CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
J1706

Project Title
Ocimum tenuiflorum: Phyto-medicine Extraordinaire

Abstract

Objectives/Goals
When you are sick, you look for medicines or soups and other remedies, but have you ever thought that a plant could cure you? The Ocimum tenuiflorum is a plant that is native to the Indian Subcontinent and has been used in ayurvedic practices for thousands of years. Since my experience supports that Ocimum tenuiflorum has anti-bacterial properties, I wanted to find out if science can also support this long-believed superstition.

Methods/Materials
I tested the anti-bacterial properties of the Ocimum tenuiflorum by observing the changes in the growth rates of bacteria exposed to the plant compared to the growth rates of bacteria that were not exposed to Ocimum tenuiflorum. I grew bacteria in petri dishes and exposed some to Ocimum tenuiflorum; and recorded the differences in their bacteria colony count. I also observed the decline of bacteria growth by exposing Ocimum tenuiflorum to grown bacteria.

Results
Exposure to Ocimum tenuiflorum resulted in slower growth rates of bacteria colonies than of those that were not exposed to the plant in all of the three trials. Despite the source of the bacteria, saliva or phlegm, the dishes exposed to the plant had almost no bacteria growth. The samples that were let to develop bacteria before exposure to Ocimum tenuiflorum had equivalent growth rates with the control samples, until exposure to the plant. The bacteria growth reduced significantly after exposure.

Conclusions/Discussion
Due to its natural derivation and competent outcomes, it has potential to be a part of modern medicine. The data that I gathered clearly proves that Ocimum tenuiflorum should be more widely used to treat bacterial illnesses. It may not replace drugs entirely, but the effects of exposure to Ocimum tenuiflorum incontrovertibly decrease the growth of bacteria.

Summary Statement
Based on the data that I gathered, in which exposure to Ocimum tenuiflorum nearly stopped all growth of bacteria, one can conclude that this plant has potential to be used as a natural alternate solution to treat common bacterial illnesses.

Help Received
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