

# The resurrection of psychedelic psychiatry and its role in addiction treatment

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## Abstract

Psychedelic psychiatry, a field which was previously popular in the 1950's to 1970's, has received renewed interest as an increasing number of recent studies have highlighted the potential role of hallucinogens in treating addictions and various mental illnesses. This paper looks at evidence supporting the use of lysergic diethylamide, ibogaine and ayahuasca in addictions treatment and discusses the barriers that limit further exploration of the therapeutic potential of these and other psychedelic substances.

There is a long history to psychedelic psychiatry, a field that developed following the accidental discovery of lysergic acid diethylamide (LSD) in 1938.<sup>1</sup> It has recently received a renewed interest as an increasing number of studies have highlighted the potential role of hallucinogenic substances in treating various psychiatric conditions, including addictions.<sup>2</sup> Despite an initial surge in interest, the use of psychedelics for medical purposes in recent decades has been subject to scrutiny given the rising popularity of recreational hallucinogen use and uncertainties regarding the validity of initial studies.<sup>3</sup> Research was further hindered by unethical applications of these substances in certain scenarios, including administration of hallucinogens to unwitting patients as part of military and intelligence agency related research. The violation of human rights in such circumstances exemplified the potential for hallucinogen use to exacerbate the power differential between physicians and patients.<sup>4</sup> However, new studies are laying the groundwork for future research thereby proving that ethical and scientific study of these substances is not only possible but also promising. By strategically administering the substances with informed consent and in a supervised, controlled environment, researchers have been able to safely elucidate some of the psychological benefits that can be obtained from the controlled ingestion of psychedelics and confirm their valuable therapeutic role.<sup>5</sup>

Most of the initial formal data on the therapeutic effects of psychedelics stem from research conducted between 1950 and 1970.<sup>3</sup> During this time, one of the most extensively studied psychedelics for the purpose of treating addiction was LSD.<sup>6</sup> Dr. Humphry Osmond, a psychiatrist from Saskatchewan, along with other researchers, conducted numerous experiments with LSD and found a promising role for LSD in treating alcohol addiction.<sup>6-10</sup> The effect was speculated to be a result of the drug's unique ability to produce so called "awakenings" or highly spiritual experiences in individuals taking the agent.<sup>6</sup> Unfortunately, negative attitudes towards LSD, in large part fueled by rising popularity in recreational LSD use, led to prohibition of further trials. More recently however, a retrospective meta-analysis of studies conducted during this time showed an overall decrease in relapse rates, significant up to 6 months post-treatment in individuals treated with a single dose of LSD compared to control subjects.<sup>12</sup>

Various plant-derived hallucinogens have been used by cultures around the globe for centuries. Ibogaine, an alkaloid, is an example of one such plant compound that has longstanding traditional use in

several West African tribes.<sup>13</sup> Both clinical and laboratory studies have suggested that this drug has a promising role in the treatment of opioid and other addictions.<sup>13-15</sup> Schenberg *et al.*<sup>16</sup> looked retrospectively at 75 patients treated with ibogaine at an addictions clinic in Brazil. The patients, who abused crack, cocaine, heroin, cannabis, or alcohol, underwent anywhere from one to nine treatment sessions with the alkaloid. Subsequent results showed an overall abstinence rate of 61% at a median follow up of 5.5 months.<sup>16</sup> In addition to formal studies, there are numerous observational and non-experimental accounts similarly corroborating the therapeutic properties of ibogaine.<sup>14</sup>

Ayahuasca is another plant derived psychedelic with renewed research focus. Traditionally consumed as a tea, ayahuasca initially gained interest when it was noted that both recreational and ceremonial use of the drug were associated with lower addiction rates in parts of Brazil<sup>17</sup> and served a fundamental part of several addictions treatment programs in Peru.<sup>18</sup> More locally, ayahuasca has been actively supported by Canadian physician and addictions specialist, Dr. Gabor Maté, who has led numerous therapeutic ayahuasca retreats with members of First Nations communities struggling with addictions issues.<sup>19</sup> These retreats were found to result in statistically significant decreases in cocaine use, as well as improvements in multiple other measures of psychological health and quality of life.<sup>18</sup>

Current strategies for the treatment of addictions report poor success rates, with twelve step programs having minimal effect on alcohol dependence.<sup>20</sup> Harm reduction strategies such as needle exchanges and supervised injection sites, however, have made great strides in improving the morbidity associated with IV drug use.<sup>21</sup> Methadone maintenance programs and naloxone take home kits have similarly made for safer drug use.<sup>22,23</sup> Despite this, the individual and social consequences of drug addiction remain far-reaching. The economic, healthcare and law-enforcement costs of drug addiction have been estimated at \$39.8 billion CAD per year.<sup>24</sup> Furthermore, our current strategies do little to address the root cause of addiction resulting in an undeniable need to develop new strategies for combating drug addiction.

The factors preventing the further exploration of these substances include both political and financial considerations. In both Canada and the United States, regulatory measures remain a significant barrier. The majority of psychedelic substances require exemption under Section 56 of the Controlled Drugs and Substances Act,<sup>25</sup> which historically has been a challenging and lengthy process. This is best demonstrated by past attempts to acquire exemption of ayahuasca use for religious purposes in Canada. In 2001, a request was made by the C eu de Montr al church

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to allow the importation, possession and consumption of Daime tea (another term for ayahuasca) for ceremonial use.<sup>26</sup> The application was deemed low risk and approval was initially recommended by Health Canada six years later. In 2011 however, this request was eventually denied by Federal Health Minister Leona Aglukkaq.<sup>27</sup> At this time, Dr. Maté was also threatened with being reprimanded should he continue his work with ayahuasca in people living with addiction.<sup>28</sup> Likewise, ibogaine has undergone similar challenges when attempts have been made to formally investigate its anti-addictive properties, despite being currently unregulated in Canada. While a study for this purpose was approved in B.C., the process took years and researchers were subjected to limitations in study design which made results difficult to interpret.<sup>29</sup> Similar limitations also apply to LSD, as approval for its study as a therapeutic agent in recent years has largely been restricted to its role in alleviating anxiety in a palliative care setting.<sup>30</sup> There have been no further studies investigating its role in addiction treatment since the studies conducted in the 50's and 60's, presumably as a result of aforementioned difficulties. These strict regulatory measures not only deter the study of psychedelics in general, but also create barriers preventing researchers from obtaining the substances for study.

For researchers that overcome the hurdle of gaining government approval, additional challenges exist with obtaining funding. A large majority of researchers rely on funding from private sources, charitable organizations such as Multidisciplinary Association for Psychedelic Studies, various non-government organizations, or crowd-funding campaigns. It has also been argued that a lack of monetary incentive for studying these drugs is an additional contributing factor, given that they have been shown to be effective in only one or two doses, while other prescription drugs are taken on a long term basis.<sup>14</sup>

The benefits of further research are not limited to the direct therapeutic effects of hallucinogens. Researching these compounds also has the potential to shed light on the biochemical etiology of addiction and other mental health issues.<sup>31</sup> An example of this is the classic hallucinogen 4-iodo-2,5-dimethoxyphenylisopropylamine (DOI).<sup>5</sup> DOI has been found to increase brain derived neurotrophic factor,<sup>32</sup> the levels of which are inversely correlated with alcohol consumption.<sup>33</sup> Studying these substances may also help elucidate the psychological factors at play in addiction, given the nature of the experiences described by those who have used psychedelics. This is supported by several studies that have shown hallucinogenic use to have persisting effects on the brain in terms of beliefs, values and even personality.<sup>6</sup> Research would also allow further insight into their therapeutic role in other mental health issues, as demonstrated by one study that showed reduced rates of mental illness and suicidality associated with psychedelic use<sup>34</sup> and another that found promising results using 3,4-methylenedioxyamphetamine (MDMA) for treatment of post-traumatic stress disorder in combination with psychotherapy.<sup>5</sup>

This is not a proposition that psychedelic substances are a panacea, but rather an argument in support of fully exploring the potential role of psychedelics as adjuncts in the treatment of addictions and other mental illnesses. In doing so we may open the door to new therapies that have the possibility to assist patients in making meaningful and lasting improvements in their psychological health.

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