

Salvia divinorum – A New Entity in the Psychedelic Scene in India

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ABSTRACT

Salvia divinorum is a psychoactive plant that produces intense hallucinations and is used as a recreational drug increasingly. The Mazatec Indians used it in spiritual healing sessions. The fact that the drug is easily available through the internet and the lack of restrictions on its use in many countries have contributed to its widespread abuse. There have also been reports of drugs being used in India.

Introduction

Salvia divinorum is known for its ability to induce powerful hallucinogenic effects. For hundreds of years, it has played a significant role in the spiritual practices of the Mazatec people in Oaxaca, Mexico, particularly during healing rituals^[1]. Traditionally, people consumed fresh foliage by masticating it as a quid and retaining it in their mouths. The leaves can also be consumed uncooked or converted into water-based solutions. When the leaves are dried, they are used as a substitute for cannabis. Research has shown that neoclerodane diterpenes are the primary active components. While this compound is largely ineffective when ingested orally, it becomes potent at 200–500 µg doses when smoked in a manner akin to a free base. (1) As a result, salvinorin A stands as the first known diterpene with hallucinogenic properties and ranks as the most potent hallucinogen found in nature^[2]. This study examined the usage and chemical properties of *S. divinorum*, a plant belonging to the Labiatae family, also known as the mint family, which is indigenous to southern Mexico.

The plant is colloquially called Sally D, Diviner's Sage, or YouTube. While Jean Basset Johnson first documented this in writing in 1939, it was not until 1990 that a research group headed by Daniel Siebert uncovered its mechanism. *S. divinorum* grows to over a meter tall, featuring square stems, sizable leaves, and white blossoms with violet calyces. As a member of the same family as mint, it is occasionally described as part of the 'mint family.' (Fig. 1)



Fig. 1: Salvia Divinorum

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S. divinorum has become well known and increasingly available, with many businesses selling live salvia plants, dried leaves, extracts, and other preparations on the internet.

Mechanism of Action

Salvinorin A, also referred to as Divinorin A, is the primary active component in *S. divinorum*^[2]. This compound is thought to be a source of the hallucinogenic properties of *S. divinorum*. Salvinorin A lacks nitrogen atoms, unlike typical alkaloids, setting it apart from most known opioid receptor ligands. It holds the distinction of being the first identified diterpene hallucinogen. Salvinorin A interacts with the kappa opiate receptor (KOR) in the brain, a region crucial for human perception regulation^[3]. Although classified as a hallucinogen, *Salvia* differs from other substances in this category, such as LSD or psilocybin, as it does not affect serotonin receptors.

Mode of Intake

In traditional Mazatec ceremonies, shamans exclusively utilize fresh *Salvia divinorum* leaves. Contemporary techniques have been developed to efficiently absorb salvinorin A, the active component of the plant. When a sufficient amount of salvinorin A is absorbed, it induces an altered state of consciousness. The length of the experience depends on the ingestion method and the quantity of salvinorin A absorbed. Dried leaves can be consumed by smoking them in a pipe or by using a water pipe to reduce the smoke temperature. The release of salvinorin from plant material requires a high temperature (approximately 240 °C). Although a less intense flame can function, directly applying a stronger flame, such as that from a torch lighter, is often preferred. Salvinorin A is typically considered ineffective when taken orally, as it is deactivated during digestion in the gastrointestinal tract. The bundle of leaves is retained in the mouth for the maximum possible duration to enhance absorption through the oral mucous membrane, resulting in effects that persist longer than those caused by smoking. Additionally, it is consumed as a liquid extract and is administered beneath the tongue. Often, the extract is mixed with water immediately before use, which may slightly diminish the intensity of its effects and potentially reduce or eliminate the burning sensation in the mouth caused by the alcohol content of the liquid extract.

Effects

The effects of psychedelics can vary from person to person, making them subjective. Although individual accounts exist, there is a limited body of published research summarizing these effects. The immediate impact of psychedelics may include uncontrollable fits of laughter, a sense of melding with or transformation into objects, the perception of existing in multiple places simultaneously, and impaired motor skills. Additionally, users may experience overlapping realities or a distorted sense of their surroundings. Once the primary effects subside, individuals regain their usual sense of self and environmental awareness, although residual sensations may persist. These lingering aftereffects differ significantly from the peak experience. Approximately 50% of users report experiencing a positive ‘afterglow’ following the main effects, characterized by an enhanced mental state. This pleasant aftermath often includes an elevated mood, heightened focus, boosted self-assurance, and increased perception.

Current legal scenario

S. divinorum is not legally prohibited in India. This substance was absent from the list of controlled or restricted substances in the NDPS Act of 1985. However, several countries, including Australia, Belgium, Canada, Denmark, Estonia, Finland, Italy, Japan, the United States, Russia, Spain, and Sweden, have implemented restrictions on this drug^[7].

Conclusion

The increased availability of this drug, coupled with modern online marketplaces, has led to its widespread use. Although not addictive, a substance can significantly impair an individual’s ability to engage in various activities. Therefore, the potential for habitual use cannot be dismissed. Researchers believe that government action should be considered to limit access to this plant, thereby preventing its misuse.

Author contributions

All authors contributed to the study design and conception, drafted the manuscript, and approved the final draft of the manuscript.

Conflict of interest

The authors have no conflicts of interest to declare.

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None.

Ethical Clearance:

Not applicable.

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