# Design Guide Summary Report

## Generated with MySampleSize.com for null

Your hypothesis is: *Pharmacological activation of Group II metabotropic glutamate receptors with compound DCG-IV will reduce neuronal cell degeneration measured at 24 hours after experimental TBI in rats.*

You will be testing this hypothesis using the outcome measure *degenerating cells* in units of *number of cells*.

Your hypothesis involves treatment(s) of *drug*, and associated control(s) of *Vehicle (Artificial CSF)*. Other factors in your experiment are *none*. The following table shows the treatments, factors, and their levels.

### Treatments and Factors

| | Name | Levels / Description | Control Type | Control Name |
|---|---|---|---|---|
| Treatment 1 | drug | Setting 1 : 20 fmol DCG-IV<br>Setting 2 : 100 fmol DCG-IV<br>Setting 3 : 500 fmol DCG-IV | Vehicle | Artificial CSF |

### Groups

These are all the groups possible with these treatments and factors.

| Group |
|---|
| (drug: 20 fmol DCG-IV) |
| (drug: 100 fmol DCG-IV) |
| (drug: 500 fmol DCG-IV) |
| (Artificial CSF: Vehicle control) |

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Your inputs result in a **Completely Randomized** design and a **1-Way ANOVA** as your statistical test.

### Statistical Power and Sample Size Calculation Summary

| | |
|---|---|
| Statistical Test: | 1-Way ANOVA |
| Significance Level: | 0.05 |
| Measurement SD: | 125 |
| Absolute Effect Size: | 60 |
| Relative Effect Size (*f*): | 0.48 |
| Total Groups: | 4 |
| Statistical Power: | 0.8 |

**The results of the Sample Size Calculation are**

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**ANOVA Test**

17 Subjects per Group

68 Total Subjects

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**Post hoc Dunnett Test**

92 Subject per Group

368 Total Subjects

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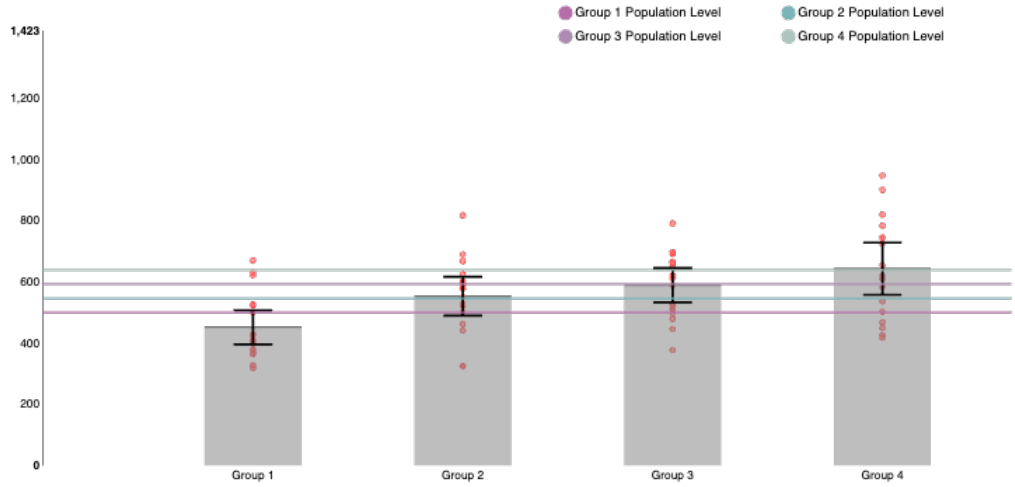
**Post hoc Tukey Test**

102 Subject per Group

408 Total Subjects

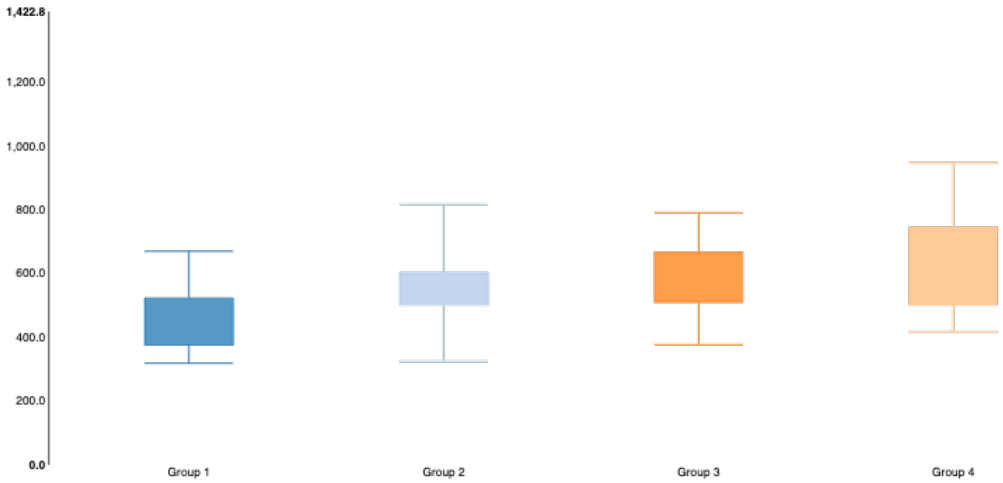
**Simulation Plot 1**

**p-value this sim: 5.426e-4**



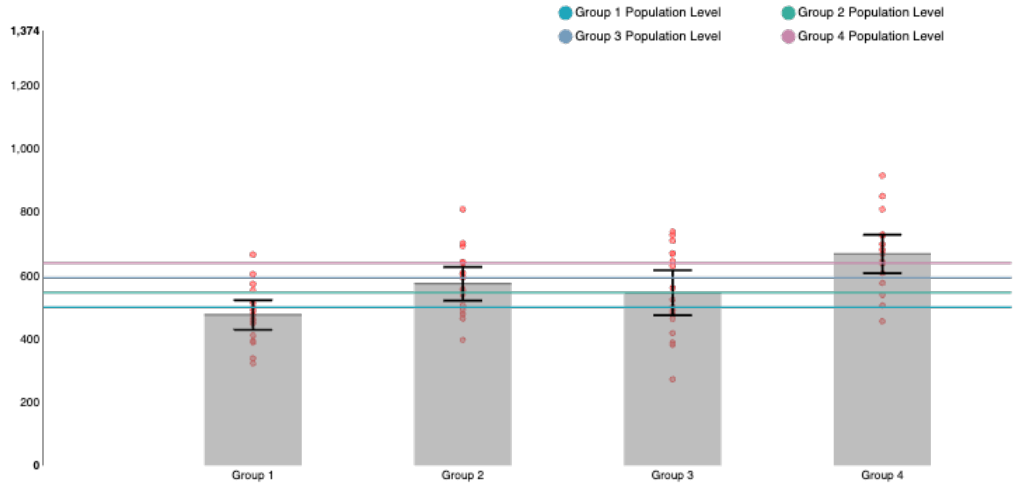

**Simulation Plot 2**

**p-value this sim: 5.426e-4**



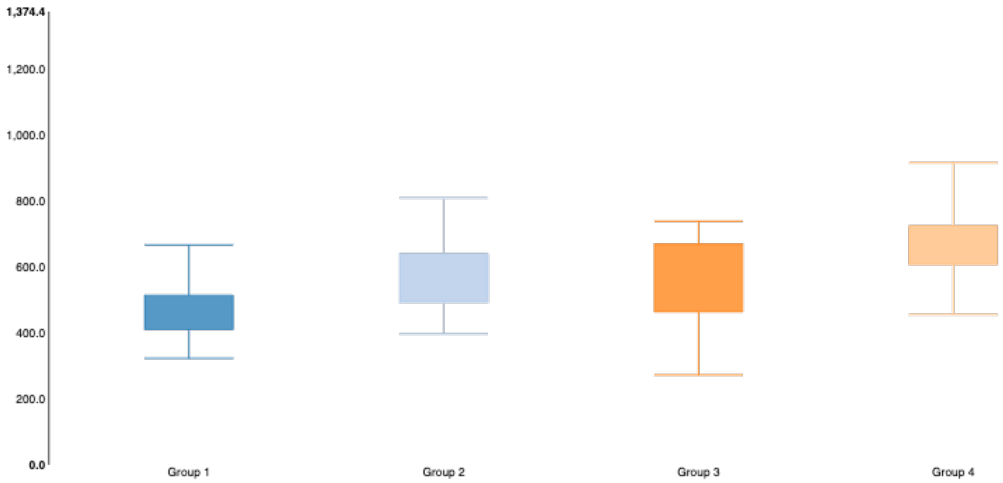
**Simulation Plot 3**

**p-value this sim: 9.815e-5**



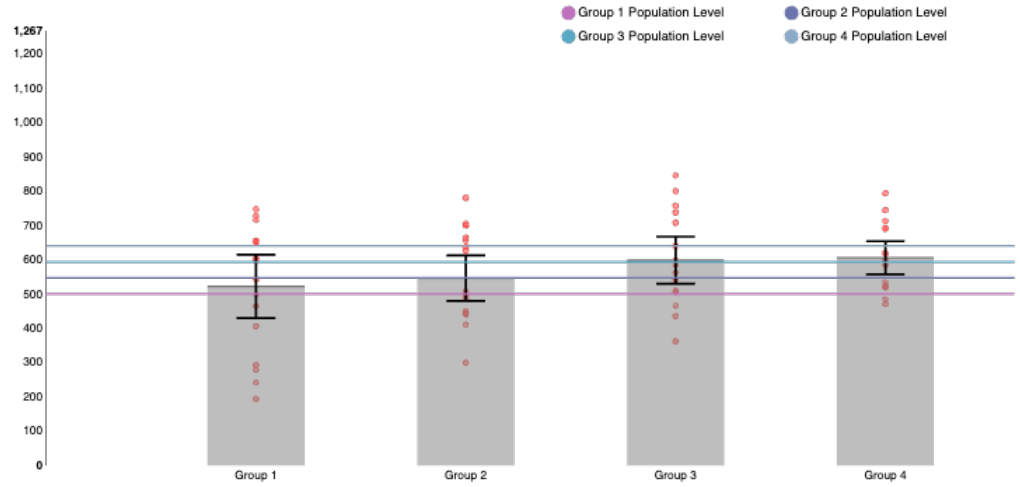

**Simulation Plot 4**

**p-value this sim: 9.815e-5**



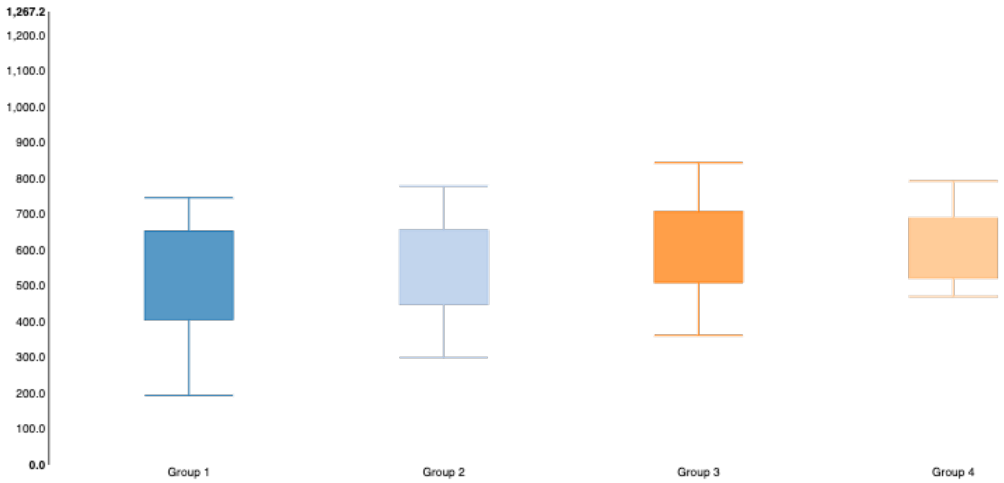
**Simulation Plot 5**

**p-value this sim: 2.295e-1**




**Simulation Plot 6**

**p-value this sim: 2.295e-1**



## Power Plot

**Note: "You are here" point does not show up. We are working on this issue.**