To Whom It May Concern:

The documents in this packet are intended for criminal justice and sentencing reform advocates who are working to oppose the criminalization of *Salvia divinorum*.

Most states have recently considered – and several have passed – legislation that criminalizes Salvia and relegates it to the illicit market. This trend is certain to continue in 2011, despite the fact that scientific evidence has demonstrated that Salvia has significant medical applications, low risk for addiction or abuse, and no risk of toxic effects or overdose.

It is critical that we work to halt the pattern of knee-jerk prohibition of psychoactive substances whenever a new one gains media attention or becomes popular. Outright prohibition of Salvia wastes scarce taxpayer funds, strains police resources, and deters scientists from studying its medical benefits. Moreover, criminalizing Salvia replaces a legal market that can be strictly and sensibly regulated with an underground economy that empowers black market criminals. The smarter approach is to keep Salvia legal while establishing restrictions to keep it out of the hands of minors.

Thankfully, some states have rejected criminalization and instead established age-control restrictions and other regulations such as marketing, branding and retail display limitations.

The following packet contains:

- A fact sheet about Salvia criminalization and regulatory alternatives
- A report-length issue brief
- Model legislation (Maryland’s House Bill 1145)
- Sample testimony (from Roland Griffiths and Matthew Johnson of Johns Hopkins University)

We look forward to working with you to advocate for regulatory alternatives to criminalization. We encourage you to notify DPA of Salvia legislation in your state so that we can support your efforts.

Sincerely,

Yolande Cadore
Director of Strategic Partnerships
Salvia Divinorum: Establish Restrictions But Don’t Criminalize It

Currently, 22 states have criminalized Salvia divinorum, either by placing it into a Schedule I category or by prohibiting its consumption; several more state legislatures are considering legislation related to Salvia. However, some states have rejected criminalization and instead established age-control restrictions and other regulations such as marketing, branding and retail display limitations. Emerging scientific evidence demonstrates that Salvia has significant potential for medical applications and an extremely low risk for abuse. Outright prohibition of Salvia wastes scarce taxpayer funds, strains police resources, and deters scientists from studying its medical benefits. Moreover, criminalizing Salvia replaces a legal market that can be strictly and sensibly regulated with an underground economy that empowers black market criminals. The smarter approach is to keep Salvia legal while establishing restrictions to keep it out of the hands of minors.

Background

Salvia divinorum is a naturally occurring herb and a member of the Lamiaceae (mint) family. Basil, mint, common sage, rosemary and thyme are close relatives in the plant kingdom. It is one of approximately 1,000 species that make up the Salvia genus. Salvia is native to the Mazatec zone in the Mexican state of Oaxaca, where the Mazatec people have consumed fresh, whole leaves for a variety of therapeutic and religious purposes for centuries. During a trip in Mexico, Harvard researchers first learned about Salvia and introduced the plant to the United States in 1962.

Salvia is most often smoked, but can also be used sublingually or orally (chewed and swallowed), producing effects that last longer but have a slower onset than when smoked. It is most commonly purchased online or at tobacco shops.

Facts

Salvia is not addictive. The scientific literature provides no indication that humans are susceptible to psychological or physiological dependence on or addiction to Salvia. Rather, new research based on animal studies suggests that Salvia may have an “aversive” effect that would limit frequent or long-term use after initial exposure. A growing body of evidence suggests that Salvia may even have the potential to treat drug dependence.

The effects of Salvia are extremely brief compared to other psychoactive drugs. Psychoactive effects typically subside within fifteen minutes. A recently conducted study of internet videos of Salvia users’ experiences found its effects to be short-lived (observable for about eight minutes), prompting the researchers to conclude that “the window of risk [for Salvia] seems much shorter than for most other drugs, including alcohol.”

There are no reported cases of Salvia poisoning or overdose. Research to date has failed to establish acute or chronic toxicity of Salvia in humans. No poisoning injuries or deaths have been reported as a result of Salvia consumption. No toxic effects to any organs or organ systems have resulted from either acute or long-term administration of the substance to animals, even at doses much higher than any human would ingest.

The potential for harm and widespread abuse is low. The National Survey on Drug Use and Health released data on Salvia usage for the first time in 2009, which showed that less than one half of one
percent (0.3 percent) of people aged 12 and older reported past year use of the substance.\textsuperscript{xvi} Salvia’s potential to induce anxiety is limited by its brief duration of effect.\textsuperscript{xvii} Researchers report that Salvia’s psychoactive effects can be interrupted or terminated by speaking to the affected person or introducing other noise stimuli. As researchers note, “the plant’s bitter taste…and its short term effects, combined with exacting cultivation parameters, make it an unlikely candidate for widespread use…neither \textit{Salvia divinorum} nor Salvinorin A have a high potential for abuse.\textsuperscript{xviii}

Most people who try Salvia once choose not to use it again.\textsuperscript{xxix} The psychoactive effects of Salvia are undesirable for most people. People who use the drug report an intensely bitter taste and inconsistent, often unpleasant psychoactive effects.\textsuperscript{xx} Of a large college student sample, less than a quarter (22.6\%) of students surveyed had even heard of Salvia, and a majority of those who had tried it said they would not do so again.\textsuperscript{xxi} Importantly, the survey found, “Prevalence rates plummet when observing lifetime use (6.7\%), to use within the last year (3.0\%), and to use within the last month (0.5\%)…this suggests Salvia has a low continuance rate.”\textsuperscript{xxii} In fact, even the DEA in 2003 concluded that people who used the drug “indicate that they would not use it a second time,” and that “Salvia divinorum most likely will not become widely abused at social events.”\textsuperscript{xxiii}

Scheduling Salvia as a controlled substance will have unintended detrimental consequences. If Salvia were banned outright, young adults could face immediate, devastating and life-long legal barriers to education, employment, voting and government benefits for Salvia-related drug law violations, despite a lack of evidence of harm to themselves or others. The use of scarce government funds to enforce, prosecute and incarcerate people who use Salvia would put a strain on police and criminal justice resources.

What States Can Do: Regulate Salvia

By attempting to prohibit Salvia, lawmakers will miss the opportunity to establish greater control over access to the drug and ensure availability to researchers for continued study. Regulating Salvia, by restricting sale or use by persons under the age of 18, is the more sensible and effective approach.

Establish age-based restrictions. Prohibiting the sale or distribution of Salvia to minors is sensible policy. In 2006, the National Survey on Drug Use and Health determined that 1.8 million Americans had used Salvia in their lifetime. The survey found that Salvia use decreases with age, and that many respondents had already used Salvia by age 18.\textsuperscript{xxiv} Studies have also found that Salvia can be acquired through online retailers, many based in foreign countries, a threat that will not be removed if Salvia is prohibited.\textsuperscript{xxv} Outright criminalization would only drive the demand for the drug to the black market, which provides no age restrictions or other regulatory controls.

The most effective approach to Salvia combines age controls with comprehensive drug education. This approach is working for tobacco, a far more harmful drug that has contributed to more deaths than alcohol and illicit drugs combined.\textsuperscript{xxvi} As a result of education initiatives and age restrictions, tobacco use has declined dramatically over time despite its legality for adults.\textsuperscript{xxvii}

In addition to age controls, states can adopt other commonsense restrictions on Salvia, such as product labeling requirements to protect the health of adult consumers,\textsuperscript{xxviii} as well as marketing, branding and retail display restrictions—all of which are proven to reduce youth access to tobacco products and impulse tobacco purchases among adults.\textsuperscript{xxix}

Several states have rejected the criminalization of Salvia in favor of regulatory restrictions. In 2007, the Maine legislature enacted Legislative Document 66, outlawing the sale of Salvia or Salvinorin A to minors. The proposed legislation initially would have scheduled Salvia, but the Legislature wisely chose to amend the bill to prohibit sales to youth instead. According to the Legislature’s Joint Standing Committee on Criminal Justice and Public Safety, the penalties for sale of Salvia to a minor are modeled on the penalties in Maine’s statutes for tobacco sales to
The California State Assembly recently adopted Assembly Bill 259, which makes the sale or distribution of Salvia to any person under age 18 a misdemeanor, punishable by imprisonment in a county jail for not more than six months, by a fine of no more than $1,000 or both. The author of AB 259, Anthony Adams (R-Hesperia), has stated that the legislation seeks to "apply the same standard to Salvia that we apply to cigarettes."

Like California and Maine, the Maryland Legislature rejected a bill that would have prohibited Salvia, instead unanimously adopting House Bill 1145, which makes sale of Salvia to any person under age 21 a misdemeanor, and possession of Salvia by persons under 21 a civil infraction. Arizona is considering following suit.

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1 States that have placed *Salvia divinorum* and/or Salvinorin A into a Schedule I category: Delaware, Florida, Georgia, Hawaii, Illinois, Kansas, Kentucky, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Virginia; states that otherwise prohibit consumption: Alabama, Louisiana, Minnesota, North Carolina, Tennessee, West Virginia, and Wisconsin.

2 States considering legislation related to *Salvia divinorum* in 2010: Alaska, Arizona, Hawaii, Iowa, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Rhode Island and South Carolina; states that considered legislation related to *Salvia divinorum* in 2009: Connecticut, New Mexico, Texas and Utah.


5 Prisinzano, 527.


14 Babu, 146-148; Prisinzano, 527-531.


17 Gussow, 23.

18 Boire, 8-9.


22 Khey, 302.


24 Substance Abuse and Mental Health Services Administration (SAMHSA). *Use of Specific Hallucinogens.*


Salvia Divinorum: Establish Restrictions But Don’t Criminalize It

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Currently, 22 states have criminalized *Salvia divinorum*, either by placing it into a Schedule I category or by prohibiting its consumption; several more state legislatures are considering legislation related to Salvia. However, some states have rejected criminalization and instead established age-control restrictions and other regulations such as marketing, branding and retail display limitations. Emerging scientific evidence demonstrates that Salvia has significant potential for medical applications and an extremely low risk for abuse. Outright prohibition of Salvia wastes scarce taxpayer funds, strains police resources, and deters scientists from studying its medical benefits. Moreover, criminalizing Salvia replaces a legal market that can be strictly and sensibly regulated with an underground economy that empowers black market criminals. The smarter approach is to keep Salvia legal while establishing restrictions to keep it out of the hands of minors.

**Background**

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Salvia is native to the Mazatec zone in the Mexican state of Oaxaca, where the Mazatec people have consumed fresh, whole leaves for a variety of therapeutic and religious purposes for centuries. During a trip in Mexico, Harvard researchers first learned about Salvia and introduced the plant to the United States in 1962.

Salvia divinorum is most often smoked, but can also be used sublingually or orally (chewed and swallowed), producing effects that last longer but have a slower onset than when smoked. It is most commonly purchased online or at specialty tobacco shops.

The effects of Salvia are extremely brief compared to other psychoactive drugs. Psychoactive effects typically subside within fifteen minutes. A recently conducted study of internet videos of Salvia users’ experiences found its effects to be short-lived (observable for about eight minutes), prompting the researchers to conclude that “the window of risk [for Salvia] seems much shorter than for most other drugs, including alcohol.”

Salvia is currently legal in all but a small handful of countries. Of the 183 nations that are parties to the United Nations Single Convention on Narcotic Drugs, only 13 have banned possession of Salvia.

**Facts**

*Salvia is not addictive.* The scientific literature provides no indication that humans are susceptible to psychological or physiological dependence on or addiction to Salvia. Rather, new research based on animal studies suggests that Salvia may have an “aversive” effect that would limit frequent or long-term use after initial exposure. A growing body of evidence suggests that Salvia may even have the potential to treat drug dependence.

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experiences found its effects to be short-lived (observable for about eight minutes), prompting the researchers to conclude that “the window of risk [for Salvia] seems much shorter than for most other drugs, including alcohol.”

**There are no reported cases of Salvia overdose.** Research to date has failed to establish acute or chronic toxicity of Salvia in humans. No poisoning injuries or deaths have been reported as a result of Salvia consumption. No toxic effects to any organs or organ systems have resulted from either acute or long-term administration of the substance to animals, even at doses much higher than any human would ingest. A review of calls to the California Poison Control Center found that a majority of cases of Salvia exposure occurred in the context of poly-substance use. The authors write, “Concomitant use of multiple psychoactive agents is more likely to result in more serious adverse effects... than Salvia divinorum use alone.”

**The potential for harm and widespread abuse is low.** The National Survey on Drug Use and Health released data on Salvia usage for the first time in 2009, which showed that less than one half of one percent (0.3 percent) of people aged 12 and older reported past year use of the substance. Salvia’s potential to induce anxiety is limited by its brief duration of effect. Researchers report that Salvia’s psychoactive effects can be interrupted or terminated by speaking to the affected person or introducing other noise stimuli. As researchers note, “the plant’s bitter taste…and its short term effects, combined with exacting cultivation parameters, make it an unlikely candidate for widespread use...neither Salvia divinorum nor Salvinorin A have a high potential for abuse.”

Most people who try Salvia once choose not to use it again. The psychoactive effects of Salvia are undesirable for most people. People who use the drug report an intensely bitter taste and inconsistent, often unpleasant psychoactive effects. Of a large college student sample, less than a quarter (22.6%) of students surveyed had even heard of Salvia, and a majority of those who had tried it said they would not do so again. Importantly, the survey found, “Prevalence rates plummet when observing lifetime use (6.7%), to use within the last year (3.0%), and to use within the last month (0.5%)...this suggests Salvia has a low continuance rate.” In fact, even the DEA in 2003 concluded that people who used the drug “indicate that they would not use it a second time,” and that “Salvia divinorum most likely will not become widely abused at social events.”

**Scheduling Salvia as a controlled substance will have unintended detrimental consequences.** If Salvia were banned outright, young adults could face immediate, devastating and life-long legal barriers to education, employment, voting and government benefits for Salvia-related drug law violations, despite a lack of evidence of harm to themselves or others. The use of scarce government funds to enforce, prosecute and incarcerate people who use Salvia would put a strain on police and criminal justice resources.

**Age restrictions and product labeling requirements have proven to be effective.** In addition to age controls, states can adopt other commonsense restrictions on Salvia, such as product labeling requirements to protect the health of adult consumers, as well as marketing, branding and retail display restrictions—all of which are proven to reduce youth access to tobacco products and impulse tobacco purchases among adults.

**The federal government has deferred to the states.** Neither the Drug Enforcement Administration (DEA) nor Congress has taken any action on Salvia. The DEA currently lists Salvia as a “drug of concern,” but has not taken any steps to schedule it. To date, only one piece of legislation (HR 5607, 107th Congress) has ever been filed in Congress to assign Salvia Schedule I status, and it failed to receive a hearing or a vote. Salvia also does not fall under the purview of the Federal Analogue Act of 1986 because it is not chemically similar to any scheduled substance.
Media and Internet Portrayals of Salvia

Salvia was a relatively unknown substance until media reports during the last decade. Despite the low prevalence of Salvia use and the lack of evidence that it is harmful, some media outlets have relied on anecdotes to portray Salvia use as both widespread and dangerous. These inaccurate portrayals have largely sounded a false alarm instead of presenting accurate information that can inform a reasoned debate and sensible regulation.

The spate of media attention directed at Salvia in the last few years can be attributed largely to a tragic and misunderstood story involving the 2006 suicide of 17-year-old Brett Chidester in Delaware. Chidester had acknowledged experimenting with Salvia, and his suicide was linked to it in media reports of his death. Not a single trace of Salvia was detected in Chidester's system after his death, but nevertheless Delaware became one of the first states to classify it as a Schedule I controlled substance. This unfortunate death is the only suicide that is allegedly linked to Salvia, although there is no conclusive proof that Salvia causes suicidal tendencies, and may in fact have the potential to treat depression. Experts believe Delaware's reaction was not warranted: One researcher stated, “It is difficult to argue that one isolated case is sufficient to link Salvia to suicidal thoughts.”

Media coverage of Salvia has also focused on a series of online videos featuring individuals (mainly young adults or youth) documenting their use of the substance. Some state legislators have cited these videos to garner support for prohibition. However, Salvia’s appearance on websites like YouTube and Facebook should not be misunderstood as evidence of widespread use. Salvia use remains very low: the National Survey on Drug Use and Health estimates that in 2006, the most recent year for which data is available, only a fraction of one-percent of people age 12 or older had used Salvia in the past year. By contrast, more than 11 million people age 12 and older reported improperly using prescription drugs, which one in five adolescents report to be the most easily accessible type of drugs and that can lead to fatal overdose.

According to a recent study, “While the popular press has claimed that [Salvia’s] use has become widespread, there have been no epidemiological studies published documenting this within the U.S.” Of a large college student sample, less than a quarter (22.6%) of students surveyed had even heard of Salvia, and a majority of those who had tried it said they would not do so again. Importantly, the survey found, “Prevalence rates plummet when observing lifetime use (6.7%), to use within the last year (3.0%), and to use within the last month (0.5%)…this suggests Salvia has a low continuance rate.” Another survey of college students found “no indication that any student engaged in a particularly risky use of Salvia.”
Prohibition Will Impair Promising Medical Research

The Mazatec culture of Mexico has used Salvia as a remedy for diarrhea, headache, rheumatism and anemia for generations, but scientists only recently began studying its potential medical benefits. Between 1982, when Salvinorin A was first identified, and 2002, the origins and psychoactive properties of the plant were not widely known, and the only available evidence of Salvia’s medical and therapeutic potential was anecdotal.

In 2002, researchers discovered that Salvinorin A binds to kappa opioid receptors in the brain and is chemically and pharmacologically distinct from all other psychoactive substances. In fact, it has been determined that Salvinorin A can have a desired effect as a unique kappa opioid receptor agonist, making it a candidate for the treatment of pain, addiction, depression, eating disorders and even HIV infection. Not only does Salvinorin A have medical potential, but its unique profile has already helped researchers investigate the kappa opioid receptor system itself.

This watershed discovery means that Salvia could be useful in the development of new psychiatric medicines, particularly for the treatment of schizophrenia, Alzheimer’s disease and bipolar disorders. One study remarked that “the discovery of kappa opioid receptor as the molecular target of Salvinorin A has opened up many opportunities for drug discovery and drug development for a number of psychiatric and non-psychiatric disorders.” Another study concluded that “Salvinorin A seems to be the most promising approach to new treatment options for a variety of [Central Nervous System] illnesses.”

Research also suggests that Salvinorin A could be used to treat both opioid and stimulant dependence and to mitigate depression. The case of a woman who relieved multi-year clinical depression with regular oral preparations of Salvia has led researchers to theorize that “research using the active ingredients from Salvia may…lead to methods for the management of depression or of treatment-resistant subtypes of this condition…[Salvia] may be a highly novel agent that has significant research and therapeutic potential in fields such as psychopharmacology, psychiatry and complementary disciplines such as herbal medicine.” A recent animal study found that Salvinorin A not only has antidepressant but also anxiolytic, or anxiety relieving, effects. Animal studies indicate that substances like Salvinorin A that activate kappa opioid receptors may block pain without the addictive effects of opiates. Although the analgesic properties of Salvia have not yet been thoroughly examined, recent studies concluded that Salvinorin A has analgesic efficacy. Furthermore, strong evidence from animal studies shows that Salvinorin A significantly inhibits gastrointestinal hypermotility and could potentially be used in for a range of conditions—from cancer imaging and treatment to the effective treatment of diarrhea and other gastrointestinal disorders.

Salvia’s medicinal benefits extend beyond its main ingredient, Salvinorin A, and its effect on kappa opioid receptors. Researchers have discovered numerous other chemical compounds in the plant that have possible therapeutic applications, as well as other possible molecular targets of therapeutic action, such as the mu- and delta-opioid receptors. Synthetic analogues of Salvinorin A are being investigated, which could lead to new pharmacological treatments. In the words of two researchers: “Opioid agonists based on [Salvinorin A] have the potential to treat pain, cough, diarrhea, stimulant dependence and mood disorders. Antagonists derived from [Salvinorin A] have potential utility in treating a number of conditions, including drug dependence, depression, opioid-induced constipation, and obesity.”

The misguided effort to schedule Salvia comes at a time when a “proliferation of interest in Salvia divinorum” for a range of therapies is emerging. Placing Salvia and Salvinorin A into Schedule I prevents meaningful and effective research into promising treatments for psychological and physiological disorders including Alzheimer’s disease, addiction, depression, schizophrenia, dementia, bipolar disorders and chronic pain. Despite the established medical uses and potentials of Salvia, several state legislatures across the nation are considering legislation to make Salvia and Salvinorin A Schedule I substances, a classification reserved for drugs that have no medical value and a high potential for abuse. Yet, no research evidence supports Schedule I classification. Salvia has little or no potential for abuse, and it has clearly demonstrated potential for medical value. According to researchers, “Data from clinical and pre-clinical studies converge in implicating the plant-derived hallucinogen Salvinorin A as an important pharmacologic tool.”

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Salvia Divinorum:
Establish Restrictions
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Researchers have expressed strong concerns that efforts to criminalize Salvia as a Schedule I substance will “slow or even halt promising research and applications.”

According to Dr. Bryan Roth of the National Institute of Mental Health Psychoactive Drugs Screening Program, one of the nation’s foremost experts on Salvia, criminalizing the substance “will make subsequent studies very difficult…it won’t make them impossible but will make it difficult to obtain for therapeutic research.”

Scientists warn that the scheduling of Salvia in one state will force researchers to “forum shop” among states—moving research to a state where Salvia is not scheduled. Schedule I classification may discourage researchers from investigating Salvia entirely. One researcher added that the criminalization “disincentivizes pharmaceutical companies that might pour millions of dollars into the development of a potential medication for cocaine dependence or Alzheimer’s and other forms of dementia.”

Moreover, some states have criminalized Salvia without permitting any research exemptions at all. What States Can Do: Regulate Salvia

By attempting to prohibit Salvia, lawmakers will miss the opportunity to establish greater control over access to the drug and ensure availability to researchers for continued study. Regulating Salvia, by restricting sale or use by persons under the age of 18, is the more sensible and effective approach.

Establish age-based restrictions. Prohibiting the sale or distribution of Salvia to minors is sensible policy. In 2006, the National Survey on Drug Use and Health determined that 1.8 million Americans had used Salvia in their lifetime. The survey found that Salvia use decreases with age, and that many respondents had already used Salvia by age 18. Studies have also found that Salvia can be acquired through online retailers, many based in foreign countries, a threat that will not be removed if Salvia is prohibited. Outright criminalization would only drive the demand for the drug to the black market, which provides no age restrictions or other regulatory controls.

The most effective approach to Salvia combines age controls with comprehensive drug education. This approach is working for tobacco, a far more harmful drug that has contributed to more deaths than alcohol and illicit drugs combined. As a result of education initiatives and age restrictions, tobacco use has declined dramatically over time despite its legality for adults.

Establishing age controls will limit Salvia use among minors while enabling groundbreaking medical research to proceed. A pharmacologist receiving federal financing to study Salvia’s effects on humans noted that “[w]e have this incredible new compound, the first in its class; it absolutely has potential medical use, and here we’re talking about throttling it because some people get intoxicated on it.”

In addition to age controls, states can adopt other commonsense restrictions on Salvia, such as product labeling requirements to protect the health of adult consumers, as well as marketing, branding and retail display restrictions—all of which are proven to reduce youth access to tobacco products and impulse tobacco purchases among adults.

Several states have rejected the criminalization of Salvia in favor of regulatory restrictions. In 2007, the Maine legislature enacted Legislative Document 66, outlawing the sale of Salvia or Salvinorin A to minors.
The proposed legislation initially would have scheduled Salvia, but the Legislature wisely chose to amend the bill to prohibit sales to youth instead. According to the Legislature’s Joint Standing Committee on Criminal Justice and Public Safety, the penalties for sale of Salvia to a minor are modeled on the penalties in Maine’s statutes for tobacco sales to minors.84

The California State Assembly recently adopted Assembly Bill 259, which makes the sale or distribution of Salvia to any person under age 18 a misdemeanor, punishable by imprisonment in a county jail for not more than six months, by a fine of no more than $1,000 or both.85 The author of AB 259, Anthony Adams (R-Hesperia), has stated that the legislation seeks to "apply the same standard to Salvia that we apply to cigarettes."86

Like California and Maine, the Maryland Legislature rejected a bill that would have prohibited Salvia, instead unanimously adopting House Bill 1145, which makes sale of Salvia to any person under age 21 a misdemeanor, and possession of Salvia by persons under 21 a civil infraction.87 Arizona is considering following suit.88

Conclusion

Scientific evidence demonstrates that Salvia has an extremely low risk for abuse and significant potential for medical applications. Outright criminalization replaces a legal market that can be sensibly regulated with an underground economy that empowers criminal activity and establishes unnecessary restrictions for medical research. Regulating Salvia by establishing age controls will limit access to the drug by minors without inhibiting promising research into its potential medical benefits.

1 States that have placed Salvia divinorum and/or Salvinorin A into a Schedule I category: Delaware, Florida, Georgia, Hawaii, Illinois, Kansas, Kentucky, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Virginia; states that otherwise prohibit consumption: Alabama, Louisiana, Minnesota, North Carolina, Tennessee, West Virginia, and Wisconsin.

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5 Prisinzano, 527.


12 United States, Drug Enforcement Administration, “Drugs and Chemicals of Concern: Salvia divinorum and Salvinorin A.”


Salvia Divinorum:
Establish Restrictions
But Don’t Criminalize It


1 United States, Drug Enforcement Administration, "Information
2 Bryan Lee Miller et al., “Trippin’ on Sally D: Exploring Predictors of
3 O. Hayden Griffin, III, Bryan Lee Miller, and David N.
4 Babu, 146-148; Oliver Grundmann et al., “Salvia divinorum and Salvinorin
5 A: An Update on Pharmacology and Analytical Methodology,” Planta


10 Babu, 146-148; Prisinzano, 527-531.


14 Boire, 8-9.


18 Khey, 302.


Saivla Divinorum: Establish Restrictions
But Don't Criminalize It

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86 Roan, F1.


HOUSE BILL 1145

ENROLLED BILL
— Judiciary/Judicial Proceedings —

Introduced by Delegates Mathias, Cane, Conway, Elmore, and Rudolph, Haddaway, and Eckardt

Read and Examined by Proofreaders:

_______________________________________________
Proofreader.

_______________________________________________
Proofreader.

Sealed with the Great Seal and presented to the Governor, for his approval this

______ day of _____________ at ________________________ o’clock, ______M.

_______________________________________________
Speaker.

CHAPTER _____

1 AN ACT concerning

Criminal Law – Salvinorin A and Salvia Divinorum and Salvinorin A –
Distribution to and Possession by Individual Under 21 Years of Age

FOR the purpose of prohibiting a person from distributing Salvia divinorum or
Salvinorin A to an individual under the age of 21 years; providing that it is a
defense in a certain prosecution that the defendant examined a certain license
or identification that positively identified a certain purchaser or recipient as at
least a certain age; establishing penalties for a certain violation of this Act;
providing that certain separate incidents are separate violations for a certain
purpose; prohibiting an individual under the age of 21 years from possessing
Salvia divinorum or Salvinorin A; establishing that a person who violates this
Act shall be issued a certain citation; authorizing certain individuals to issue
certain citations under certain circumstances; requiring the District Court to
prescribe a certain form of citation; requiring the jurisdiction that issues a

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.
[Brackets] indicate matter deleted from existing law.
Underlining indicates amendments to bill.
Strike out indicates matter stricken from the bill by amendment or deleted from the law by
amendment.
Italics indicate opposite chamber/conference committee amendments.
certain citation to forward a copy of the citation and a request for trial to the
District Court having a certain venue; requiring the District Court to schedule a
certain trial and summon a certain defendant to appear; providing that a willful
failure to respond to a certain summons is contempt of court; establishing that a
violation of a certain provision of this Act is a Code violation and a civil offense;
providing that a minor is subject to certain procedures and dispositions;
providing that an individual who is under the age of 21 years but not a minor is
subject to certain provisions of this Act; establishing that an adjudication of a
certain Code violation is not a criminal conviction for any purpose and does not
impose certain disabilities; establishing certain procedures for a certain Code
violation proceeding; establishing certain penalties for a certain violation of this
Act; prohibiting the Chief Judge of the District Court from establishing a
certain schedule for the prepayment of fines; authorizing a court to direct the
payment of a certain fine be suspended or deferred; establishing that the willful
failure to pay a certain fine is criminal contempt of court; providing that a
certain defendant is liable for certain costs; establishing that a certain
defendant has certain rights to appeal or file certain motions; authorizing the
State's Attorney to prosecute a certain violation in a certain manner;
authorizing a certain intake officer to refer a certain child to a substance abuse
education or rehabilitation program under certain circumstances; requiring a
certain intake officer to forward a certain citation to the State's Attorney if a
certain child fails to comply with a substance abuse education or rehabilitation
program referral; establishing that a violation of a certain provision of this Act
is a violation for certain purposes; authorizing a certain law enforcement officer
to issue a citation to a child for a violation of a certain provision of this Act
under certain circumstances; providing for the application of this Act; requiring
the Attorney General to submit a certain report to certain committees on or before
a certain date; providing that this Act does not preempt certain local or
municipal laws; defining a certain term; making conforming changes; and
generally relating to Salvia divinorum and Salvinorin A.

BY adding to

Article – Criminal Law
Section 10–130 through 10–133 to be under the new part “Part IV. Salvia
Divinorum”
Annotated Code of Maryland
(2002 Volume and 2009 Supplement)

BY repealing and reenacting, with amendments,

Article – Courts and Judicial Proceedings
Section 3–8A–01(dd), 3–8A–10(k), and 3–8A–33(a)
Annotated Code of Maryland
(2006 Replacement Volume and 2009 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF
MARYLAND, That the Laws of Maryland read as follows:
Article – Criminal Law

10–128. Reserved.

10–129. Reserved.

PART IV. SALVIA DIVINORUM.

10–130.

(A) In this part, “SALVIA DIVINORUM” includes SALVINORIN A and any material, compound, mixture, preparation, or product that contains SALVIA DIVINORUM or SALVINORIN A.

(B) Nothing in this part shall prohibit an accredited academic or medical institution or research facility from conducting research on SALVIA DIVINORUM or SALVINORIN A or a derivative of SALVIA DIVINORUM or SALVINORIN A.

(C) This part does not preempt any local or municipal law currently regulating the use, possession, or distribution of SALVIA DIVINORUM or SALVINORIN A.

10–131.

(A) A person may not distribute SALVIA DIVINORUM to an individual under the age of 21 years.

(B) In a prosecution for a violation of this section, it is a defense that the defendant examined the purchaser’s or recipient’s driver’s license or other valid identification issued by an employer, a government unit, or an institution of higher education that positively identified the purchaser or recipient as at least 21 years of age.

(C) A person who violates this section is guilty of a misdemeanor and on conviction is subject to a fine not exceeding:

(1) $300 for a first violation;

(2) $1,000 for a second violation occurring within 2 years after the first violation; and
(3) $3,000 for each subsequent violation occurring within 2 years after the preceding violation.

(D) For purposes of this section, each separate incident at a different time and occasion is a separate violation.

10–132.

An individual under the age of 21 years may not possess Salvia divinorum.

10–133.

(A) A person who violates § 10–132 of this part shall be issued a citation under this section.

(B) A citation for a violation of § 10–132 of this part may be issued by:

(1) A police officer authorized to make arrests; and

(2) in State forestry reservations, State parks, historic monuments, and recreation areas, a forest or park warden under § 5–206(a) of the Natural Resources Article.

(C) A person authorized under this section to issue a citation shall issue a citation if the person has probable cause to believe that the person charged is committing or has committed a violation of § 10–132 of this part.

(D) (1) Subject to paragraph (2) of this subsection, the form of citation issued to an adult for a violation of § 10–132 of this part shall be as prescribed by the District Court and shall be uniform throughout the State.

(2) The citation issued to an adult shall contain:

(i) the name and address of the person charged;

(ii) the statute allegedly violated;

(iii) the location, date, and time that the violation occurred;
(IV) the fine that may be imposed;

(V) a notice stating that prepayment of the fine is not allowed;

(VI) a notice that the District Court shall promptly send to the person charged a summons to appear for trial;

(VII) the signature of the person issuing the citation; and

(VIII) a space for the person charged to sign the citation.

(3) the form of citation issued to a minor shall:

(i) be prescribed by the State Court Administrator;

(ii) be uniform throughout the State; and

(iii) contain the information listed in § 3–8A–33(B) of the Courts Article.

(E) (1) the issuing jurisdiction shall forward a copy of the citation and a request for trial to the District Court in the district having venue.

(2) the District Court shall promptly schedule the case for trial and summon the defendant to appear.

(3) willful failure of the defendant to respond to a summons described in paragraph (2) of this subsection is contempt of court.

(F) (1) for purposes of this section, a violation of § 10–132 of this part is a Code violation and is a civil offense.

(2) a person charged who is under the age of 18 years shall be subject to the procedures and dispositions provided in Title 3, Subtitle 8A of the Courts Article.

(3) a person charged who is at least 18 years old shall be subject to the provisions of this section.
(4) **Adjudication of a Code violation under § 10–132 of this part is not a criminal conviction for any purpose and does not impose any of the civil disabilities ordinarily imposed by a criminal conviction.**

(g) **In any proceeding for a Code violation under § 10–132 of this part:**

(1) **The State has the burden to prove the guilt of the defendant to the same extent as is required by law in the trial of criminal causes;**

(2) **The court shall apply the evidentiary standards as prescribed by law or rule for the trial of criminal causes;**

(3) **The court shall ensure that the defendant has received a copy of the charges against the defendant and that the defendant understands those charges;**

(4) **The defendant is entitled to cross-examine all witnesses who appear against the defendant, to produce evidence or witnesses on behalf of the defendant, or to testify on the defendant’s own behalf, if the defendant chooses to do so;**

(5) **The defendant is entitled to be represented by counsel of the defendant’s choice and at the expense of the defendant; and**

(6) **The defendant may enter a plea of guilty or not guilty, and the verdict of the court in the case shall be:**

(I) **Guilty of a Code violation;**

(II) **Not guilty of a Code violation; or**

(III) **Probation before judgment, imposed by the court in the same manner and to the same extent as is allowed by law in the trial of a criminal case.**

(h) (1) **If the District Court finds that a person has committed a Code violation, the court shall require the person to pay:**
(I) FOR A FIRST VIOLATION, A FINE NOT EXCEEDING $500; 

OR 

(II) FOR A SECOND OR SUBSEQUENT VIOLATION, A FINE NOT EXCEEDING $1,000.

(2) THE CHIEF JUDGE OF THE DISTRICT COURT MAY NOT ESTABLISH A SCHEDULE FOR THE PREPAYMENT OF FINES FOR A VIOLATION UNDER § 10–132 OF THIS PART.

(I) WHEN A DEFENDANT HAS BEEN FOUND GUILTY OF A CODE VIOLATION AND A FINE HAS BEEN IMPOSED BY THE COURT:

(1) THE COURT MAY DIRECT THAT THE PAYMENT OF THE FINE BE SUSPENDED OR DEFERRED UNDER CONDITIONS THAT THE COURT MAY ESTABLISH; AND

(2) IF THE DEFENDANT WILLFULLY FAILS TO PAY THE FINE IMPOSED BY THE COURT, THAT WILLFUL FAILURE MAY BE TREATED AS A CRIMINAL CONTEMPT OF COURT, FOR WHICH THE DEFENDANT MAY BE PUNISHED BY THE COURT AS PROVIDED BY LAW.

(J) (1) THE DEFENDANT IS LIABLE FOR THE COSTS OF THE PROCEEDINGS IN THE DISTRICT COURT AND FOR PAYMENT TO THE CRIMINAL INJURIES COMPENSATION FUND.

(2) THE COURT COSTS IN A CODE VIOLATION CASE UNDER § 10–132 OF THIS PART IN WHICH COSTS ARE IMPOSED ARE $5.

(K) (1) A DEFENDANT WHO HAS BEEN FOUND GUILTY OF A CODE VIOLATION UNDER § 10–132 OF THIS PART HAS THE RIGHT TO APPEAL OR TO FILE A MOTION FOR A NEW TRIAL OR A MOTION FOR A REVISION OF A JUDGMENT PROVIDED BY LAW IN THE TRIAL OF A CRIMINAL CASE.

(2) A MOTION SHALL BE MADE IN THE SAME MANNER AS PROVIDED IN THE TRIAL OF CRIMINAL CASES, AND THE COURT, IN RULING ON THE MOTION, HAS THE SAME AUTHORITY PROVIDED IN THE TRIAL OF CRIMINAL CASES.

(L) (1) THE STATE’S ATTORNEY FOR ANY COUNTY MAY PROSECUTE A CODE VIOLATION UNDER § 10–132 OF THIS PART IN THE SAME MANNER AS PROSECUTION OF A VIOLATION OF THE CRIMINAL LAWS OF THE STATE.
(2) IN A CODE VIOLATION CASE UNDER § 10–132 OF THIS PART, THE STATE’S ATTORNEY MAY:

   (I) ENTER A NOLLE PROSEQUI IN OR PLACE THE CASE ON THE STET DOCKET; AND

   (II) EXERCISE AUTHORITY IN THE SAME MANNER AS PRESCRIBED BY LAW FOR VIOLATION OF THE CRIMINAL LAWS OF THE STATE.

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3–8A–01.

(dd) “Violation” means a violation for which a citation is issued under:

(1) § 10–113, § 10–114, § 10–115, or § 10–116 of the Criminal Law Article;

(2) § 10–108 of the Criminal Law Article; [or]

(3) § 10–132 OF THE CRIMINAL LAW ARTICLE; OR

[(3)] (4) § 26–103 of the Education Article.


(k) (1) If the intake officer receives a citation other than a citation authorized under § 10–108 of the Criminal Law Article, the intake officer may:

   (i) Refer the child to an alcohol OR SUBSTANCE ABUSE education or rehabilitation program;

   (ii) Assign the child to a supervised work program for not more than 20 hours for the first violation and not more than 40 hours for the second or subsequent violation;

   (iii) Require the parent or guardian of the child to withdraw the parent’s or guardian’s consent to the child’s license to drive, and advise the Motor Vehicle Administration of the withdrawal of consent; or

   (iv) Forward the citation to the State’s Attorney.

(2) The intake officer shall forward the citation, other than a citation authorized under § 10–108 of the Criminal Law Article, to the State’s Attorney if:
(i) The parent or guardian of the child refuses to withdraw consent to the child’s license to drive;

(ii) The child fails to comply with an alcohol OR SUBSTANCE ABUSE education or rehabilitation program referral; or

(iii) The child fails to comply with a supervised work program assignment.

3–8A–33.

(a) A law enforcement officer authorized to make arrests shall issue a citation to a child if the officer has probable cause to believe that the child is violating:

(1) § 10–113, § 10–114, § 10–115, or § 10–116 of the Criminal Law Article;

(2) § 10–108 of the Criminal Law Article; [or]

(3) § 10–132 OF THE CRIMINAL LAW ARTICLE; OR

[(3)] (4) § 26–103 of the Education Article.

SECTION 2. AND BE IT FURTHER ENACTED, That, on or before December 1, 2010, the Attorney General shall, in accordance with § 2–1246 of the State Government Article, submit to the Senate Judicial Proceedings Committee and the House Judiciary Committee a report detailing a recommended plan for the regulation of sales of Salvia divinorum and Salvinorin A, including requirements for sellers and the placement of products in stores.

SECTION 2 3. AND BE IT FURTHER ENACTED, That this Act shall take effect June 1, 2010.

Approved:

_____________________________________________ Governor.

_____________________________________________ Speaker of the House of Delegates.

_____________________________________________ President of the Senate.
Scientific Considerations Concerning Saliva Divinorum and Salvinorin A: Implications for Proposed Legislation

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We are psychopharmacology researchers at Johns Hopkins University School of Medicine who conduct clinical pharmacology studies on a variety of drugs of abuse. As described below, research with salvinorin A (the active constituent of Salvia divinorum) has potentially important implications for understanding a variety of disease states, including Alzheimer’s disease, schizophrenia, bipolar disorder, dementia, and drug dependence. We have federal grant funding from the National Institutes on Health (NIH), and Food and Drug Administration (FDA) approval, to study the effects of salvinorin A in a controlled clinical laboratory trial.

We are concerned that recently proposed Maryland House (HB 8) and Senate (SB 9) bills intended to control Salvia divinorum may impede scientifically important academic research at Johns Hopkins and other institutions in Maryland. In addition to providing potentially important information relevant to a variety of disease states, our research will provide scientific information on the potential harms of Salvia divinorum use. It would be unfortunate if legislation designed with the intent of eliminating harm from Salvia divinorum use actually prevented the scientific assessment of its potential harms. The following is a summary of what we believe are the relevant scientific concerns surrounding Salvia divinorum and salvinorin A.

Background

The Salvia divinorum mint plant has been used in traditional spiritual practices by the Mazatec Indians of Oaxaca, Mexico to produce “mystical” or hallucinogenic experiences (Valdes, 1994; Ott, 1995, 1996; Siebert, 1994). Although the indigenous use of salvinorin A dates back hundreds of years, a recognition of the psychoactive effects of salvinorin A by American hallucinogen users dates back only about a decade (Siebert, 1994; Ott, 1995). Although in traditional Mexican use, the leaves of Salvia divinorum were chewed or made into an infusion and swallowed (Valdes, 1994; Siebert, 1994, Ott, 1995), contemporary use commonly involves either smoking or buccal (tincture)
Pharmacology of salvinorin A

Salvinorin A, a neoclerodan diterpene, is a naturally occurring, potent, nonnitrogenous kappa opioid agonist, with no other known activity across 50 other receptors, transporters, and ion channels, including the 5-HT$_{2A}$ serotonin receptor, which is the principal site of activity of classic hallucinogens such as LSD and psilocybin (Roth et al., 2002; Prisinzano, 2005). Recent studies have begun to characterize structure-activity relationships and the molecular mechanisms for salvinorin A binding to the kappa opioid receptor (Chavkin et al., 2004; Yan et al., 2005; Munro et al., 2005). Studies in monkeys show salvinorin A produces discriminative stimulus effects similar to other high efficacy κ agonists (Butelman et al., 2004). A kappa-like profile of antinociceptive and behavioral effects has also been demonstrated in rodents (Fantegrossi et al., 2005; Wang et al., 2005; Zhang et al., 2005; McCurdy et al., 2006; Carlezon et al., 2006).

Addiction potential of salvinorin A

Although self-administration, the hallmark pre-clinical test of abuse liability, has not been studied, salvinorin A was shown to produce several effects different from classic drug reinforcers (e.g., cocaine, heroin, marijuana, methamphetamine): it elevates rather than decreases thresholds for intracranial stimulation (Zhang et al., 2005); it produces conditioned place aversion rather than conditioned place preference (Carlezon et al., 2006), and it decreases rather than increases dopamine levels in the caudate putamen in mice and nucleus accumbens in rats (Zhang et al., 2005; Carlezon et al., 2006). These results suggest the lack of reinforcing or rewarding effects in nonhuman animals. Therefore, salvinorin A does not appear to be a drug that would lead to addiction (compulsive drug seeking).

Given its lack of rewarding effects in behavioral and brain assays in animals, it is likely that use of salvinorin A in humans is motivated by the reported extraordinary sensory and perceptual effects elicited by the drug, rather than classic euphoric drug effects. Supporting this, a recent scientific survey of 500 Salvia divinorum users reported that only 0.6% of users reported every feeling addicted or dependent on the drug (Baggott et al., 2004). The study authors considered this rate of endorsement too low to consider significant. Furthermore, despite the popularization of Salvia divinorum use over the past 5 to 10 years, there are no case reports of addiction to Salvia divinorum in the scientific literature, and Salvia divinorum use has not been reported to be a problem in substance abuse treatment programs. Our research group at the Behavioral Pharmacology Research Unit of Johns Hopkins School of Medicine has treated drug abuse in Baltimore for several decades and has conducted pioneering research on pharmacotherapies for opioid dependence. We are aware of no reports from our treatment program or affiliated treatment programs that have indicated Salvia divinorum to be a drug abuse problem in Baltimore.
Impairment resulting from salvinorin A

Although addiction appears to be of low concern with Salvia divinorum, it is clear that some use of Salvia divinorum can legitimately be considered abuse (i.e. use in a way that risks the well being of the individual or others). For example, Salvia divinorum can lead to substantial motor impairment that could potentially lead to accidents, particularly if the user is in a hazardous environment or situation. It should be noted, however, that there is little evidence that such injuries are occurring because there are no emergency department case reports in the scientific literature suggesting such injuries. This is perhaps due to the extremely short time course of the drug when smoked, allowing little time for such injuries to occur. Users describe effects to be substantially resolved in approximately 5 to 10 minutes.

Although the rate of injuries from use of Salvia divinorum is apparently low, one suicide by a Delaware teenager was claimed by his parents to be due to his intermittent use of saliva divinorum during some period of time before the suicide. Although the incident is certainly tragic and we understand and sympathize with the parents’ efforts to prevent similar tragedies, the attribution of the teen’s suicide to Salvia divinorum is not clear. Although reported ambiguously in many media reports, the earliest news reports made clear that there was no evidence that he was intoxicated on the drug when he committed suicide. In addition, there is an absence of any larger trend from other case reports of Salvia divinorum use that link use to depression or suicide. In fact, one case report in the medical literature describes the case of an adult whose treatment-resistant depression was purportedly alleviated by her self-experimentation with Salvia divinorum (Hanes, 2001). The high rate of suicide among youth (over 4,000 teen and young adult suicides per year in the U.S. alone, Center for Disease Control and Prevention, 2007) contributes further to the uncertainty of attributing the tragic Delaware suicide to Salvia divinorum use. The high publicity that this incident has received, partly due to the understandable anguish expressed by the teenager’s parents, appears to be a prime moving force in the passage of new drug regulations controlling Salvia divinorum. Publicity has also surrounded the cases of a 12 year old Ohio boy who was killed by another child who had unsupervised access to a handgun. Although it is unclear whether the children had been using Salvia divinorum, salvia has been implicated in the case because of earlier use by the shooter. Although tragic, as with the Delaware case, the role of Salvia divinorum in this case appears unclear.

Importance of continued research with salvinorin A

Research with salvinorin A, a selective kappa agonist, has the potential for identifying novel opioid receptor modulators which may have therapeutic applications in the treatment of certain psychiatric disorders (e.g. Alzheimer’s disease, schizophrenia, bipolar disorder, and dementia) (Sheffler and Roth, 2003) and in the treatment of pain. Also, a better understanding of opioid receptor mediated phenomenon may have relevance to treatment of drug dependence, and it has been proposed that research on novel compounds acting on the kappa system including salvinorin A may lead to the development of novel medical treatments for drug dependence (Mello & Negus, 2000; Prisinzano et al., 2005).

Chemists, pharmacologists, and behavioral scientists at several universities across the nation are conducting research with salvinorin A and related analogues that has
important implications for the treatment of Alzheimer’s disease, schizophrenia, bipolar disorder, dementia, pain, and substance dependence. We are now conducting clinical research with salvinorin A which would allow for Johns Hopkins scientists to be among the first in the nation to characterize the clinical effects of salvinorin A in humans. It is our hope that the new state legislation would not inadvertently impose limitations or delays on FDA and Johns Hopkins approved research with salvinorin A.

A potential significant problem with the proposed legislation

A Johns Hopkins government relations liaison has indicated that section 5-304(c) of the Criminal Law provides language about exclusion for research conducted on Schedule I. However, this section ambiguous. Specifically, the section provides an exclusion “…if the authorized provider is registered under federal law to conduct research with a controlled dangerous substance listed in Schedule I and gives evidence of the registration to the Department.” The ambiguity rests on the fact that Salvia divinorum is not listed as a Federal Schedule I substance, and therefore it is not possible for a provider to be registered under federal law to conduct research with Salvia divinorum. DEA grants approval to conduct research with Schedule I substances on a drug-by-drug basis. DEA does not provide “blanket” approval for conducting research with all Schedule I drugs. Thus, although we are approved to conduct research with other DEA Schedule I drugs, we believe the proposed legislation will inadvertently preclude our continued research Salvia divinorum

Legislative options that minimize constraints on academic research

The federal DEA has been conducting a detailed evaluation using well-accepted procedures for determining whether Salvia divinorum should be scheduled. Indeed, the DEA employs a body of scientists from various scientific and medical disciplines specifically for engaging in such evaluations. Therefore, one option is to not schedule Salvia divinorum at the state level, and instead allow the analyses to be conducted by DEA scientists and drug control experts to determine the relative merits of scheduling Salvia divinorum. If Salvia divinorum is to be controlled at the state level, our hope is that a variety of options would be considered that would minimize constraints on academic research. One option would be to only ban the sale of the substance rather than possession. Another would be to ban possession by those under 21 years of age. A final option would be to explicitly exempt legitimate research. However, as stated previously, there is ambiguity over whether this is possible for a drug that is scheduled at the state level but is not scheduled federally.

Summary of considerations relevant to the potential scheduling of Salvia divinorum

While we take no advocacy position on the legal control of Salvia divinorum, our hope is that legislators consider the full scope of available scientific evidence and carefully consider both the advantages and disadvantages of regulatory action. The scientific evidence suggests that addiction to Salvia divinorum is not likely, and in this respect the drug differs from such legally controlled drugs as heroin, cocaine, marijuana, and methamphetamine. Therefore, it is not likely to become a widely popular emerging drug of abuse such as methamphetamine. However, Salvia divinorum use can cause substantial behavioral and motor impairment, and thus its use may potentially lead to
accidents. In this respect, use of Salvia divinorum appears more similar to sniffing glue, inhaling gasoline fumes, or taking high doses of diphenhydramine (Benadryl), than to addictive drugs such as heroin, cocaine, marijuana, and methamphetamine. A potential advantage of regulatory control would be to prevent such abuse and potential accidents. A potential disadvantage is that highly restrictive regulatory control would inevitably constrain scientific advancement because such restrictions decrease access and increase bureaucratic burdens to conducting scientific research with these compounds, which has importance for research on the biology of Alzheimer’s disease, schizophrenia, bipolar disorder, dementia, pain management, and drug dependence. An additional potential disadvantage of regulatory control is that it will further encumber already overburdened drug enforcement efforts, ultimately distracting from the control of scheduled drugs with very clear and substantial public health burdens (e.g., heroin, cocaine).

References


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