

BDNF statistical analysis details

A) Jonckheere-Terpstra test for dose-response on BDNF levels: placebo < 1.5 mg/kg NFMD < 4.5 mg/kg NFMD

Left hemisphere

Sample count by Group

[1] 18 18 18

Mann-Whitney count by Group

[1] 200.0 241.0 208.5

sum of Mann-Whitney counts = 649.5

expected sum of Mann-Whitney counts = 486

var of sum of Mann-Whitney counts = 3969

J statistic = 2.5952380952381

P-value = 0.00472627064544695

Right hemisphere

Sample count by Group

[1] 18 18 17

Mann-Whitney count by Group

[1] 170.5 204.0 196.0

sum of Mann-Whitney counts = 570.5

expected sum of Mann-Whitney counts = 468

var of sum of Mann-Whitney counts = 3753

J statistic = 1.67314886515417

P-value = 0.0471489969497616

B) Kruskal-Wallis test with Dunn's post hoc test for multiple comparisons for analysis of BDNF levels in individual neflamapimod dose groups versus the vehicle group

Left (non-injured) hemisphere

Kruskal-Wallis test

| | |
|---|-------------|
| P value | 0.0364 |
| Exact or approximate P value? | Approximate |
| P value summary | * |
| Do the medians vary signif. (P < 0.05)? | Yes |
| Number of groups | 3 |
| Kruskal-Wallis statistic | 6.627 |
| Data summary | |
| Number of treatments (columns) | 3 |
| Number of values (total) | 54 |

| Dunn's multiple comparisons test | Mean rank diff. | Significant? | Summary | Adjusted P Value | A-? | |
|----------------------------------|-----------------|--------------|------------|------------------|-----|----------------|
| Vehicle vs. NFMD 1.5 mg/kg | -6.028 | No | ns | 0.5006 | B | NFMD 1.5 mg/kg |
| Vehicle vs. NFMD 4.5 mg/kg | -13.47 | Yes | * | 0.0204 | C | NFMD 4.5 mg/kg |
| Mean | | | | | | |
| Test details | Mean rank 1 | Mean rank 2 | rank diff. | n1 | n2 | Z |
| Vehicle vs. NFMD 1.5 mg/kg | 21.00 | 27.03 | -6.028 | 18 | 18 | 1.150 |
| Vehicle vs. NFMD 4.5 mg/kg | 21.00 | 34.47 | -13.47 | 18 | 18 | 2.569 |

Right (injured) hemisphere

Kruskal-Wallis test

| | |
|---|-------------|
| P value | 0.1937 |
| Exact or approximate P value? | Approximate |
| P value summary | ns |
| Do the medians vary signif. (P < 0.05)? | No |
| Number of groups | 3 |
| Kruskal-Wallis statistic | 3.282 |
| Data summary | |
| Number of treatments (columns) | 3 |
| Number of values (total) | 53 |

| Dunn's multiple comparisons test | Mean rank diff. | Significant? | Summary | Adjusted P Value | A-? | |
|----------------------------------|-----------------|--------------|-----------------|------------------|-----|----------------|
| Vehicle vs. NFMD 1.5 mg/kg | -1.389 | No | ns | >0.9999 | B | NFMD 1.5 mg/kg |
| Vehicle vs. NFMD 4.5 mg/kg | -8.835 | No | ns | 0.1813 | C | NFMD 4.5 mg/kg |
| Mean | | | | | | |
| Test details | Mean rank 1 | Mean rank 2 | Mean rank diff. | n1 | n2 | Z |
| Vehicle vs. NFMD 1.5 mg/kg | 23.69 | 25.08 | -1.389 | 18 | 18 | 0.2699 |
| Vehicle vs. NFMD 4.5 mg/kg | 23.69 | 32.53 | -8.835 | 18 | 17 | 1.692 |