| Behavioral response | Statistics |
| :--- | :--- |
| Before treatment | Genotype effects $3 x T g-A D$ vs. NTg ( $n=46$ ) |

## Corner Test

Vertical activity (latency, s)
Vertical activity ( $n$ )
Horizontal activity ( $n$ )

| $\mathrm{F}_{(1,45)}=5.367$ | $\mathrm{P}<0.01$ | $*$ |
| :--- | :--- | :--- |
| $\mathrm{~F}_{(1,45}=8.110$ | $\mathrm{P}<0.001$ | $* * *$ |
| $\mathrm{~F}_{(1,45)}=25.678$ | $\mathrm{P}<0.001$ | $* * *$ |

## Open field test

Initial freezing (latency, s)
Exit of the center (latency, s)
Entry into the periphery (latency, s)
Vertical activity (latency, s)
Self-grooming (latency, s)
Self-grooming (total $n$ )
Vertical activity (1 min)
Vertical activity ( 2 min )
Vertical activity (3 min)
Vertical activity (4 min)
Vertical activity ( 5 min )
Vertical activity (total $n$ )
Horizontal activity (total distance, cm)
Defecation (total $n$ of episodes)
Urine (total $n$ of episodes)

| $\mathrm{F}_{(1,45)}=0.067$ | $\mathrm{P}=0.977$ |  |
| :--- | :--- | :--- |
| $\mathrm{~F}_{(1,45)}=0.424$ | $\mathrm{P}=0.737$ |  |
| $\mathrm{~F}_{(1,45)}=1.879$ | $\mathrm{P}=0.148$ |  |
| $\mathrm{~F}_{(1,45)}=1.367$ | $\mathrm{P}=0.266$ |  |
| $\mathrm{~F}_{(1,45)}=2.766$ | $\mathrm{P}=0.054$ |  |
| $\mathrm{~F}_{(1,45)}=11.455$ | $\mathrm{P}<0.001$ | $* * *$ |
| $\mathrm{~F}_{(1,45)}=7.917$ | $\mathrm{P}<0.001 \quad * *$ |  |
| $\mathrm{~F}_{(1,45)}=3.526$ | $\mathrm{P}<0.05 \quad *$ |  |
| $\mathrm{~F}_{(1,45)}=4.516$ | $\mathrm{P}<0.01$ | $* *$ |
| $\mathrm{~F}_{(1,45)}=4.774$ | $\mathrm{P}<0.01$ | $* *$ |
| $\mathrm{~F}_{(1,45)}=2.567$ | $\mathrm{P}=0.067$ |  |
| $\mathrm{~F}_{(1,45)}=7.809$ | $\mathrm{P}<0.001 \quad * *$ |  |
| $\mathrm{~F}_{(1,45)}=5.122$ | $\mathrm{P}<0.01 \quad * *$ |  |
| $\mathrm{~F}_{(1,45)}=0.466$ | $\mathrm{P}=0.707$ |  |
| $\mathrm{~F}_{(1,45)}=5.602$ | $\mathrm{P}<0.01 \quad * *$ |  |

## Social Interaction Test

## Social interactions

Body/face (Latency, s)
Body/face (total time, s)
Body/face (total $n$ of episodes)
Vibrating tail (Latency, s)
Vibrating tail (total $n$ of episodes)
Vibrating tail (total time, s)
Ano-genital (Latency, s)
Ano-genital (total number of episodes)
Ano-genital (total time, s)
Aggressiveness (Latency, s)
Aggressiveness (total number of episodes)
Aggressiveness (total time, s)
$F_{(1,45)}=6.348$
$F_{(1,45)}=13.68$
$\mathrm{F}_{(1,45)}=20.58$
$\mathrm{F}_{(1,45)}=19.44$
$\mathrm{F}_{(1,45)}=8.611$
$\mathrm{F}_{(1,45)}=8.536$
$\mathrm{F}_{(1,45)}=2.636$
$\mathrm{F}_{(1,45)}=2.273 \quad \mathrm{P}=0.094$
$\mathrm{F}_{(1,45)}=2.368 \quad \mathrm{P}=0.084$
$\mathrm{F}_{(1,45)}=0.941 \quad \mathrm{P}=0.430$
$\mathrm{F}_{(1,45)}=0.941 \quad \mathrm{P}=0.430$
$\mathrm{F}_{(1,45)}=0.941 \quad \mathrm{P}=0.430$
$\mathrm{F}_{(1,45)}=7.064 \quad \mathrm{P}<0.01$
$\mathrm{F}_{(1,45)}=1.592 \quad \mathrm{P}=0.206$
$\mathrm{F}_{(1,45)}=15.871 \quad \mathrm{P}<0.001$
$\mathrm{F}_{(1,45)}=3.068 \quad \mathrm{P}<0.05$
$\mathrm{F}_{(1,45)}=1.805 \quad \mathrm{P}=0.161$
$\mathrm{F}_{(1,45)}=1.611 \quad \mathrm{P}=0.201$
$\mathrm{F}_{(1,45)}=1.124 \quad \mathrm{P}=0.350$

## T-maze test

Initial movement (latency of freezing, s)
Reach criteria (s)
Complete the test (total time)
$\mathrm{F}_{(1,45)}=0.448$
$F_{(1,45)}=1.145$
$\mathrm{F}_{(1,45)}=0.330$
$\mathrm{P}=0.720$
$\mathrm{P}=0.342$
$\mathrm{P}=0.804$

Defecation (total $n$ of episodes)
Urine (total $n$ of episodes)

## Morris water maze

Day-by-day
Day 1 (Mean latency, s)
Day 2 (Mean latency, s)
Day 3 (Mean latency, s)
Day 4 (Mean latency, s)

Day 5 (Mean latency, s)
Trial-by-trial
PT11 (Latency, s)
PT12 (Latency, s)
PT13 (Latency, s)
PT14 (Latency, s)
PT21 (Latency, s)
PT22 (Latency, s)
PT23 (Latency, s)
PT24 (Latency, s)
PT31 (Latency, s)
PT32 (Latency, s)
PT33 (Latency, s)
PT34 (Latency, s)
PT41 (Latency, s)
PT42 (Latency, s)
PT43 (Latency, s)
PT44 (Latency, s)
PT51 (Latency, s)
PT52 (Latency, s)
PT53 (Latency, s)
PT54 (Latency, s)
Quadrant preference
Platform quadrant ( $n$ of entries) Right quadrant (n of entries)
Opposite quadrant ( $n$ of entries)
Left quadrant ( $n$ of entries)

## Marble interaction test

Intact ( $n$ )
Change of position ( $n$ )
Buried $(n)$

IPGTT
Glucose concentration mg/dl

## Weight (g)

Week 1
Week 6
$\mathrm{F}_{(1,45)}=0.200 \quad \mathrm{P}=0.896$
$\mathrm{F}_{(1,45)}=1.247 \quad \mathrm{P}=0.305$

| $\mathrm{F}_{(1,45)}=1.448$ | $\mathrm{P}=0.242$ |
| :--- | :--- |
| $\mathrm{~F}_{(1,45)}=0.146$ | $\mathrm{P}=0.932$ |
| $\mathrm{~F}_{(1,45)}=2.145$ | $\mathrm{P}=0.109$ |
| $\mathrm{~F}_{(1,45)}=2.019$ | $\mathrm{P}=0.126$ |

$\mathrm{F}_{(1,45)}=1.302 \quad \mathrm{P}=0.287$
$\mathrm{F}_{(1,45)}=2.919 \quad \mathrm{P}<0.05 \quad$ *
$\mathrm{F}_{(1,45)}=2.250 \quad \mathrm{P}=0.096$
$\mathrm{F}_{(1,45)}=0.293 \quad \mathrm{P}=0.830$
$\mathrm{F}_{(1,45)}=0.287 \quad \mathrm{P}=0.835$
$\mathrm{F}_{(1,45)}=1.457 \quad \mathrm{P}=0.240$
$\mathrm{F}_{(1,45)}=0.721 \quad \mathrm{P}=0.545$
$\mathrm{F}_{(1,45)}=1.229 \quad \mathrm{P}=0.311$
$\mathrm{F}_{(1,45)}=0.038 \quad \mathrm{P}=0.990$
$\mathrm{F}_{(1,45)}=0.161 \quad \mathrm{P}=0.922$
$\mathrm{F}_{(1,45)}=0.878 \quad \mathrm{P}=0.460$
$\mathrm{F}_{(1,45)}=3.447 \quad \mathrm{P}<0.05$ *
$\mathrm{F}_{(1,45)}=1.140 \quad \mathrm{P}=0.344$
$\mathrm{F}_{(1,45)}=2.172 \quad \mathrm{P}=0.106$
$\mathrm{F}_{(1,45)}=0.703 \quad \mathrm{P}=0.555$
$\mathrm{F}_{(1,45)}=0.649 \quad \mathrm{P}=0.588$
$\mathrm{F}_{(1,45)}=1.123 \quad \mathrm{P}=0.351$
$\mathrm{F}_{(1,45)}=0.406 \quad \mathrm{P}=0.750$
$\mathrm{F}_{(1,45)}=0.793 \quad \mathrm{P}=0.504$
$\mathrm{F}_{(1,45)}=0.748 \quad \mathrm{P}=0.530$
$\mathrm{F}_{(1,45)}=1.700 \quad \mathrm{P}=0.182$
$\mathrm{F}_{(1,45)}=1.503 \quad \mathrm{P}=0.228$
$\mathrm{F}_{(1,45)}=6.989 \quad \mathrm{P}<0.01 \quad * *$
$\mathrm{F}_{(1,45)}=0.471 \quad \mathrm{P}=0.704$
$\mathrm{F}_{(1,45)}=1.303 \quad \mathrm{P}=0.286$

| $\mathrm{F}_{(1,45)}=2.408$ | $\mathrm{P}=0.079$ |  |
| :--- | :--- | :--- |
| $\mathrm{~F}_{(1,45)}=6.822$ | $\mathrm{P}<0.01$ | $* *$ |
| $\mathrm{~F}_{(1,45)}=3.748$ | $\mathrm{P}<0.05$ | $*$ |

$\mathrm{F}_{(1,45)}=0.452 \quad \mathrm{P}=0.717$
$\mathrm{F}_{(1,45)}=5.803 \quad \mathrm{P}<0.05 \quad$ *
$\mathrm{F}_{(1,45)}=4.126 \quad \mathrm{P}<0.05 \quad *$

