

Experiment Number: **F66268B**

Test Type: **Genetic Toxicology - In Vivo Alkaline Comet Assay**

Route: **Oral Gavage**

Species/Strain: **Rat/Wistar Han IGS**

G01: In Vivo Alkaline Comet Summary Data

Test Compound: **Methylphenidate hydrochloride**

CAS Number: **298-59-9**

Date Report Requested: **02/27/2019**

Time Report Requested: **11:34:50**

NTP Study Number: F66268B

Study Duration: 28 day

Male Study Result: Negative

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Sex: Male; Number of Treatments: 28

| Dose (mg/kg/day) | N | Blood | | N | Brain Frontal Lobe | |
|-------------------------------|---|------------------|----------|---|--------------------|-----------|
| | | Percent Tail DNA | p-Value | | Percent Tail DNA | p-Value |
| Vehicle Control ¹ | 5 | 3.045 ± 0.444 | | 5 | 18.632 ± 2.226 | |
| 2 | 5 | 3.054 ± 0.892 | 1.0000 | 5 | 21.013 ± 2.695 | 0.3876 |
| 10 | 5 | 3.478 ± 0.310 | 0.5886 | 5 | 18.961 ± 1.110 | 0.4587 |
| 25 | 5 | 2.081 ± 0.397 | 1.0000 | 5 | 18.764 ± 2.619 | 0.4876 |
| Trend p-Value | | 0.8092 | | | 0.6350 | |
| Positive Control ² | 5 | 41.094 ± 1.846 | 0.0045 * | 5 | 40.598 ± 1.285 | < 0.001 * |

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| Dose (mg/kg/day) | N | Brain Hippocampus | | N | Brain Striatum | |
|-------------------------------|---|-------------------|-----------|---|------------------|-----------|
| | | Percent Tail DNA | p-Value | | Percent Tail DNA | p-Value |
| Vehicle Control ¹ | 5 | 21.877 ± 2.294 | | 5 | 20.939 ± 1.127 | |
| 2 | 5 | 18.534 ± 2.170 | 0.7776 | 5 | 20.668 ± 1.144 | 0.5821 |
| 10 | 5 | 20.212 ± 2.615 | 0.8540 | 5 | 21.093 ± 1.553 | 0.6700 |
| 25 | 5 | 17.637 ± 0.905 | 0.8805 | 5 | 19.667 ± 0.842 | 0.7057 |
| Trend p-Value | | 0.8534 | | | 0.7842 | |
| Positive Control ² | 5 | 49.713 ± 2.260 | < 0.001 * | 5 | 43.848 ± 2.253 | < 0.001 * |

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Liver

| Dose (mg/kg/day) | N | Percent Tail DNA | p-Value |
|-------------------------------|---|------------------|----------|
| Vehicle Control ¹ | 5 | 25.143 ± 4.460 | |
| 2 | 5 | 29.259 ± 5.044 | 0.2627 |
| 10 | 5 | 28.713 ± 4.569 | 0.3159 |
| 25 | 5 | 30.628 ± 1.700 | 0.2347 |
| Trend p-Value | | 0.2290 | |
| Positive Control ² | 5 | 50.557 ± 7.499 | 0.0098 * |

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LEGEND

CAS Number = Chemical Abstracts Service registry number

N = Number of subjects

Values given as Mean or Mean \pm Standard Error Mean

Pairwise comparison with the control group; values are significant at $P \leq 0.025$ by Williams or Dunn's test

Dose-related trend; significant at $P \leq 0.025$ by linear regression or Jonckheere's test

* Statistically significant pairwise or trend test

1: Vehicle Control: Deionized Water

2: 100 mg/kg/day Ethyl Methanesulfonate

**** END OF REPORT ****