GMO vs. Non-GMO: Comparing the Addictiveness of Corn in Rats

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GMO vs. Non-GMO: Comparing the Addictiveness of Corn in Rats

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STATEMENT OF THE PROBLEM

Background
• Genetically modified (GMO) corn accounted for approximately 88% of all corn consumed in the United States in 2012. The health and safety implications of GMO corn use remain a controversial topic.¹
• Addictive behavior has been demonstrated in as many as 47% of adults in the United States. The addictive substance could be anything from tobacco and alcohol to gambling, shopping, or sex. Studies have also demonstrated that eating can be an addictive behavior.²

Significance of the Problem
• Studies comparing the addictiveness of GMO corn to non-GMO corn have not been conducted.
• If GMO corn is found to be more addictive than non-GMO corn, the findings will be strongly implicated in the incidence of obesity and its associated pathologies in the United States.

OBJECTIVES

To compare the addictiveness between GMO corn and non-GMO corn in rats.

HYPOTHESES

Null Hypothesis: There is no statistically significant difference between the level of addictiveness between GMO corn and non-GMO corn in rats.

Alternative Hypothesis: GMO corn products are more addictive than non-GMO corn products in rats.

PROJECT TIMELINE

Obtain IUCUC approval (Spring – Summer 2015)
Data Collection (Fall 2015 – Spring 2016)
Data Analysis (Fall 2016)

LIMITATIONS

• We are not identifying the specific chemical components of the corn molecule that lead to any differences in addictiveness.
• We are only assessing GMO corn and not other GMO products to see how addictiveness is affected by genetic modification in those other items.

FUTURE DIRECTIONS

• The purpose of this study is to provide exploratory framework for future dependency studies with GMO products.

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REFERENCES