

Request #: 526 - PSY - Dissertation

Effectiveness of LM11A-31 in a Mouse Model of Depression

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Background

We are testing the effectiveness of a drug (LM11A-31) as an antidepressant in a mouse model of depression. We have a transgenic mouse and are testing the effectiveness of the drug in both wildtype and transgenic mice. We have previously shown that there is a difference in their response to a depression-inducing protocol and now we are seeing if the drug has an antidepressant effect. Our protocol is a 5-day forced swim where we measure immobility as our indicator of depression.

Sample

We have collected the preliminary data of how the mice do with no drug. We have a few mice as a pilot showing the effects of the drug but need to do more for statistical significance. I don't know how many mice we'll need, which is one of the things I need help with.

Hypothesis

We think that the drug will be effective in reducing immobility times, especially in the wildtype mice who are more susceptible to the effects of the forced swim. I do want to know if it is better to do fewer days of the swim for a bigger effect.

Progress

We have the pilot data already that looks like there might be a difference in the groups, especially for the first days. We have the original study that shows the effects of the swim without the drug and have already run the statistics on that.

Request

I would like to know if it is better to run the mice for fewer days while the effect of the drug is greater. I also need help knowing what the sample size will need to be.

Timeline

I am hoping to propose the project in the next few months but nothing is scheduled yet. I need to have the sample size and plan before I do the proposal.