

The Positive Effects of Marijuana on Alzheimer's Disease



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INTRODUCTION

- Today more than 5 million Americans are affected by this irreversible disease that causes memory decline, impaired reasoning and eventually death.
- Currently, there is no cure, however, several therapies using THC have been introduced to help combat the symptoms of the debilitating disease
- We wanted to explore the research that has been done on those that have Alzheimer's disease and see if this therapy method would be effective.
- Based on the chart at the bottom, use of marijuana in the medical setting will increase in coming years, so we'd like to look at the advantages it pose to Alzheimer's patients.

OBJECTIVES

- Determine how marijuana affects the brain of Alzheimer's patients
- Determine how marijuana slows the progression of the disease in patients
- Determine the symptoms of marijuana

METHODS

- Research was found through Google Scholar
- The keywords of Alzheimer's Disease, marijuana and THC were used to find information

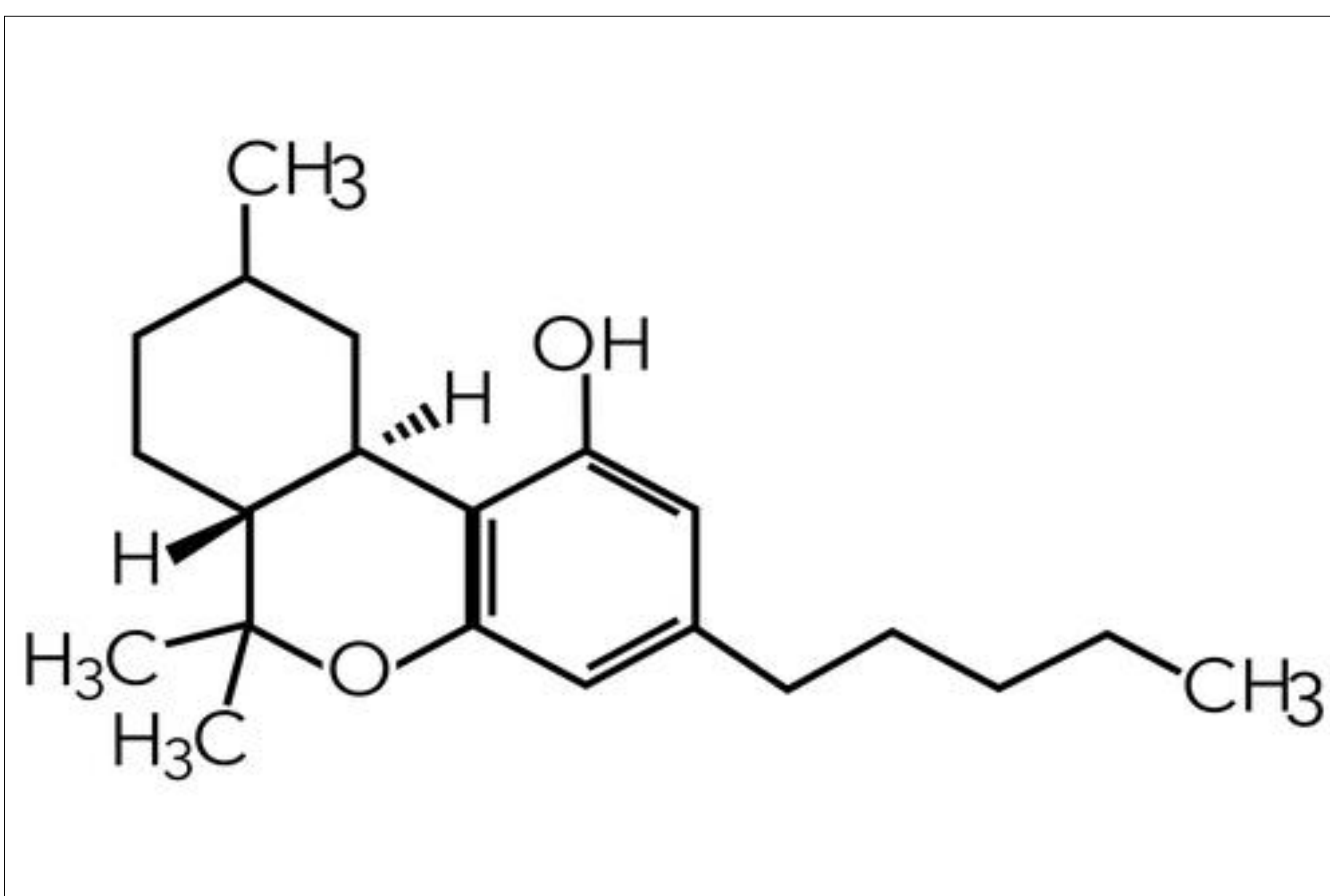


Figure 1. A molecule of THC

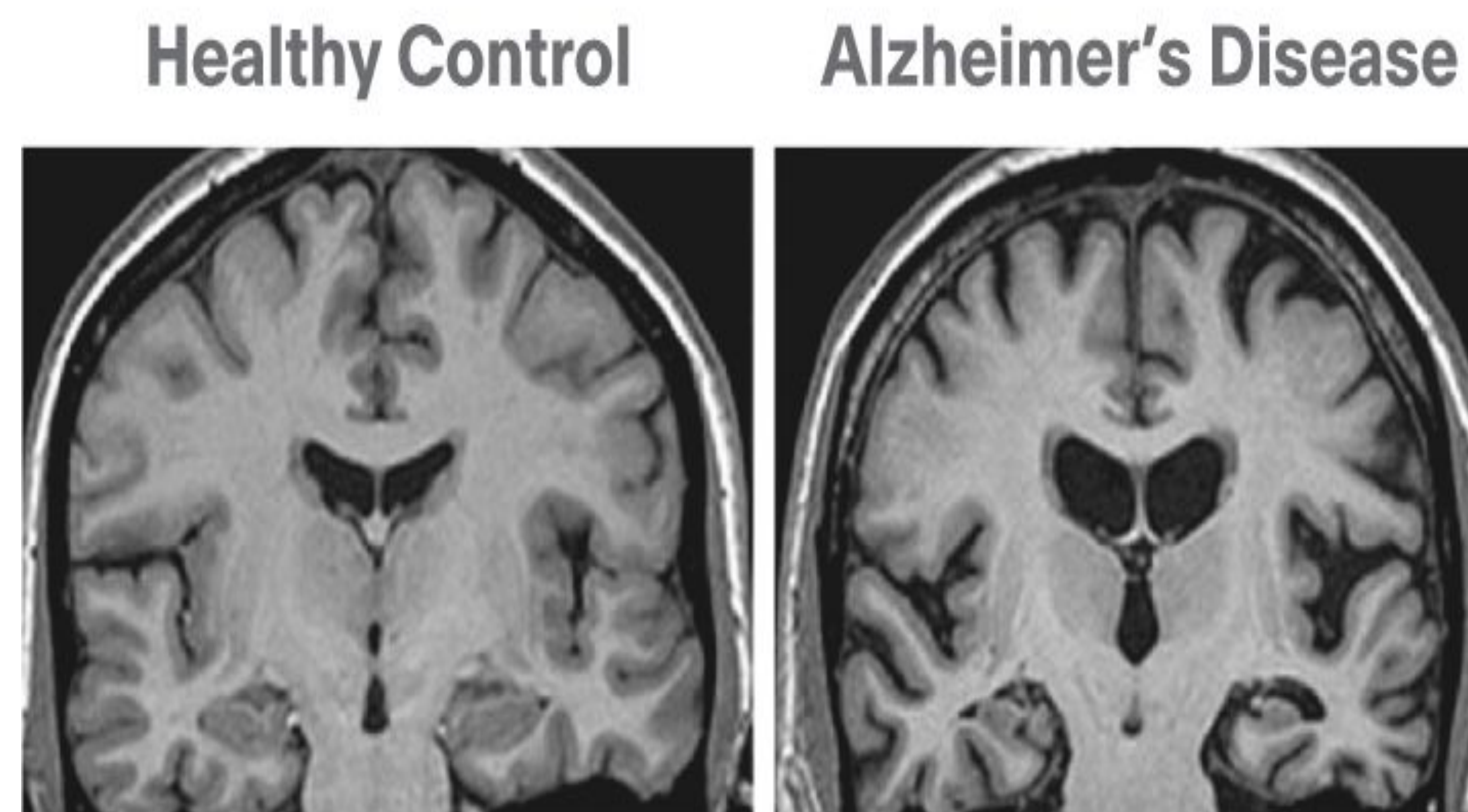


Figure 2. Alzheimer's patient's brain compared to healthy brain

RESULTS

- THC slows the formation of amyloid plaques by blocking the enzyme in the brain that makes them
- THC was shown to inhibit the enzyme acetylcholinesterase (AChE), which is responsible for the degradation of neurotransmitters in the brain, twice more than the approved Alzheimer's drugs .
- Certain cannabinoids produce vasodilation of blood vessels in the brain and increase cerebral blood flow.
- The components of THC showed to help with symptoms of pain and nausea

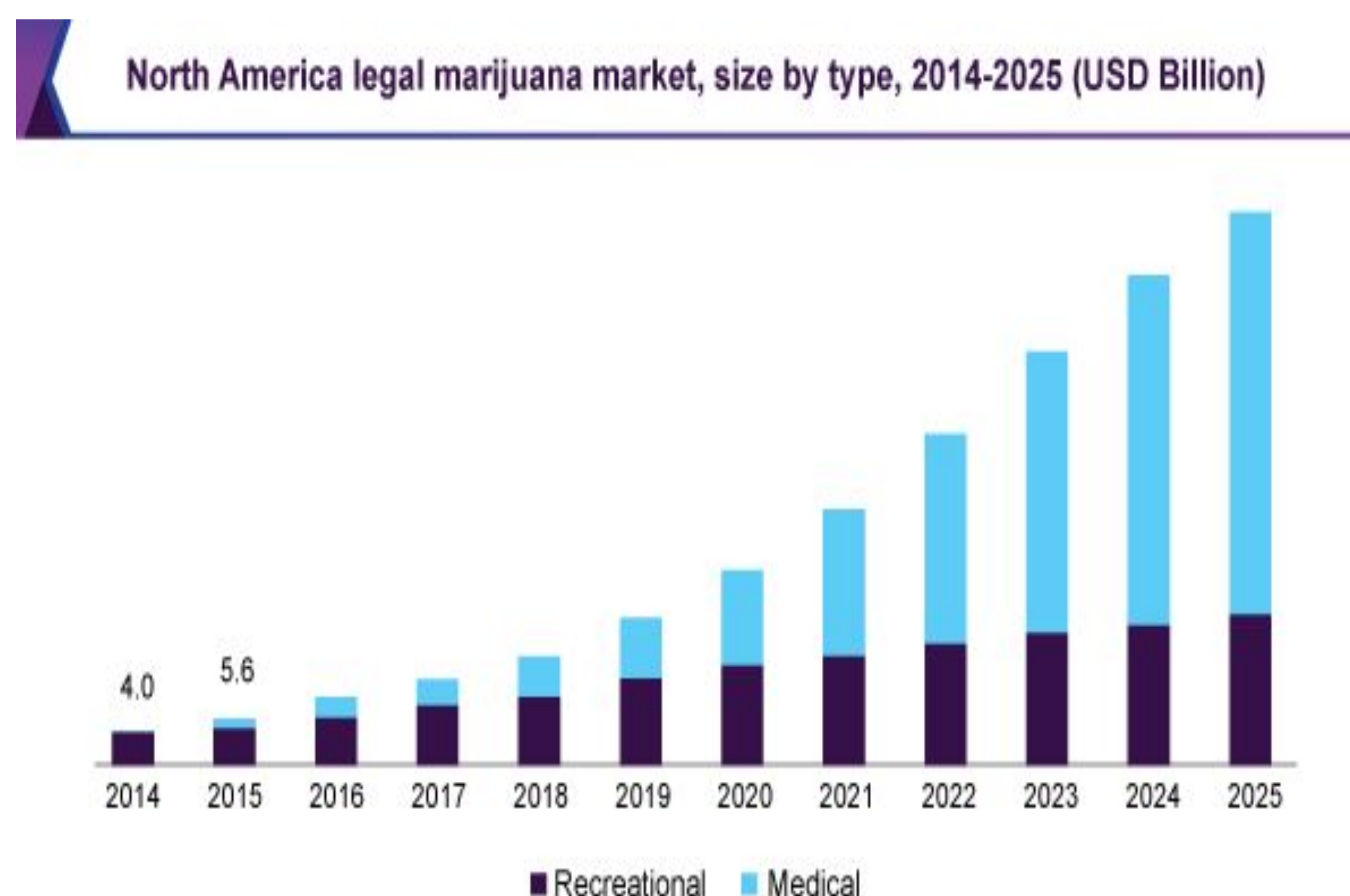


Figure 3. Graph of past and future growth of use of marijuana in medical field

CONCLUSIONS

Based on the evidence in the research, marijuana has shown to be a promising method in treating both the progression, growth and the symptoms of Alzheimer's disease.

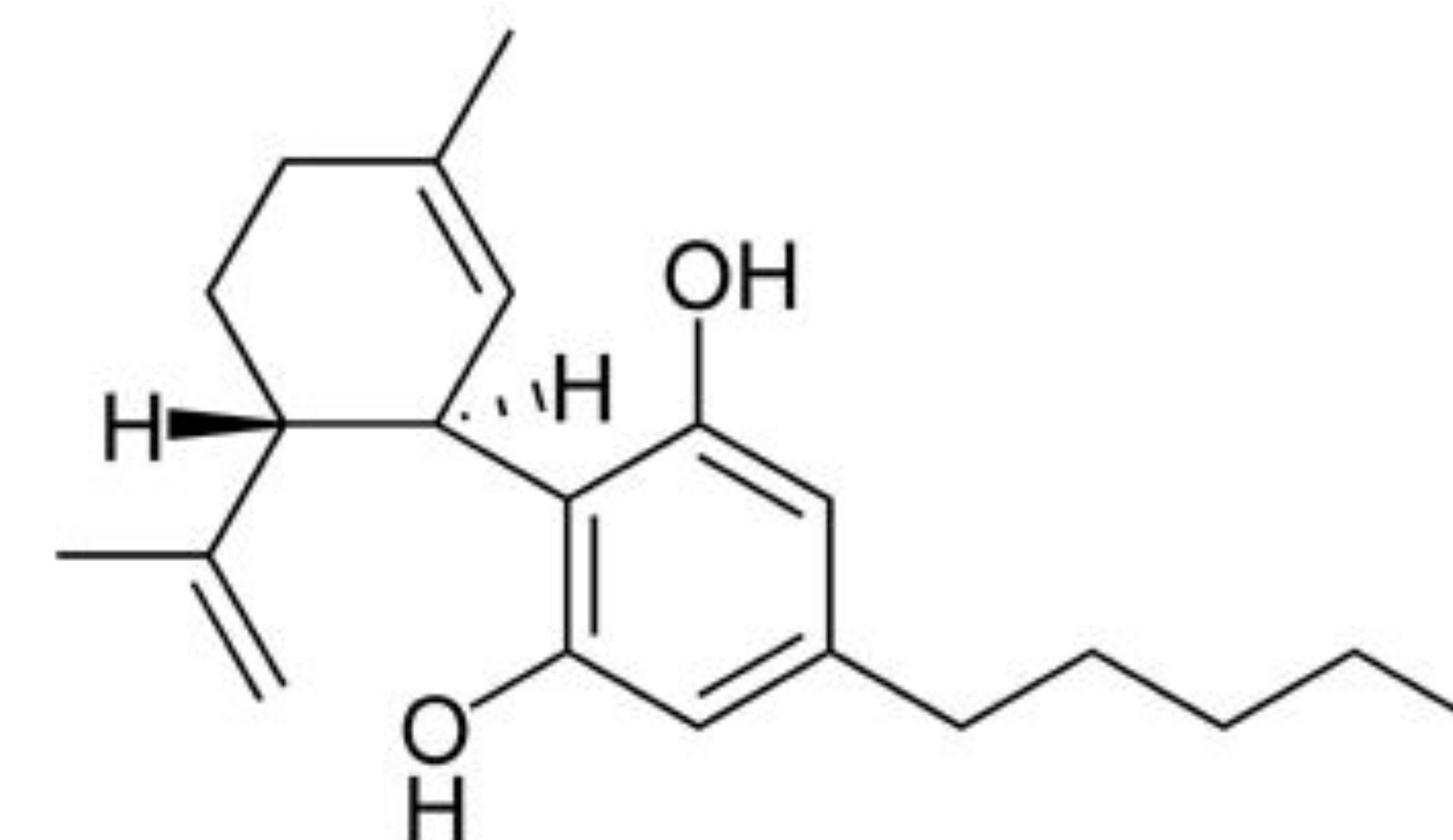


Figure 4. A molecule of CBD

FUTURE WORK

In the future, studies can be conducted to further observe the relationship between marijuana and Alzheimer's in humans. More evidence can be found correlating THC to the improvement of the degenerative disease.

References (Calibri, 40 points, bold)

- J Welsh, K Loria - *Business Insider*, 2014 - academia.edu
"A Molecular Link between the Active Component of Marijuana and Alzheimer's Disease Pathology"
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Acknowledgments (Calibri, 40 points, bold)

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