FOR OFFICE USE ONLY

DATE RECEIVED: ***10/29/2024*** *DATE APPROVED:* ***10/29/2024***

FILE NUMBER: ***#24-134***

APPLICATION FOR STATISTICAL CONSULTING

LAST NAME**:** Chen FIRST NAME: Xiaoling

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YOUR PRIMARY POSITION AT PURDUE: Staff,Post-doc

Other:

(if a student) MAJOR PROFESSOR LAST NAME: FIRST NAME:

PHONE NUMBER:

MAJOR PROFESSOR CAMPUS ADDRESS (BLDG & DEPT): /

MAJOR PROFESSOR EMAIL:

HOW DID YOU FIND US: Recommendation of a colleague

LIST STATISTICS COURSES TAKEN AND STATISTICAL COMPUTING EXPERIENCE:

STAGE OF RESEARCH: Design (no data collected yet)

IF DESIGN STAGE IS COMPLETE, WAS A STATISTICIAN CONSULTED FOR DESIGN?

PREVIOUS CONSULTANT – INSTITUTION/DEPARTMENT:

ESTIMATED NUMBER OF CONSULTING HOURS NEEDED THIS SEMESTER: <5 hours

EXPECTED COMPLETION DATE OF PROJECT: 11/30/2024

IMPORTANT DEADLINE OR DUE DATES RELATED TO YOUR PROJECT: my k99_resubmit proposal deadline is Nov. 12, 2024

THE RESULTS OF THIS RESEARCH WILL PROBABLY BE PUBLISHED AS:

Grant Proposal

IS THIS RESEARCH SUPPORTED BY A GRANT OR CONTRACT? No

If so, give grant/contract title:

GIVE A BRIEF DESCRIPTION OF YOUR RESEARCH INCLUDING:

PURPOSE:

Deciphering the Role of SCN2A Deficiency in Autism-Associated Impairments Through Advanced Human Brain Organoid Models

DESCRIPTION OF VARIABLES TO BE MEASURED:

Hello,

I aim to resubmit my K99 application. In my reviewer question, it is said insufficient power and data analysis plans. May I get support for having a statistical consultant?

RESEARCH QUESTIONS THAT YOU WANT TO ADDRESS USING STATISTICAL METHODS:

In general, sample size is estimated based on a power analysis with a power of 0.8, an effect size of 0.5, and a significance level of 0.05. The number of biological replicates per experiment is detailed in the Approach sections. Organoid Culture: Experiments will include a minimum of three hiPS cell lines over two to three differentiation processes, incorporating at least two to three organoids or assembloids per batch, to account for variability in neuronal differentiation52,53. Mouse Studies: Mice of both sexes, aged 0-8 months, will be utilized in Aim 3. Should no sex differences be observed, the results will be pooled. Statistical Analysis: The normality test will be performed with GraphPad, and normally distributed data will be further analyzed by Students t-test (for two groups) or ANOVA with Bonferroni, Tukey's, or Dunnett's post hoc tests as appropriate (for three or more groups), and non-normal distribution data will undergo nonparametric analysis (Mann-Whitney U or Kruskal-Wallis with Dunn's post hoc).

STATISTICAL ISSUES:

4. insufficient power and data analysis plans

ADDITIONAL INFORMATION YOU THINK WOULD BE HELPFUL:

ATTACHMENTS:

No Attachment