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A STATISTICAL INVESTIGATION OF OBESE MICE AND LINK TO DIABETES

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Abstract of Poster: Several studies suggest that obesity increases a person's risk for diabetes, however it is unclear what the cause is for diabetes. This study observes the islets (or insulin-producing cells) in two obese strains of mice, one strain having Type II diabetes also. We hypothesized that the insulin distribution in the diabetic islets is more scattered than the other non-diabetic strain. To determine the distribution of insulin in the islets, we examined the signal to noise ratio calculated by a computer software called Metamorph. According to a 2-sample t-test, we did not find a significant difference between strains. In this test, we cannot conclude that the insulin distribution in islets of obese mice do not differ in diabetic mice. Results had several limitations due to the lack of mice available for the study.