Supplementary Figure 1.



Supplementary Figure 1. D-amphetamine-induced hypermotility is increased in dual-LPS-treated rats versus controls. A) Locomotion, B) Horizontal activity, C) Vertical activity, D) Central Activity, E) Peripheral activity, and F) Corner time. Time 0 represents the baseline of activity prior to injection of D-amphetamine used for area under the curve calculations. N= 10 in each group. AMPH, d-amphetamine.

Supplementary Table 1(for Figure 2)

Behavior performance of dual-saline treated rats and dual-LPS treated rats during the habituation in the open-field test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Measurement  |  | F | DFn, DFd | p |
| Locomotion | Time  | 111 | 11, 418 | **<0.0001** |
|  | Treatment  | 92.78 | 1, 38 | **<0.0001** |
|  | Interaction  | 7.693 | 11, 418 | **<0.0001** |
|  |  |  |  |  |
| Horizontal activity | Time  | 59.19 | 11, 418 | **<0.0001** |
|  | Treatment  | 62.25 | 1, 38 | **<0.0001** |
|  | Interaction  | 2.363 | 11, 418 | **0.0077** |
|  |  |  |  |  |
| Vertical activity | Time  | 34.76 | 11, 418 | **<0.0001** |
|  | Treatment  | 33.45 | 1, 38 | **<0.0001** |
|  | Interaction  | 6.588 | 11, 418 | **<0.0001** |
|  |  |  |  |  |
| Central activity | Time  | 24.37 | 11, 418 | **<0.0001** |
|  | Treatment  | 48.04 | 1, 38 | **<0.0001** |
|  | Interaction  | 2.465 | 11, 418 | **0.0054** |
|  |  |  |  |  |
| Peripheral activity | Time  | 69.35 | 11, 418 | **<0.0001** |
|  | Treatment  | 62.97 | 1, 38 | **<0.0001** |
|  | Interaction  | 1.663 | 11, 418 | 0.0791 |
|  |  |  |  |  |
| Corner time | Time  | 13.81 | 11, 418 | **<0.0001** |
|  | Treatment  | 46.83 | 1, 38 | **<0.0001** |
|  | Interaction  | 2.387 | 11, 418 | **0.0071** |

N = 20 in each treatment group. Bold value refers to statistic significance.

Supplementary Table 2 (for figure 3)

Behavior performance of dual-saline treated rats and dual-LPS treated rats in the d-amphetamine induced locomotor test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Measurement  |  | F | DFn, DFd | p |
| Locomotion | Dual-LPS treatment  | 4.985 | 1, 36 | **0.0319** |
|  | AMPH treatment  | 164.5 | 1, 36 | **<0.0001** |
|  | Interaction  | 3.893 | 1, 36 | 0.0579 |
|  |  |  |  |  |
| Horizontal activity | Dual-LPS treatment  | 13.23 | 1, 36 | **0.0009** |
|  | AMPH treatment  | 257.0 | 1, 36 | **<0.0001** |
|  | Interaction  | 13.12 | 1, 36 | **0.0009** |
|  |  |  |  |  |
| Vertical activity | Dual-LPS treatment  | 1.132 | 1, 36 | 0.2944 |
|  | AMPH treatment  | 50.10 | 1, 36 | **<0.0001** |
|  | Interaction  | 1.383 | 1, 36 | 0.2473 |
|  |  |  |  |  |
| Central activity | Dual-LPS treatment  | 3.178 | 1, 36 | 0.0831 |
|  | AMPH treatment  | 136.1 | 1, 36 | **<0.0001** |
|  | Interaction  | 3.762 | 1, 36 | 0.0603 |
|  |  |  |  |  |
| Peripheral activity | Dual-LPS treatment  | 11.28 | 1, 36 | **0.0019** |
|  | AMPH treatment  | 128.7 | 1, 36 | **<0.0001** |
|  | Interaction  | 10.07 | 1, 36 | **0.0031** |
|  |  |  |  |  |
| Corner time | Dual-LPS treatment  | 17.13 | 1, 36 | **0.0002** |
|  | AMPH treatment  | 194.5 | 1, 36 | **<0.0001** |
|  | Interaction  | 4.861 | 1, 36 | **0.0339** |

N = 10 in each treatment group. Bold value refers to statistic significance.

Supplementary Table 3 (for figure 4)

Behavior performance of dual-saline treated rats and dual-LPS treated rats in the delay fear conditioning test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test  |  | F | DFn, DFd | p |
| Training  | Treatment  | 5.557 | 1, 17 | **0.0307** |
|  | Training phase  | 22.54 | 2, 34 | **< 0.0001** |
|  | Interaction  | 1.647 | 2, 34 | 0.2075 |
|  |  |  |  |  |
| Context  | Treatment  | 0.09646 | 1, 17 | 0.7599 |
|  | Context  | 6.439 | 6, 102 | **< 0.0001** |
|  | Interaction  | 0.7602 | 6, 102 | 0.2075 |
|  |  |  |  |  |
| Cue | Treatment  | 1.090e-008 | 1, 17 | > 0.9999 |
|  | Tone-cue  | 8.169 | 9, 153 | **< 0.0001** |
|  | Interaction  | 1.061 | 9, 153 | 0.3947 |

N = 9 in the SAL + SAL group, N = 10 in the LPS + LPS group. Bold value refers to statistic significance.

Supplementary Table 4 (for figure 6)

Behavior performance of dual-saline treated rats and dual-LPS treated rats in the novel object recognition test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test  |  | F | DFn, DFd | p |
| Training  | Treatment  | 17.17 | 1, 20 | **0.0005** |
|  | Object  | 0.0015 | 1, 20 | 0.9694 |
|  | Interaction  | 0.09628 | 1, 20 | 0.7595 |
|  |  |  |  |  |
| Test  | Treatment  | 0.0126 | 1, 20 | **0.0126** |
|  | Object  | 14.56 | 1, 20 | **0.0011** |
|  | Interaction  | 2.362 | 1, 20 | 0.1400 |

N = 11 in each treatment group. Bold value refers to statistic significance.

Supplementary Table 5 (for figure 7)

Striatal extracellular fluid tryptophan, kynurenine, and KYNA levels following dual-saline or dual-LPS treatment in rats.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Measurement  |  | F | DFn, DFd | p |
| Tryptophan | Treatment  | 4.439 | 1, 7 | 0.0731 |
|  | Time  | 0.5063 | 8, 50 | 0.8458 |
|  | Interaction  | 0.1987 | 8, 50 | 0.9898 |
|  |  |  |  |  |
| Kynurenine | Treatment  | 7.922 | 1, 7 | **0.0260** |
|  | Time  | 0.8529 | 8, 50 | 0.5617 |
|  | Interaction  | 0.3970 | 8, 50 | 0.9170 |
|  |  |  |  |  |
| KYNA | Treatment  | 7.586 | 1, 7 | **0.0283** |
|  | Time  | 2.524 | 8, 50 | **0.0217** |
|  | Interaction  | 0.6510 | 8, 50 | 0.7312 |

N = 4 in the SAL + SAL group, N = 5 in the LPS + LPS group. Bold value refers to statistic significance.