experience since pre-history is saved. This area, called as the collective unconsciousness by C. G. Jung (Jung, 2009), is common for all of us and we find complex patterns of basic human experience, so-called archetypes, in this place (Jacobi, 2013). Precisely these archetypes allow mutual understanding and inspiration, as they are equally applicable to all of us – whether a native of the Amazon or an inhabitant of a European city. We could deduce on the basis of this that people from different cultures may understand the symbolic language of the traditional medicine of the Amazon.

Images induced by ayahuasca can be interpreted as any other symbolic material, and it is possible to work with them in similar ways as with dreams or imagination. As V. Kastová (2010) stated, all the images that were produced by us show something about ourselves and our immediate situation. They reveal our current understanding of the world and identity, as well as the possibilities of our current relationships. Moreover, every such self-understanding has its therapeutic aspect.

Evidence about the benefits of traditional medicine of the Amazon is particularly clear in clinical practice. Even though there is not much relevant information on factors that contribute to the treatment of patients, so this remains a bit mystery for us. In practice, we have encountered with patients that were cured, who were significantly and positively influenced by this experience. In my opinion, if there is any practice with therapeutic potential that may serve to improve the quality of human life, it would be unethical not to pay proper attention to it.

## Summary

This research focused on the possibilities of applying traditional medicine of the Amazon to psychotherapy. In the first sections, the author defines traditional medicine and describes its main principles. Attention is paid to the hallucinogenic vine ayahuasca, which

is used for the preparation of a tea of the same name. The native tribes have used this tea for millennia, especially for treatment in religious ceremonies. In addition to the description of the chemical composition of ayahuasca and analysis of its traditional forms of application, other results of contemporary research on ayahuasca were presented in this chapter. The author also outlines the possibilities of its psychotherapeutic use and describes the model in detail. Specifically, the author describes how the therapeutic community of Takiwasi, where the plant extract is administered as one of the key pillars of therapy used to treat drug addiction. Furthermore, the issue of shamanic tourism is explained in this chapter, i.e. individual journeys of people from Europe and the USA to the Amazon rainforest for the purpose of undergoing the ayahuasca ritual. Finally, based the study, the motivation of travelers, and the potential benefits and risks of ayahuasca application are discussed in this chapter.

## References

- Aedo, F. N. C. (2009). *Contribución de los estados modificados de conciencia facilitados por la experiencia con ayahuasca en la rehabilitación de drogdependientes de la comunidad terapéutica Takiwasi* [Contribution of the altered stades of consciousness facilitated by the experience with ayahuasca in the drug dependents rehabilitation in the therapeutic community Takiwasi]. Unpublished master's thesis. Universidad de Chile, Santiago, Chile.
- Ballón, G. G. (1999). *Efectos del ayahuasca en el tratamiento de toxicomanías* [Effects of ayahuasca in the drug addiction treatment]. Unpublished thesis. Peru, Lima: Universidad Ricardo Palma.
- Berlanda, N. F. & Viegas, D. R. (2012). *Ayahuasca. Medicina del alma*. [Ayahuasca. Medicine of the soul]. Buenos Aires: Editorial Biblos.
- 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), e42421. doi:10.1371/journal.pone.0042421.
- Bowie, F. (2008). *Antropologie náboženství* [Anthropology of religion]. Prague: Portál.
- Brabec de Mori, B. (2011). Tracing Hallucinations: Contributing to a Critical Ethnohistory of Ayahuasca Usage in the Peruvian Amazon. In: Labate, B. C. & Jungaberle, H. (Eds.) *The Internationalization of Ayahuasca*. LIT Verlag Münster, 23–49.
- Callaway, J. C., Mckenna, D. J., Grob, C. S., Brito, G. S., Raymon, L. P., Poland, R. E., Andrade, E. N., Andrade, E. O. & Mash, D. C. (1999). Pharmacokinetics of hoasca alkaloids in healthy humans. *Journal of Ethnopharmacology*, (65), 243–256.
- Dobkin De Rios, M. (1994). Drug tourism in the Amazon. *Anthropology of Consciousness*, 5(1), 16–19.
- Dobkin De Rios, M. & Rumrill, R. (2008). *A hallucinogen tea, laced with controversy*. London: Praeger Publishers.
- Eliade, M. (1997). *Šamanismus a nejstarší techniky extáze* [Shamanism: Archaic techniques of ecstasy]. Prague: Argo.
- Fotiou, M. (2010). *From medicine men to day trippers: Shamanic tourism in Iquitos, Peru*. USA: University of Wisconsin-Madison. Dissertation.
- Freckska E., Móré C. E., Vargha A. & Luna L. E. (2012). Enhancement of creative expression and entoptic phenomena as after-effects of repeated ayahuasca ceremonies. *Journal of Psychoactive Drugs*. 44 (3), 191–199.
- Furst, P. T. (1996). *Hallucinogeny a kultura* [Hallucinogens and culture]. Prague: DharmaGaia a Mafá.
- Giove, R. (2002). *La liana de los muertos al rescate de la vida* [Vine of dead like redemption of the life]. Tarapoto: Takiwasi.
- Gable, R. S. (2007). Risk assessment of ritual use of oral dimethyltryptamine (DMT) and harmala alkaloids. *Addiction*, 102 (1), 24–34.
- Gómez, P. P. C. (2009). *Medicina tradicional indígena y psicología* [Traditional indigenous medicine and psychology]. In: *Congreso internacional “Medicinas tradicionales, interculturalidad y salud mental”*, Peru, Tarapoto.
- Gonzaga, W. (2009). El uso de ayahuasca en el tratamiento de la dependencia química de pasta base de cocaína (crack) en poblaciones de alto riesgo social [The use of ayahuasca in the treat-

- ment of chemical crack dependence in the areas of high social risk]. In: *Congreso internacional "Medicinas tradicionales, interculturalidad y salud mental"*, Peru, Tarapoto.
- Grob, C. S., Mckenna, D. J., Callaway, J. C., Brito, G. S., Neves, E. S., Oberlender, G., Saide, O. L., Labigalini, E., Tacla, C., Miranda, C. T., Strassman, R. J. & Boone, K. B. (1996). Human pharmacology of hoasca, a plant hallucinogen used in ritual context in Brazil. *The Journal of Nervous and Mental Disease*, (184), 86–94.
- Grof, S. (2009). *Lidské vědomí a tajemství smrti* [Human consciousness and the mystery of death]. Prague: Argo.
- Harrington, N. (2008). *The psychology of plants. An ethnography of patient – provider relationship at the Takiwasi center for rehabilitation*. Unpublished master's thesis. USA: Hampshire College.
- Horák, M. (2013). *Dům, kde se zpívá. Rehabilitace drogově závislých tradiční domorodou medicínou peruánské Amazonie* [The house of song. Rehabilitation of drug addicts by the traditional indigenous medicine of the Peruvian Amazon]. Czech Republic, Brno: Mendel University in Brno, Faculty of Regional Development and International Studies.
- Jacob, M. S. & Presti, D. E. (2005). Endogenous psychoactive tryptamines reconsidered: an anxiolytic role for dimethyltryptamine. *Medical Hypotheses*, (64), 930–937.
- Jacobi, J. (2013). *Psychologie C. G. Junga* [Psychology of C. G. Jung]. Prague: Portál.
- Jung, C. G. (2009). *Výbor díla II.* [Selected works II.]. Brno: Tomáš Janečka Publishers.
- Kastová, V. (2010). *Imaginace jako prostor setkání s nevědomím* [Imagination as a place of meeting with unconsciousness]. Prague: Portál.
- Kavenská, V. (2013). *Tradiční medicína Jižní Ameriky a její využití v psychoterapii* [Traditional medicine of South America and its application in psychotherapy]. Olomouc: UP Publishers.
- Krippner, S. & Sulla, J. (2000). Identifying spiritual content in reports from ayahuasca sessions. *The International Journal of Transpersonal Studies*, (19), 59–76.
- Llamazares, A. M. & Sarasola, C. M. (2003). Principales plantas sagradas de Sudamérica [The principal sacred plants of South America]. In: *Butlletí Informatiu. Revista de Etnopsicologia. Societat d'Etnopsicologia Aplicada i Estudis Cognitius*, (2), 9–22.
- Luke, D. (2011). Discarnate entities and dimethyltryptamine (DMT): Psychopharmacology, phenomenology and ontology. *Journal of the Society for Psychical Research*, (75), 26–42.
- Luna, L. E. (2002). *Vegetalismo. Šamanismus mezi mestickým obyvatelstvem peruánské Amazonie* [Vegetalismo – shamanism among the mestizo population of the Peruvian Amazon]. Prague: DharmaGaia.
- Mabit, J. (1997). El saber médico tradicional y la drogadicción [The knowledge of traditional medicine and the drug addiction]. *Medicinas alternativas*, (6), 30–41.
- Mabit, J. (2002). *Blending traditions: Using indigenous medicinal knowledge to treat drug addiction*. Multidisciplinary Association for Psychedelic Studies, 12 (2), 25–32.
- Mabit, J. (2007). Ayahuasca in the treatment of addictions. In: Winkelman, M. J. & Roberts, T. B. (Eds.). *Psychedelic medicine. New evidence for hallucinogenic substances as treatments*. Vol. 2. Westport: Praeger Publishers.
- Mabit, J. & Sieber, C. (2006). The Evolution of a pilot program utilizing ayahuasca in the treatment of drug addictions. *Shaman's Drum Journal*, (73), 23–31.
- Mckenna, D. J., Towers, G. H. N. & Abbott, F. (1984). Monoamine oxidase inhibitors in South American hallucinogenic plants: Tryptamine and beta-carboline constituents of ayahuasca. *Journal of Ethnopharmacology*, (1), 195–223.
- Mckenna, D. J. (2004). Clinical investigations of the therapeutic potential of ayahuasca: rationale and regulatory challenges. *Pharmacology & Therapeutics*, (102), 111–129.
- Melho, J. A. (2006). *Estudio de los efectos somáticos y psíquicos producidos por la ingesta del berbaje del ayahuasca, realizado en la región Loreto en el período 2004–2006* [The Study of the somatic and psichical effect produced by consumption use of ayahuasca beverage, ritualized in the Loreto region in the period 2006–2006]. Peru, Lima: Universidad de San Martín de Porres. Dissertation.
- Mercante, M. S., n.d. *The possibility of healing depression through ayahuasca sessions*. Unpublished manuscript.
- Mujica, S. B. (1997). *El Centro Takiwasi y el uso terapéutico de plantas psicoactivas* [The Takiwasi center and the therapeutic use of psychoactive plans]. Unpublished master's thesis. Peru, Lima: Universidad de Lima.

- Naranjo, P. (1986). El ayahuasca en la arqueología ecuatoriana [The ayahuasca in Ecuador's archeology]. *América Indígena*, 46(1), 117–127.
- Narby, J. (2006). *Kosmický had* [Cosmic serpent]. Prague: Rybka Publishers.
- Nicholson, S. (Ed.) (1987). *Shamanism: An expanded view of reality*. Wheaton: Quest Books.
- Ojeda, W. J. (2002). *La psicoterapia en el límite de la realidad* [The Psychotherapy in the limits of the reality]. Retrieved March 3, 2011, from [http://www.takiwasi.com/docs/arti\\_esp/psicoterapia\\_limite\\_realidad.pdf](http://www.takiwasi.com/docs/arti_esp/psicoterapia_limite_realidad.pdf).
- Owen, B. J. (2006). *Marketing mysticism and the purchase of pilgrimage: The rise of spiritual tourism in Cusco and Iquitos, Peru*. USA: University of Arizona. Dissertation.
- Riba, J., Rodríguez-Fornells, A., Urbano, G., Morte, A., Antonijoan, R., Monteiro, M. *et al.* (2001). Subjective effect and tolerability of the South American psychoactive beverage ayahuasca in healthy volunteers. *Psychopharmacology*, 154, 85–95.
- Schultes, R. E. & Hofmann, A. (1996). *Rostliny bohů. Jejich posvátná, léčebná a halucinogenní moc* [Plants of the Gods: Their sacred, healing, and hallucinogenic powers]. Prague: Mafá.
- Shanon, B. (2002). *The Antipodes of the mind: Charting the phenomenology of the ayahuasca experience*. Oxford: Oxford University Press.
- Trichter, S., W. (2007) Ayahuasca and spirituality: Empirical research on experiencing the divine. *MAPS*, 17, 23.
- Villaescusa, M. (2006). *Aplicaciones del uso de ayahuasca en la psicoterapia occidental* [Application of the use of ayahuasca to the occidental psychotherapy]. Simposio Cultura y Droga. Colombia: Universidad de Caldas en Manizales.
- Viegas, D. R. (2009). El potencial terapéutico de ayahuasca [The therapeutic potential of ayahuasca]. In: *Congreso internacional “Medicinas tradicionales, interculturalidad y salud mental”*, Peru, Tarapoto.
- Vitebsky, P. (2006). *Los chamanes. El viaje del alma, fuerzas y poderes mágicos, éxtasis y curación* [Shamans. The journey of the soul, power and powerful wizards, extasy and healing]. Evergreen.
- Winkelman, M. J. (2002). Shamanic guidelines for psychedelic medicine. In: Winkelman, M. J. & Roberts, T. B. (Eds.). *Psychedelic medicine. New evidence for hallucinogenic substances as treatments. Vol. 2*. Westport: Praeger Publishers.
- Winkelman, M. (2007). Alternative and traditional medicine approaches for substance abuse programs: a shamanic perspective. *International Journal of Drug Policy*, 12(4), 337–351.