

The Bioethical Implications of Psychedelic Drug Development



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Abstract:

Psychedelics are a type of substance that have the potential to greatly alter perception, affect cognitive functions, and potentially cause hallucinations if taken in large enough quantities. Humans have been using psychedelics for thousands of years for a variety of spiritual, cultural, and recreational purposes. Although many societies knew of and used psychedelics, Europeans remained largely ignorant of their existence until the 1900s. In the late 1950s and early 1960s, more people in the west became aware of LSD and psilocybin. The substances became more readily available which allowed more individuals to experience the drug themselves and form their own opinions about the nature of the psychedelics. Hallucinogens became a key part of the 1960s counterculture movement in the United States and were associated with other controversial cultural changes occurring during this time such as the rise of the hippie movement and anti-war sentiment. The federal government began to criminalize the consumption and distribution of psychedelic substances because officials believed that psychedelics and the countercultural movement associated with them as a threat to the establishment and its authority. This had the additional consequence of causing funding for related research to be halted. Much of this research demonstrated that psychedelics may have the potential to provide health benefits to those suffering from mental illnesses such as addiction and depression. The changing culture in the United States may provide an opportunity for a new generation of scientists to resume psychedelic research and potentially discover new, effective ways to treat mental illness.

Criminalization:

In the 1960s, psychedelics had managed to gain traction in the American scientific community due to their promising results as a treatment for various mental illnesses in clinical studies. The government had little issue with the use of these substances in a research context. Officials did, however, worry about the countercultural implications of allowing psychedelics to remain legal. Figures like Timothy Leary at Harvard University sought to distribute psychedelics to the masses and fuel an anti-war and anti-establishment mindset among the population. The Nixon administration desired to put a stop to the movement as a whole and target those who they deemed to be political enemies. They concocted a "war on drugs" to provide a political climate in which they could criminalize a variety of substances, including psychedelics, and target "the antiwar left and black people" (CNN). Nixon's domestic policy chief John Ehrlichman claimed that he hoped to "get the public to associate the hippies with marijuana and blacks with heroin" so that authorities "could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news." Persuading the public to accept the criminalization legislation involved in the war on drugs did not serve as a challenge to the administration due to the public's ignorance and fear of the substance. Anti-drug propaganda had existed for decades prior, and the country's overall conservative attitude allowed for the war on drugs to start with little public resistance. Psychedelics were one of the groups of substances criminalized in this politically motivated campaign. This conveniently silenced a subsection of the counterculture movement and allowed the United States to create a narrative in which Leary could be portrayed as a dangerous criminal. Any medical research that involved psychedelics received cut funding in response to the new federal policy which caused all the studies to die out until there were almost none left. A very select few studies were allowed to quietly continue but they were small and had very little impact on creating a medical future for psychedelics.



Figure 1: Psilocybin Mushrooms

Discussion & Conclusion

Upon interpreting the sources discussed in this project, it has been concluded that allowing scientific research on the effects of psychedelics to continue would be an ethical pursuit. The moral and political arguments made to justify criminalizing these substances were not made with public health and safety as the main concern. Research at the time did not demonstrate any danger that could result from consuming psychedelics in a controlled, clinical environment under the supervision of researchers and doctors. President Nixon's domestic policy chief personally admitted that many drugs, including psychedelics, were criminalized to further unrelated political causes and allow the government to villainize certain groups. While it is impossible to determine at the time of writing whether it is ethical for the FDA to fully approve the treatments that have been studied thus far, there is little danger in continuing to do clinical and laboratory research. Potential unforeseen issues can be resolved quickly with little issue under the watchful eyes of trained professionals. The FDA's strictness and regulations in addition to the rigor and high standards of rigorous repeated testing and documentation within the scientific community will keep the research and development of new therapies ethically in check. The minimal risks associated with continued research are heavily offset by the potential benefits of the creation and approval of novel psychedelic therapies. A variety of common mental illnesses are difficult to treat in many patients and they can have significant effects on daily life. Current treatments and therapies have limited success at reducing symptoms of these conditions and increasing quality of life. Psychedelic research may provide the opportunity for novel and innovative treatments to emerge and improve the lives of millions of Americans.



Figure 2: A poster of the 1936 anti-marijuana propaganda film *Reefer Madness*. This film, like many others made in the United States during the first half of the 20th century, made exaggerated and false claims about the effects of marijuana on the human brain.

Methods:

A variety of sources will be analyzed in order to understand the history of psychedelics and their effects on the human brain. This research will allow for a comprehensive discussion of the potential for medicinal use, risk factors associated with consumption, the reasons why psychedelics were outlawed in the United States, and how cultural and political changes may provide an opportunity for research of psychedelics to resume on a national scale. A variety of angles from a multitude of different disciplines such as biology, political science, and ethics will be used to interpret the scientific and historical data. This project seeks to determine if medicinal psychedelic research and potential human application is an ethical pursuit.

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The Science of Psychedelics

Psychedelics are substances that contain chemicals that are considered hallucinogenic. Two examples, psilocybin and LSD, have their chemical compounds shown below as **Figure 3** and **Figure 4** respectively. They are organic molecules that alter the chemicals of the user's brain after consumption in addition to affecting mood and perception of their environment. The effects of taking LSD and psilocybin can vary based on how they expect their experience will be, past experiences, and how much they consume. It is important to note that any hallucinogenic effects are temporary and both LSD and psilocybin have been proven to not be addictive substances. Additionally, despite being referred to as hallucinogens, they do not always cause hallucinations. Due to their powerful effects and non-addictive nature, psychedelics have caught the attention of neurobiological researchers seeking to find treatments for a variety of mental illnesses. Much of the data is inclusive. Most of the studies that occurred in the 20th century were shut down early for political reasons. Modern research has not been conducted for long enough to draw any definitive conclusions about the effects of psychedelic therapies and treatments. The limited data that is available to the scientific community has shown promise to potentially be more effective at treating certain mental illnesses like depression and alcoholism than traditional therapies and antidepressants.

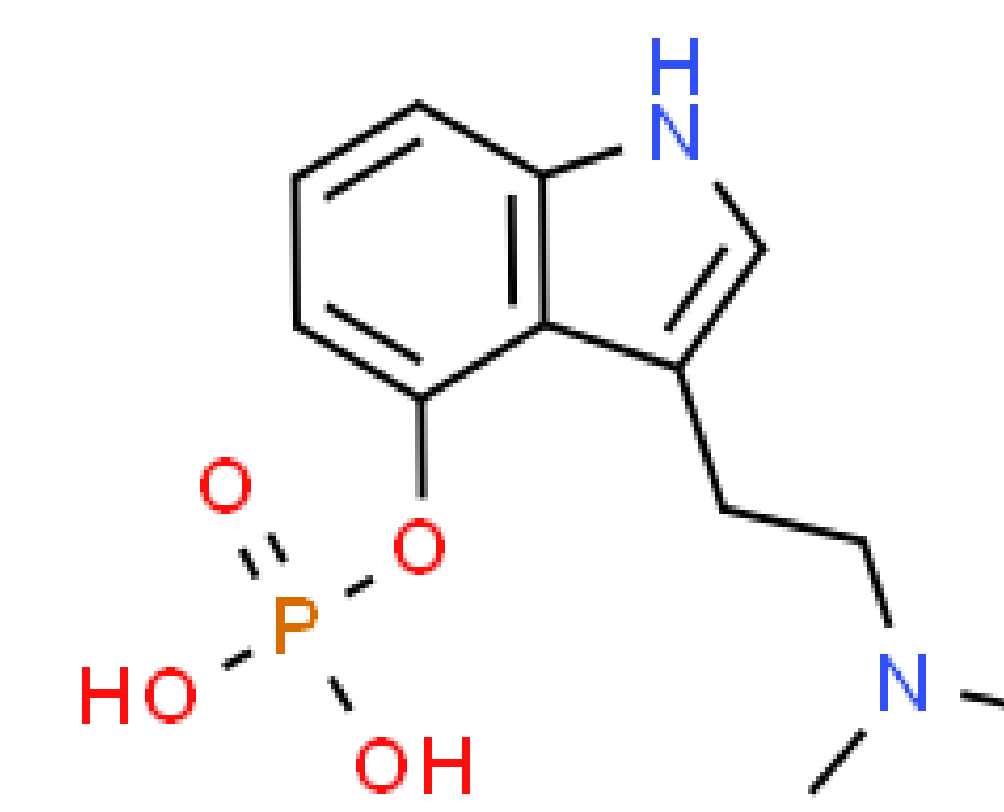


Figure 3: The molecular structure of psilocybin

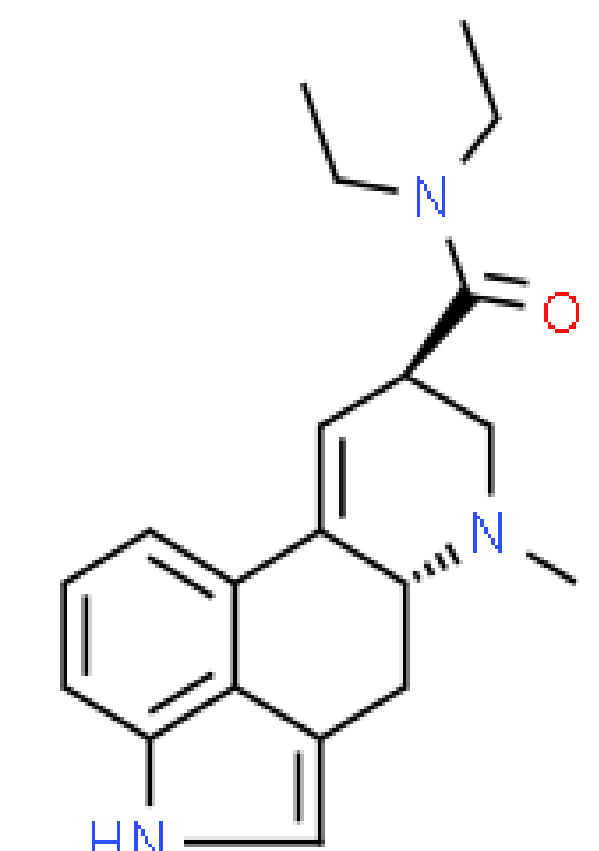


Figure 4: The molecular structure of Lysergic acid diethylamide (LSD)

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