The Effect of Sexual Frustration on Drosophila Ethanol Consumption

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In the United States there are over 15 million people who struggle with alcohol addiction. This issue has become increasingly large over the years in the United States, especially in Florida where overconsumption of alcohol is common, which is why I chose this project. Drosophila are key model organisms that are used heavily in human biology studies due to many shared genes. In this project the drosophila were exposed to three different conditions to induce different levels of sexual frustration to see how this would affect their ethanol consumption. The results of the experiment showed that the group that consumed the most ethanol was the group that experienced the condition where the drosophila were required to watch a video of other drosophila mating as well as watch a previously mated female that would continuously reject the males. Whereas, the group that consumed the least amount of ethanol was as predicted, the group that did not experience any of the conditions throughout the trial. This project supported my hypothesis that the more sexually frustrated a drosophila becomes, the more ethanol they are likely to consume, which is also the reasoning to why many humans consume alcohol. Therefore, in the future drosophila could also be used to test different treatments and medications to help humans who suffer from the same disorder.

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