**Supplementary Table 1 Effects of CUMS and time on body weight and behavior in rats subjected to stroke**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Group | 2w/1w  post-MCAO # | 4w/1w  post-MCAO # | CUMS × time | |  | Simple effect \* | | | |  | Main effect \* | | | |
| *CUMS* | | *Times* | | CUMS | | Time | |
| *F* | *P* | *F*/*P* | *F*/*P* | *F*/*P* | *F*/*P* | *F/P* | *t/P* e | *F/P* | *t/P* f |
| *t/P* a | *t/P* b | *t/P* c | *t/P* d |
| Body weight | Stroke | 1.18±0.09 | 1.32±0.13 | 0.126 | 0.724 |  | / | / | / | / |  | 10.88  9/**0.002** | 3.344/**0.002** | 14.757/**<0.001** | 3.906/**<0.001** |
| Stroke + CUMS | 1.09±0.09 | 1.20±0.10 |
| OFT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| counts of rearing | Stroke | 1.21±0.57 | 1.27±0.34 | 1.256 | 0.270 |  | / | / | / | / |  | 27.28  2/**< 0.001** | 5.236/**< 0.001** | 0.390/0.536 | 0.626/0.536 |
| Stroke + CUMS | 0.70±0.32 | 0.48±0.27 |
| counts of grid crossing | Stroke | 1.16±0.25 | 1.20±0.07 | 6.857 | **0.013** |  | 3.596/0.066 | 31.356/**< 0.001** | 0.215/0.646 | 10.494/**0.003** |  | / | / | / | / |
| 1.897/0.066 | 5.608/**< 0.001** | 0.464/0.646 | 3.247/**0.003** |
| Stroke + CUMS | 0.98±0.27 | 0.66±0.22 |
| NSFT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| latency | Stroke | 1.08±0.48 | 0.71±0.39 | 5.150 | **0.029** |  | 0.024/0.877 | 11.326/**0.002** | 2.760/0.105 | 2.396/0.130 |  | / | / | / | / |
| 0.155/0.877 | 3.367/**0.002** | 1.659/0.105 | 1.549/0.130 |
| Stroke + CUMS | 1.12±0.31 | 1.47±0.73 |
| food consumption | Stroke | 3.16±2.49 | 5.84±4.41 | 1.470 | 0.233 |  | / | / | / | / |  | 5.596/**0.024** | 2.366/**0.024** | 3.280/0.078 | 1.810/0.078 |
| Stroke + CUMS | 2.14±1.22 | 2.67±2.07 |
| SPT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SPI | Stroke | 1.06±0.13 | 1.16±0.14 | 5.319 | **0.027** |  | 0.206/0.653 | 13.802/**0.001** | 2.660/0.112 | 2.659/0.112 |  | / | / | / | / |
| Stroke + CUMS | 1.03±0.10 | 0.93±0.17 | 0.452/0.653 | 3.726/**0.001** | 1.629/0.112 | 1.629/0.112 |

We identify *groups* and *times* in italics, representing comparisons of different *groups* at a certain time point, and comparisons of different *times* for a group, respectively. *t/P* aindicates the stroke + CUMS group *vs.* the stroke group 2 w post-MCAO, *t/P* bindicates the stroke + CUMS group *vs.* the stroke group 4 w post-MCAO, *t/P* c indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke group, *t/P* d indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke + CUMS group, *t/P* eindicates the stroke + CUMS group *vs.* the stroke group, and *t/P* f indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO. # indicates that the data have been standardized. \* indicates that the *t* and *P* values have been corrected by the Bonferroni method.

**Supplementary Table 2 Relative expression of Iba-1 and P2X7R/NLRP3 signaling pathway-related proteins in the affected hippocampus between the stroke and stroke + CUMS groups**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Group | 2w/1w  post-MCAO # | 4w/1w  post-MCAO # | CUMS × time | |  | Simple effect\* | | | |  | Main effect \* | | | |
| *CUMS* | | *Times* | | CUMS | | Time | |
| *F* | *P* | *F*/*P* | *F*/*P* | *F*/*P* | *F*/*P* | *F/P* | *t/P* e | *F/P* | *t/P* f |
| *t/P* a | *t/P* b | *t/P* c | *t/P* d |
| Iba-1 | Stroke | 1.21±0.11 | 1.31±0.09 | 3.716 | 0.072 |  | / | / | / | / |  | 37.824/**< 0.001** | 6.136/**< 0.001** | 13.127/**0.002** | 3.610/**0.002** |
| Stroke + CUMS | 1.45±0.10 | 1.78±0.20 |
| Caspase-1 | Stroke | 1.08±0.12 | 1.55±0.38 | 0.007 | 0.934 |  | / | / | / | / |  | 14.115/**0.002** | 3.758/**0.002** | 6.442/**0.022** | 2.539/**0.022** |
| Stroke + CUMS | 1.77±0.45 | 2.20±0.52 |
| IL-18 | Stroke | 1.47±0.50 | 2.03±0.43 | 1.915 | 0.185 |  | / | / | / | / |  | 2.408/0.140 | 1.554/0.140 | 9.914/**0.006** | 3.150/**0.006** |
| Stroke + CUMS | 1.52±0.53 | 2.95±1.12 |
| P2X7R | Stroke | 1.54±0.65 | 1.64±0.53 | 0.402 | 0.535 |  | / | / | / | / |  | 1.455/0.245 | 1.206/0.245 | 0.754/0.398 | 0.869/0.398 |
| Stroke + CUMS | 1.78±0.84 | 2.40±1.42 |
| NLRP3 | Stroke | 1.61±0.53 | 1.94±0.25 | 0.458 | 0.508 |  | / | / | / | / |  | 4.702/**0.046** | 2.169/**0.046** | 5.194/**0.037** | 2.279/**0.037** |
| Stroke + CUMS | 1.91±0.51 | 2.51±0.46 |
| IL-1β | Stroke | 1.39±0.28 | 1.44±0.26 | 22.216 | **< 0.001** |  | 0.275/0.607 | 51.700/**< 0.001** | 0.089/0.769 | 48.498/**< 0.001** |  | / | / | / | / |
| 0.526/0.607 | 7.181/**< 0.001** | 0.298/0.769 | 6.959/**< 0.001** |
| Stroke + CUMS | 1.48±0.19 | 2.67±0.33 |

We identify *groups* and *times* in italics, representing comparisons of different *groups* at a certain time point, and comparisons of different *times* for a group, respectively. *t/P* aindicates the stroke + CUMS group *vs.* the stroke group 2 w post-MCAO, *t/P* bindicates the stroke + CUMS group *vs.* the stroke group 4 w post-MCAO, *t/P* c indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke group, *t/P* d indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke + CUMS group, *t/P* eindicates the stroke + CUMS group *vs.* the stroke group, and *t/P* f indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO. # indicates that the data has been standardized. \* indicates that the *t* and *P* values have been corrected by the Bonferroni method.

**Supplementary Table 3 Comparison of P2X7R, NLRP3 and Iba-1 staining in the affected CA1 region between the stroke and stroke + CUMS groups (400×)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Group | 2w/1w  post-MCAO # | 4w/1w  post-MCAO # | CUMS × time | |  | Simple effect \* | | | |  | Main effect \* | | | |
| *CUMS* | | *Times* | | CUMS | | Time | |
| *F* | *P* | *F*/*P* | *F*/*P* | *F*/*P* | *F*/*P* | *F/P* | *t/P* e | *F/P* | *t/P* f |
| *t/P* a | *t/P* b | *t/P* c | *t/P* d |
| Iba-1 | Stroke | 1.55±0.60 | 2.37±1.21 | 0.789 | 0.388 |  | / | / | / | / |  | 12.490/**0.003** | 3.532/**0.003** | 3.332/0.087 | 1.824/0.087 |
| Stroke + CUMS | 3.86±2.25 | 6.22±2.87 |
| NLRP3 | Stroke | 2.16±0.66 | 2.56±0.92 | 1.440 | 0.248 |  | / | / | / | / |  | 8.590/**0.010** | 2.930/**0.010** | 4.312/0.054 | 2.075/0.054 |
| Stroke + CUMS | 2.95±0.92 | 4.44±1.42 |
| P2X7R | Stroke | 2.01±1.07 | 1.92±1.09 | 1.967 | 0.180 |  | / | / | / | / |  | 6.113/**0.025** | 2.471/**0.025** | 1.616/0.222 | 1.271/0.222 |
| Stroke + CUMS | 2.73±1.13 | 4.55±2.37 |

We identify *groups* and *times* in italics, representing comparisons of different *groups* at a certain time point, and comparisons of different *times* for a group, respectively. *t/P* aindicates the stroke + CUMS group *vs.* the stroke group 2 w post-MCAO, *t/P* bindicates the stroke + CUMS group *vs.* the stroke group 4 w post-MCAO, *t/P* c indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke group, *t/P* d indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO in the stroke + CUMS group, *t/P* eindicates the stroke + CUMS group *vs.* the stroke group, and *t/P* f indicates 4w/1w post-MCAO *vs.* 2w/1w post-MCAO. # indicates that the data been standardized. \* indicates that the *t* and *P* values have been corrected by the Bonferroni method.