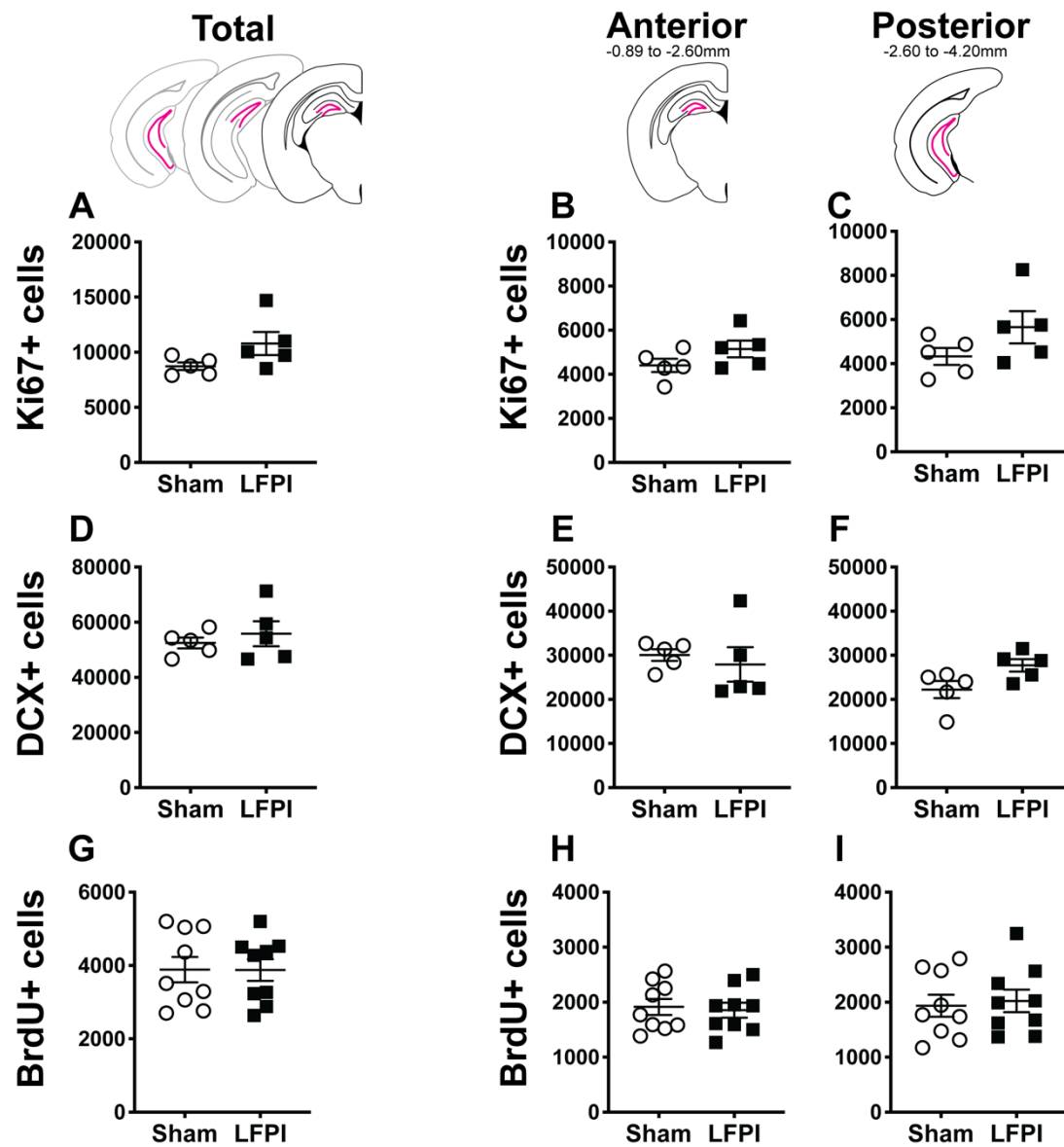


## Supplementary Material – Clark et al.

## 3 dpi contralateral SGZ

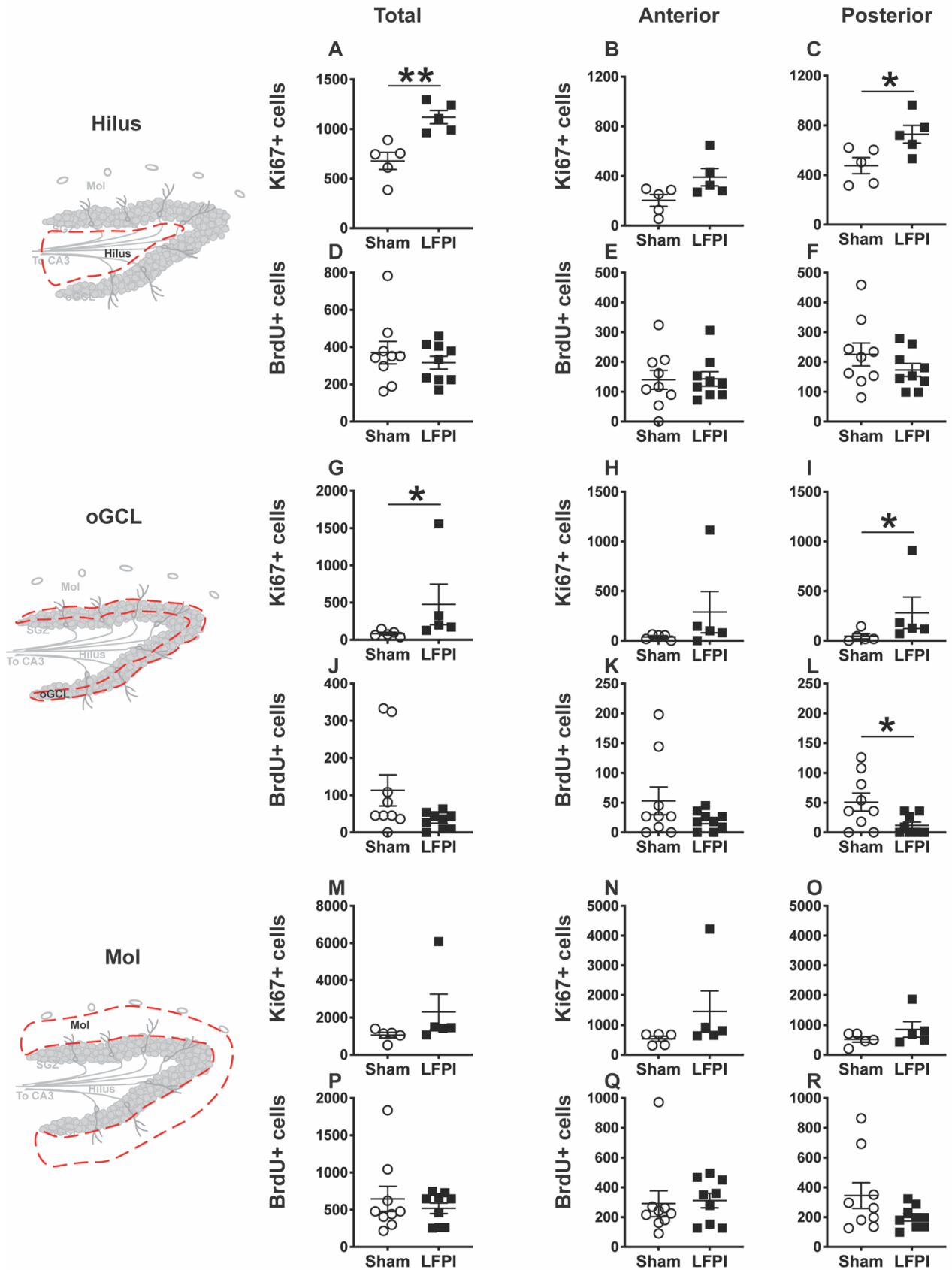


**Supplementary Figure 1. Relative to Sham, lateral fluid percussion injury (LFPI) does not change the number of Ki67-immunoreactive (Ki67+), DCX+, or BrdU+ cells in the contralateral mouse subgranular zone (SGZ) or granule cell layer (GCL) 3 days post-injury (dpi).**

Pink lines in schematics (top row) indicate these measures were collected in the contralateral SGZ/GCL, while the green lines in the figures in the main text indicate those measures were collected in the ipsilateral SGZ/GCL. Stereological quantification of Ki67+ (A-C; Sham n=5, LFPI n=5), DCX+ (D-F; Sham n=5, LFPI n=5), and BrdU+ (G-I; Sham n=9, LFPI n=9) cells in the SGZ

(Ki67, BrdU) and GCL (DCX). Immunopositive cells were quantified across the entire longitudinal axis (**A, D, G**), and also broken up into anterior (**B, E, H**) and posterior (**C, F, I**) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively.

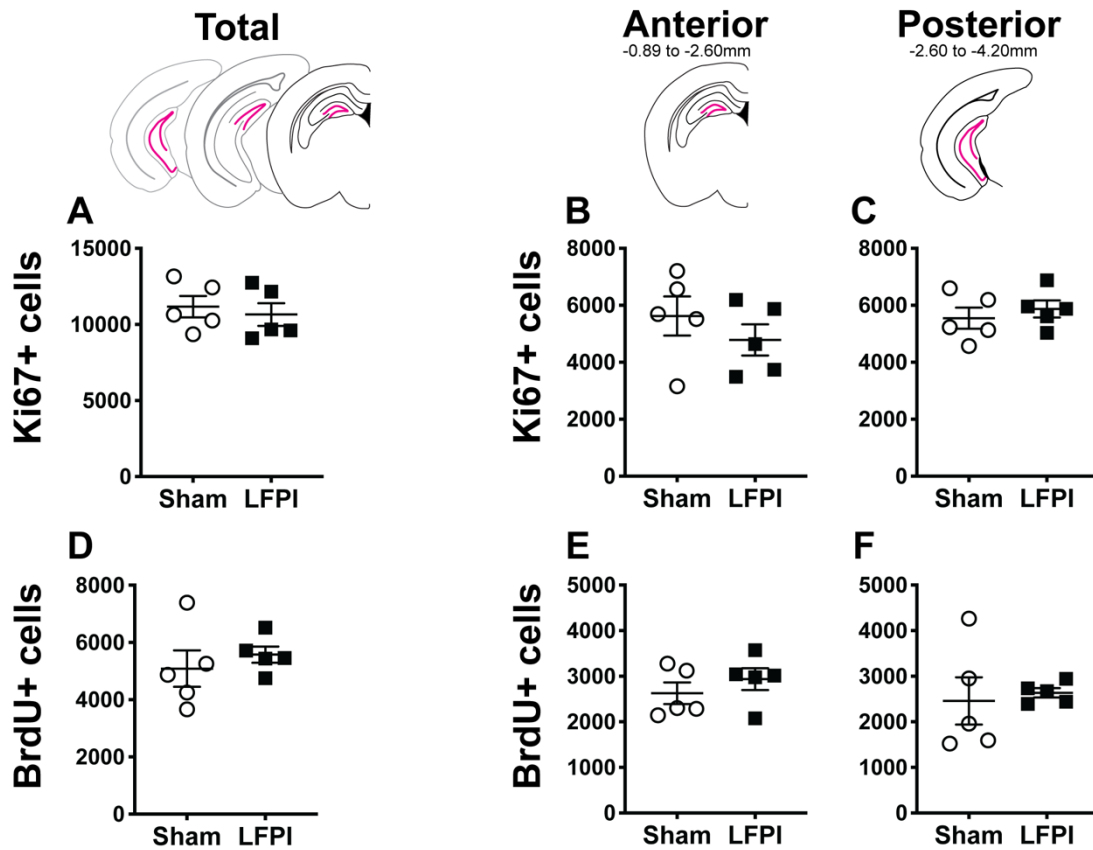
### 3 dpi other contralateral DG subregions



**Supplementary Figure 2. Relative to Sham treatment, LFPI increases proliferation in some contralateral other DG subregions 3 days post-injury.**

Stereological quantification of Ki67+ (**A-C, G-I, M-O**; Sham n=5, LFPI n=5) and BrdU+ (**D-F, J-L, P-R**; Sham n=9, LFPI n=9) cells in the hilus (**A-F**; red dotted line region, top-left schematic), outer granule cell layer (**G-L**; red dotted line region, middle-left schematic), and molecular layer (**M-R**; red dotted line region, bottom-left schematic). Immunopositive cells were quantified across the entire longitudinal axis (**A, D, G, J, M, P**), and also broken up into anterior (**B, E, H, K, N, Q**) and posterior (**C, F, I, L, O, R**) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively. T-test, \*p<0.05, \*\*p<0.01.

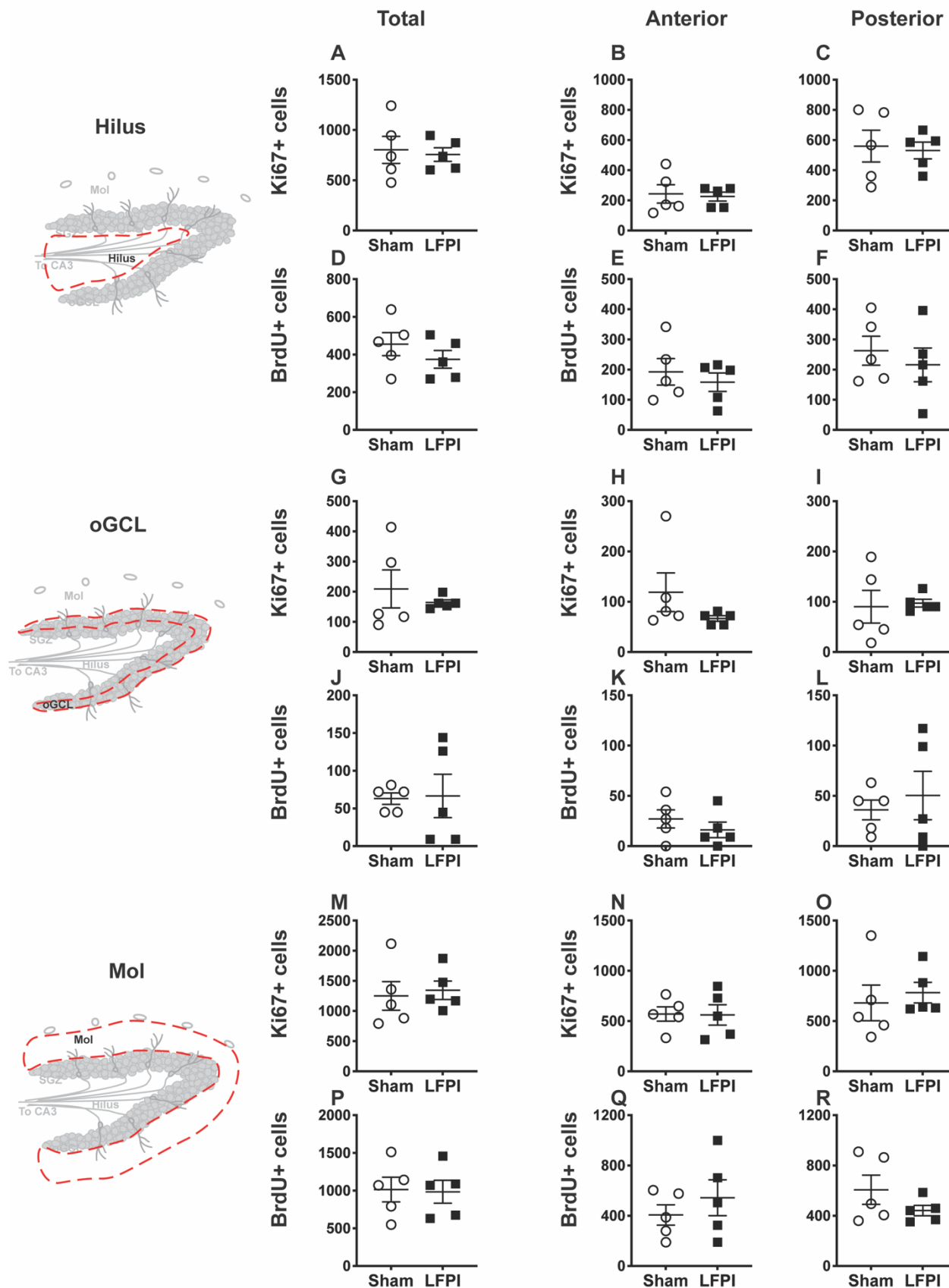
## 7 dpi contralateral SGZ



**Supplementary Figure 3. LFPI does not affect proliferation and cell survival in the contralateral mouse SGZ 7 days post-injury.**

Pink lines in schematics (top row) indicate these measures were collected in the contralateral SGZ/GCL. Stereological quantification of Ki67+ (A-C; Sham n=5, LFPI n=5) and BrdU+ (D-F; Sham n=5, LFPI n=5) cells in the SGZ (Ki67, BrdU) and GCL (DCX). Immunopositive cells were quantified across the entire longitudinal axis (A, D), and also broken up into anterior (B, E) and posterior (C, F) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively.

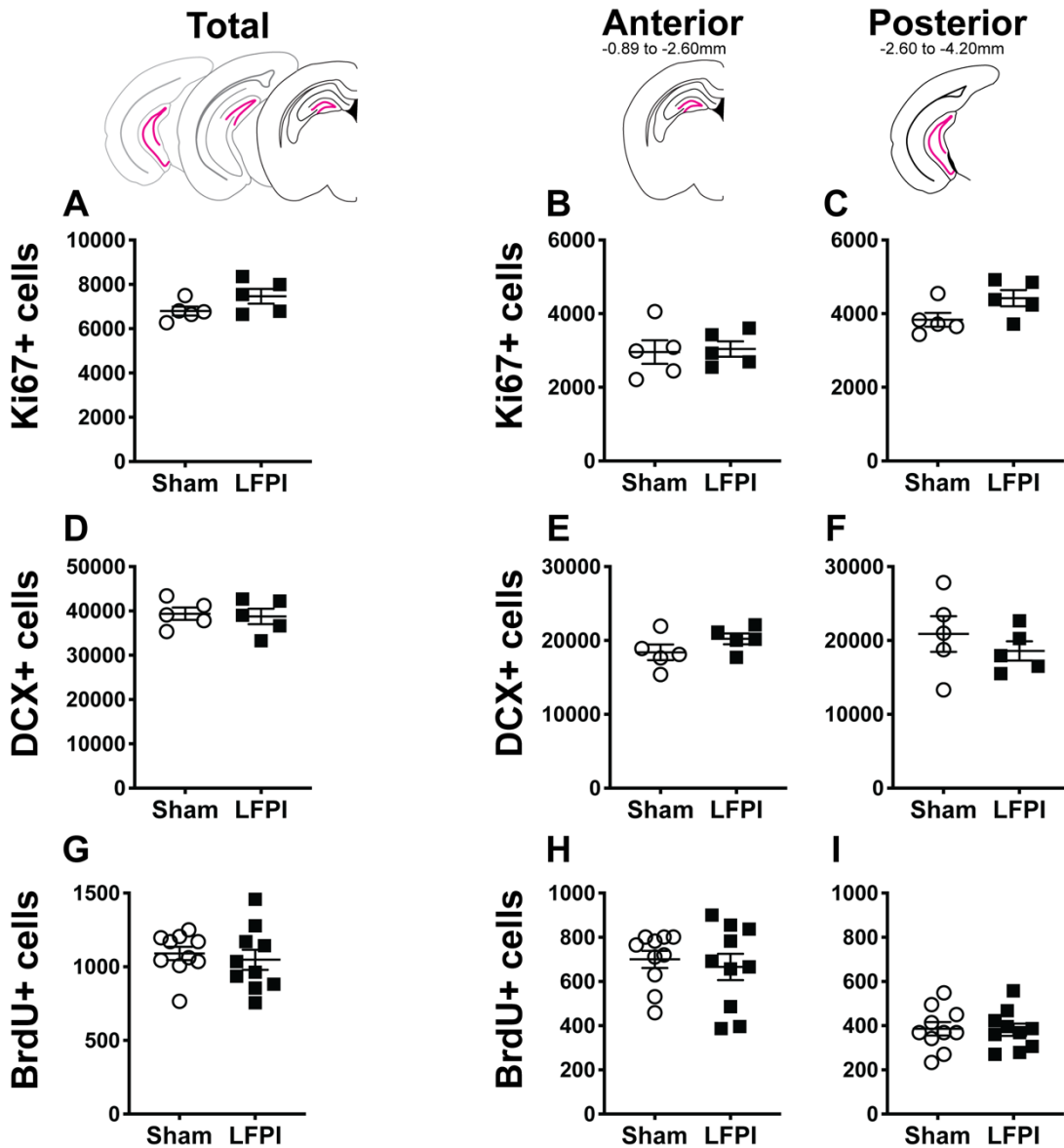
### 7 dpi other contralateral DG subregions



**Supplementary Figure 4. LFPI does not affect proliferation and intermediate cell survival in other DG subregions 7 days post-injury.**

Stereological quantification of Ki67+ (**A-C, G-I, M-O**; Sham n=5, LFPI n=5) and BrdU+ (**D-F, J-L, P-R**; Sham n=5, LFPI n=5) cells in the hilus (**A-F**; red dotted line region, top-left schematic), outer granule cell layer (**G-L**; red dotted line region, middle-left schematic), and molecular layer (**M-R**; red dotted line region, bottom-left schematic). Immunopositive cells were quantified across the entire longitudinal axis (**A, D, G, J, M, P**), and also broken up into anterior (**B, E, H, K, N, Q**) and posterior (**C, F, I, L, O, R**) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively.

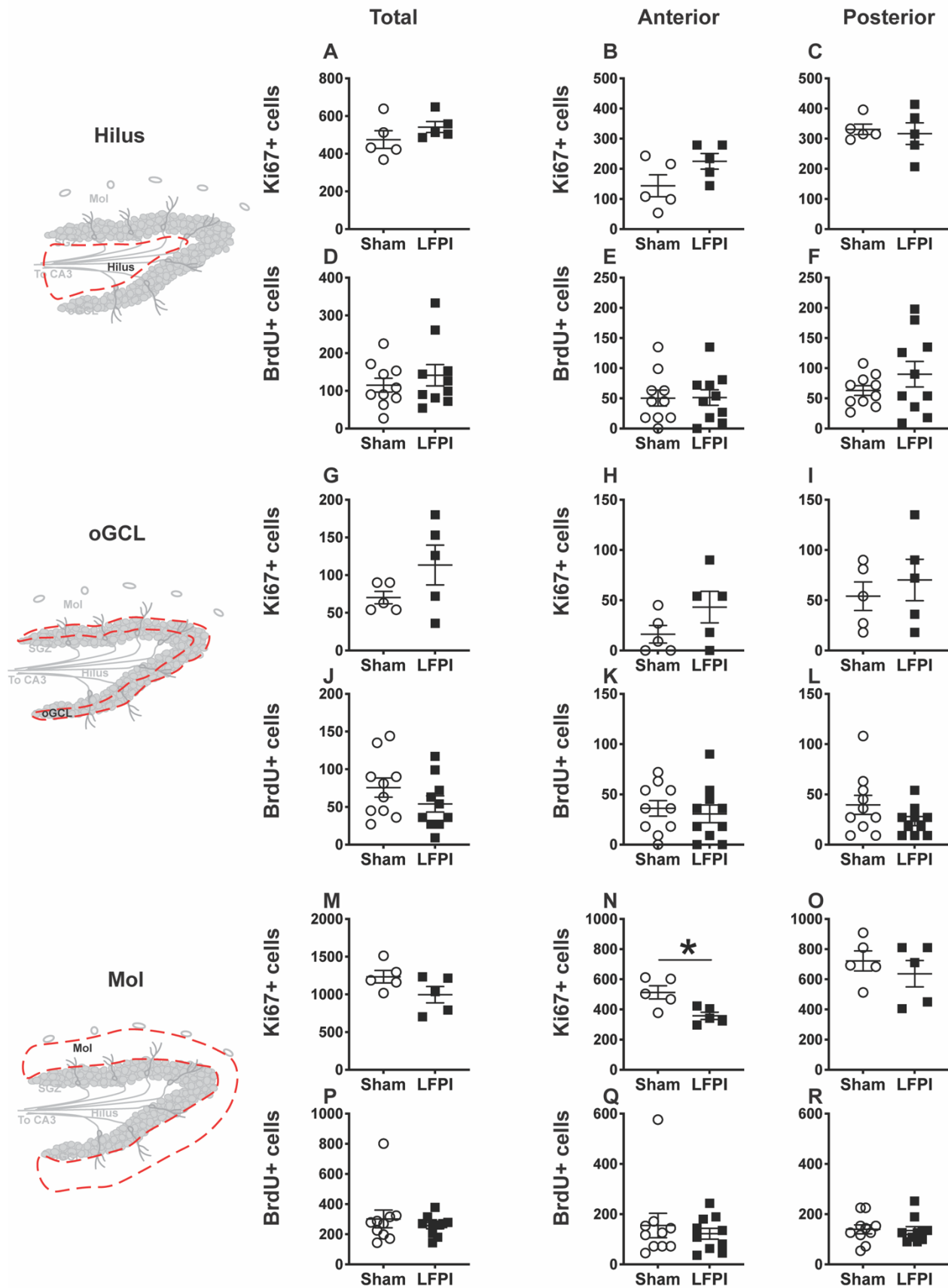
## 31 dpi contralateral SGZ



**Supplementary Figure 5. LFPI does not affect proliferation, neurogenesis, or long-term cell survival in the contralateral mouse SGZ 31 days post-injury. Pink lines in schematics (top row) indicate these measures were collected in the contralateral SGZ/GCL.**

Pink lines in schematics (top row) indicate these measures were collected in the contralateral SGZ/GCL. Stereological quantification of Ki67+ (**A-C**; Sham  $n=5$ , LFPI  $n=5$ ), DCX+ (**D-F**; Sham  $n=5$ , LFPI  $n=5$ ), and BrdU+ (**G-I**; Sham  $n=10$ , LFPI  $n=10$ ) cells in the SGZ (Ki67, BrdU) and GCL (DCX). Immunopositive cells were quantified across the entire longitudinal axis (**A, D, G**), and also broken up into anterior (**B, E, H**) and posterior (**C, F, I**) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively.

### 31 dpi other contralateral DG subregions



**Supplementary Figure 6. LFPI does not affect proliferation or long-term cell survival in other contralateral DG subregions 31 days post-injury.**

Stereological quantification of Ki67+ (**A-C, G-I, M-O**; Sham n=5, LFPI n=5) and BrdU+ (**D-F, J-L, P-R**; Sham n=10, LFPI n=10) cells in the hilus (**A-F**; red dotted line region, top-left schematic), outer granule cell layer (**G-L**; red dotted line region, middle-left schematic), and molecular layer (**M-R**; red dotted line region, bottom-left schematic). Immunopositive cells were quantified across the entire longitudinal axis (**A, D, G, J, M, P**), and also broken up into anterior (**B, E, H, K, N, Q**) and posterior (**C, F, I, L, O, R**) bins, operationally defined as Bregma levels -0.92 to -2.6; and -2.6 to -3.97, respectively.





## 7 DPI - IPSILATERAL

| Marker           | Region           | Totals                 |                |                  |                        | Anterior               |                 |                  |                  | Posterior        |                 |                 |   |
|------------------|------------------|------------------------|----------------|------------------|------------------------|------------------------|-----------------|------------------|------------------|------------------|-----------------|-----------------|---|
| Ki67             | SGZ              | Fig. 4A                |                |                  |                        | Fig. 4B                |                 |                  |                  | Fig. 4C          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 12537 +/- 1291         | 5              | 13815 +/- 912.3  | 5                      | 5611 +/- 791.1         | 5               | 6707 +/- 564.8   | 5                | 6926 +/- 587.3   | 5               | 7108 +/- 473.1  | 5 |
|                  |                  | t-test (p-value)       |                |                  |                        | t-test (p-value)       |                 |                  |                  | t-test (p-value) |                 |                 |   |
|                  | 0.4421           |                        |                |                  | 0.2921                 |                        |                 |                  | 0.8156           |                  |                 |                 |   |
|                  | Hilus            | Fig. 5A                |                |                  |                        | Fig. 5B                |                 |                  |                  | Fig. 5C          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 1031 +/- 158.8         | 5              | 873 +/- 28.8     | 5                      | 252 +/- 25.14          | 5               | 316.8            | 5                | 779.4 +/- 136.9  | 5               | 556.2 +/- 42.06 | 5 |
|                  |                  | t-test (p-value)       |                |                  |                        | Mann-Whitney (p-value) |                 |                  |                  | t-test (p-value) |                 |                 |   |
|                  | 0.3551           |                        |                |                  | 0.0873                 |                        |                 |                  | 0.1577           |                  |                 |                 |   |
|                  | oGCL             | Fig. 5G                |                |                  |                        | Fig. 5H                |                 |                  |                  | Fig. 5I          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 180 +/- 36.34          | 5              | 345.6 +/- 81.13  | 5                      | 45 +/- 12.73           | 5               | 84.60 +/- 17.91  | 5                | 135 +/- 26.24    | 5               | 261 +/- 63.64   | 5 |
| t-test (p-value) |                  |                        |                | t-test (p-value) |                        |                        |                 | t-test (p-value) |                  |                  |                 |                 |   |
| 0.0995           |                  |                        |                | 0.1092           |                        |                        |                 | 0.1046           |                  |                  |                 |                 |   |
| Mol              | Fig. 5M          |                        |                |                  | Fig. 5N                |                        |                 |                  | Fig. 5O          |                  |                 |                 |   |
|                  | Sham             |                        | LFPI           |                  | Sham                   |                        | LFPI            |                  | Sham             |                  | LFPI            |                 |   |
|                  | Mean +/- SEM     | n                      | Mean +/- SEM   | n                | Mean +/- SEM           | n                      | Mean +/- SEM    | n                | Mean +/- SEM     | n                | Mean +/- SEM    | n               |   |
|                  | 1678 +/- 309     | 5                      | 1071 +/- 245.9 | 5                | 693 +/- 82.09          | 5                      | 446.4 +/- 74.47 | 5                | 984.6 +/- 228.2  | 5                | 624.6 +/- 174.8 | 5               |   |
|                  | t-test (p-value) |                        |                |                  | t-test (p-value)       |                        |                 |                  | t-test (p-value) |                  |                 |                 |   |
| 0.1631           |                  |                        |                | 0.0567           |                        |                        |                 | 0.2458           |                  |                  |                 |                 |   |
| DCX              | SGZ + GCL        | Fig. 4D                |                |                  |                        | Fig. 4E                |                 |                  |                  | Fig. 4F          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 47142 +/- 2746         | 5              | 63115 +/- 3741   | 5                      | 23027 +/- 2979         | 5               | 29810 +/- 996.8  | 5                | 23969 +/- 1423   | 5               | 33055 +/- 3186  | 5 |
|                  |                  | t-test (p-value)       |                |                  |                        | t-test (p-value)       |                 |                  |                  | t-test (p-value) |                 |                 |   |
| 0.0088           |                  |                        |                | 0.0629           |                        |                        |                 | 0.0314           |                  |                  |                 |                 |   |
| BrdU             | SGZ              | Fig. 4G                |                |                  |                        | Fig. 4H                |                 |                  |                  | Fig. 4I          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 5683 +/- 1000          | 5              | 6340 +/- 457.8   | 5                      | 2839 +/- 550.4         | 5               | 3343 +/- 183.6   | 5                | 2844 +/- 481.2   | 5               | 2997 +/- 320.4  | 5 |
|                  |                  | Mann-Whitney (p-value) |                |                  |                        | Mann-Whitney (p-value) |                 |                  |                  | t-test (p-value) |                 |                 |   |
|                  | 0.1508           |                        |                |                  | 0.1508                 |                        |                 |                  | 0.798            |                  |                 |                 |   |
|                  | Hilus            | Fig. 5D                |                |                  |                        | Fig. 5E                |                 |                  |                  | Fig. 5F          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 504 +/- 30.65          | 5              | 856.8 +/- 190.9  | 5                      | 138.6 +/- 31.64        | 5               | 183.6 +/- 58.71  | 5                | 365.4 +/- 20.64  | 5               | 673.2 +/- 142.7 | 5 |
|                  |                  | t-test (p-value)       |                |                  |                        | t-test (p-value)       |                 |                  |                  | t-test (p-value) |                 |                 |   |
|                  | 0.1055           |                        |                |                  | 0.5189                 |                        |                 |                  | 0.0653           |                  |                 |                 |   |
|                  | oGCL             | Fig. 5J                |                |                  |                        | Fig. 5K                |                 |                  |                  | Fig. 5L          |                 |                 |   |
|                  |                  | Sham                   |                | LFPI             |                        | Sham                   |                 | LFPI             |                  | Sham             |                 | LFPI            |   |
|                  |                  | Mean +/- SEM           | n              | Mean +/- SEM     | n                      | Mean +/- SEM           | n               | Mean +/- SEM     | n                | Mean +/- SEM     | n               | Mean +/- SEM    | n |
|                  |                  | 122.4 +/- 20.24        | 5              | 142.2 +/- 44.22  | 5                      | 48.60 +/- 20.04        | 5               | 37.8 +/- 14.34   | 5                | 73.8 +/- 10.02   | 5               | 104.4 +/- 32.02 | 5 |
| t-test (p-value) |                  |                        |                | t-test (p-value) |                        |                        |                 | t-test (p-value) |                  |                  |                 |                 |   |
| 0.6946           |                  |                        |                | 0.6728           |                        |                        |                 | 0.3884           |                  |                  |                 |                 |   |
| Mol              | Fig. 5P          |                        |                |                  | Fig. 5Q                |                        |                 |                  | Fig. 5R          |                  |                 |                 |   |
|                  | Sham             |                        | LFPI           |                  | Sham                   |                        | LFPI            |                  | Sham             |                  | LFPI            |                 |   |
|                  | Mean +/- SEM     | n                      | Mean +/- SEM   | n                | Mean +/- SEM           | n                      | Mean +/- SEM    | n                | Mean +/- SEM     | n                | Mean +/- SEM    | n               |   |
|                  | 1771 +/- 531.4   | 5                      | 2050 +/- 534.8 | 5                | 795.6 +/- 385.1        | 5                      | 595.8 +/- 226.8 | 5                | 975.6 +/- 189    | 5                | 1454 +/- 477.4  | 5               |   |
|                  | t-test (p-value) |                        |                |                  | Mann-Whitney (p-value) |                        |                 |                  | t-test (p-value) |                  |                 |                 |   |
| 0.7209           |                  |                        |                | 0.8413           |                        |                        |                 | 0.3783           |                  |                  |                 |                 |   |
|                  |                  |                        |                |                  |                        |                        |                 |                  |                  |                  |                 |                 |   |
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|                  |                  |                        |                |                  |                        |                        |                 |                  |                  |                  |                 |                 |   |
|                  |                  |                        |                |                  |                        |                        |                 |                  |                  |                  |                 |                 |   |
|                  |                  |                        |                |                  |                        |                        |                 |                  |                  |                  |                 |                 |   |
|                  |                  |                        |                | </               |                        |                        |                 |                  |                  |                  |                 |                 |   |

### 31 DPI - IPSILATERAL

| Marker | Region    | Totals                 |    |                 |    | Anterior               |    |                 |    | Posterior              |    |                 |    |
|--------|-----------|------------------------|----|-----------------|----|------------------------|----|-----------------|----|------------------------|----|-----------------|----|
| Ki67   | SGZ       | Fig. 6A                |    |                 |    | Fig. 6B                |    |                 |    | Fig. 6C                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 6323 +/- 465.6         | 5  | 6134 +/- 485.9  | 5  | 2925 +/- 150.4         | 5  | 2434 +/- 218    | 5  | 3398 +/- 472.2         | 5  | 3701 +/- 330.5  | 5  |
|        |           | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.786                  |    |                 |    | 0.1006                 |    |                 |    | 0.6141                 |    |                 |    |
|        | Hilus     | Fig. 7A                |    |                 |    | Fig. 7B                |    |                 |    | Fig. 7C                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 639 +/- 118.5          | 5  | 433.8 +/- 59.04 | 5  | 217.8 +/- 66.65        | 5  | 118.8 +/- 26.61 | 5  | 421.2 +/- 64.92        | 5  | 315 +/- 54.52   | 5  |
|        |           | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.1597                 |    |                 |    | 0.2051                 |    |                 |    | 0.2457                 |    |                 |    |
|        | oGCL      | Fig. 7G                |    |                 |    | Fig. 7H                |    |                 |    | Fig. 7I                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 106.2 +/- 31.1         | 5  | 144 +/- 60.91   | 5  | 3.6 +/- 3.6            | 5  | 21.6 +/- 10.87  | 5  | 102.6 +/- 29.11        | 5  | 122.4 +/- 64.56 | 5  |
|        |           | t-test (p-value)       |    |                 |    | Mann-Whitney (p-value) |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.5956                 |    |                 |    | 0.1667                 |    |                 |    | 0.7869                 |    |                 |    |
|        | Mol       | Fig. 7M                |    |                 |    | Fig. 7N                |    |                 |    | Fig. 7O                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 1136 +/- 117.8         | 5  | 986.4 +/- 176.7 | 5  | 525.6 +/- 88.53        | 5  | 383.4 +/- 83.1  | 5  | 610.2 +/- 33.36        | 5  | 603 +/- 101.1   | 5  |
|        |           | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.5018                 |    |                 |    | 0.2753                 |    |                 |    | 0.9478                 |    |                 |    |
| DCX    | SGZ + GCL | Fig. 6D                |    |                 |    | Fig. 6E                |    |                 |    | Fig. 6F                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 42261 +/- 3818         | 5  | 39743 +/- 1433  | 5  | 19915 +/- 1951         | 5  | 20212 +/- 760.6 | 5  | 22306 +/- 2788         | 5  | 19525 +/- 1674  | 5  |
|        |           | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.5541                 |    |                 |    | 0.8907                 |    |                 |    | 0.4174                 |    |                 |    |
| BrdU   | SGZ       | Fig. 6G                |    |                 |    | Fig. 6H                |    |                 |    | Fig. 6I                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 1179 +/- 84.84         | 10 | 1726 +/- 92.11  | 10 | 750.6 +/- 68.39        | 10 | 972 +/- 64.89   | 10 | 422.1 +/- 34.69        | 10 | 748.8 +/- 52.34 | 10 |
|        |           | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.0004                 |    |                 |    | 0.0305                 |    |                 |    | <0.0001                |    |                 |    |
|        | Hilus     | Fig. 7D                |    |                 |    | Fig. 7E                |    |                 |    | Fig. 7F                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 146.7 +/- 23.43        | 10 | 828 +/- 93.35   | 10 | 53.1 +/- 12.4          | 10 | 298.8 +/- 45.02 | 10 | 91.8 +/- 16.31         | 10 | 526.5 +/- 54.68 | 10 |
|        |           | Mann-Whitney (p-value) |    |                 |    | Mann-Whitney (p-value) |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | <0.0001                |    |                 |    | <0.0001                |    |                 |    | <0.0001                |    |                 |    |
|        | oGCL      | Fig. 7J                |    |                 |    | Fig. 7K                |    |                 |    | Fig. 7L                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 92.7 +/- 24.56         | 10 | 162 +/- 15.76   | 10 | 43.2 +/- 13.34         | 10 | 67.5 +/- 15.13  | 10 | 49.5 +/- 13.57         | 10 | 92.7 +/- 11.47  | 10 |
|        |           | Mann-Whitney (p-value) |    |                 |    | Mann-Whitney (p-value) |    |                 |    | t-test (p-value)       |    |                 |    |
|        |           | 0.005                  |    |                 |    | 0.1675                 |    |                 |    | 0.0257                 |    |                 |    |
|        | Mol       | Fig. 7P                |    |                 |    | Fig. 7Q                |    |                 |    | Fig. 7R                |    |                 |    |
|        |           | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    | Sham                   |    | LFPI            |    |
|        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|        |           | 421.2 +/- 102.2        | 10 | 1382 +/- 168.1  | 10 | 142.2 +/- 31.63        | 10 | 440.1 +/- 105.4 | 10 | 260.1 +/- 75.82        | 10 | 934.2 +/- 138.9 | 10 |
|        |           | Mann-Whitney (p-value) |    |                 |    | Mann-Whitney (p-value) |    |                 |    | Mann-Whitney (p-value) |    |                 |    |
|        |           | 0.0027                 |    |                 |    | 0.003                  |    |                 |    | 0.0027                 |    |                 |    |

| 3 DPI - CONTRALATERAL  |           |                        |                |                        |               |                        |                |                        |                 |                        |               |                |   |  |  |
|------------------------|-----------|------------------------|----------------|------------------------|---------------|------------------------|----------------|------------------------|-----------------|------------------------|---------------|----------------|---|--|--|
| Marker                 | Region    | Totals                 |                |                        |               | Anterior               |                |                        |                 | Posterior              |               |                |   |  |  |
| Ki67                   | SGZ       | Fig. S1A               |                |                        |               | Fig. S1B               |                |                        |                 | Fig. S1C               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 8732 +/- 348.2         | 5              | 10798 +/- 1050         |               | 4405 +/- 296.4         | 5              | 5148 +/- 378.5         | 5               | 4327 +/- 382.4         | 5             | 5650 +/- 729.9 | 5 |  |  |
|                        |           | t-test (p-value)       |                |                        |               | t-test (p-value)       |                |                        |                 | t-test (p-value)       |               |                |   |  |  |
|                        | 0.0986    |                        |                |                        | 0.1606        |                        |                |                        | 0.147           |                        |               |                |   |  |  |
|                        | Hilus     | Fig. S2A               |                |                        |               | Fig. S2B               |                |                        |                 | Fig. S2C               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 678.6 +/- 85.22        | 5              | 1120 +/- 66.17         | 5             | 203.4 +/- 48.27        | 5              | 390.6 +/- 70.5         | 5               | 475.2 +/- 64.92        | 5             | 729 +/- 71.94  | 5 |  |  |
|                        |           | t-test (p-value)       |                |                        |               | t-test (p-value)       |                |                        |                 | t-test (p-value)       |               |                |   |  |  |
|                        | 0.0035    |                        |                |                        | 0.0598        |                        |                |                        | 0.0307          |                        |               |                |   |  |  |
|                        | oGCL      | Fig. S2G               |                |                        |               | Fig. S2H               |                |                        |                 | Fig. S2I               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 82.8 +/- 18.31         | 5              | 475.2 +/- 272.4        | 5             | 37.8 +/- 12.21         | 5              | 288 +/- 208.3          | 5               | 45 +/- 25.77           | 5             | 280.8 +/- 158  | 5 |  |  |
|                        |           | Mann-Whitney (p-value) |                |                        |               | Mann-Whitney (p-value) |                |                        |                 | Mann-Whitney (p-value) |               |                |   |  |  |
|                        | 0.0159    |                        |                |                        | 0.1111        |                        |                |                        | 0.0476          |                        |               |                |   |  |  |
|                        | Mol       | Fig. S2M               |                |                        |               | Fig. S2N               |                |                        |                 | Fig. S2O               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
| Mean +/- SEM           |           | n                      | Mean +/- SEM   | n                      | Mean +/- SEM  | n                      | Mean +/- SEM   | n                      | Mean +/- SEM    | n                      | Mean +/- SEM  | n              |   |  |  |
| 1058 +/- 146.5         |           | 5                      | 2306 +/- 947.6 | 5                      | 540 +/- 88.27 | 5                      | 1451 +/- 694.6 | 5                      | 518.4 +/- 93.51 | 5                      | 855 +/- 260.5 | 5              |   |  |  |
| Mann-Whitney (p-value) |           |                        |                | Mann-Whitney (p-value) |               |                        |                | Mann-Whitney (p-value) |                 |                        |               |                |   |  |  |
| 0.0556                 |           |                        |                | 0.2222                 |               |                        |                | 0.5159                 |                 |                        |               |                |   |  |  |
| DCX                    | SGZ + GCL | Fig. S1D               |                |                        |               | Fig. S1E               |                |                        |                 | Fig. S1F               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 52472 +/- 1981         | 5              | 55843 +/- 4513         | 5             | 30051 +/- 1332         | 5              | 27936 +/- 3899         | 5               | 22250 +/- 1958         | 5             | 27720 +/- 1405 | 5 |  |  |
|                        |           | t-test (p-value)       |                |                        |               | t-test (p-value)       |                |                        |                 | t-test (p-value)       |               |                |   |  |  |
| 0.5133                 |           |                        |                | 0.6216                 |               |                        |                | 0.0529                 |                 |                        |               |                |   |  |  |
| BrdU                   | SGZ       | Fig. S1G               |                |                        |               | Fig. S1H               |                |                        |                 | Fig. S1I               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 3889 +/- 344.2         | 9              | 3878 +/- 295.8         | 9             | 1914 +/- 144.7         | 9              | 1855 +/- 135.8         | 9               | 1935 +/- 200           | 9             | 2023 +/- 205.1 | 9 |  |  |
|                        |           | t-test (p-value)       |                |                        |               | t-test (p-value)       |                |                        |                 | t-test (p-value)       |               |                |   |  |  |
|                        | 0.981     |                        |                |                        | 0.77          |                        |                |                        | 0.7627          |                        |               |                |   |  |  |
|                        | Hilus     | Fig. S2D               |                |                        |               | Fig. S2E               |                |                        |                 | Fig. S2F               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 370 +/- 60.66          | 9              | 316 +/- 34.64          | 9             | 140 +/- 31.89          | 9              | 143 +/- 23.97          | 9               | 225 +/- 38.54          | 9             | 173 +/- 21.67  | 9 |  |  |
|                        |           | t-test (p-value)       |                |                        |               | t-test (p-value)       |                |                        |                 | t-test (p-value)       |               |                |   |  |  |
|                        | 0.4508    |                        |                |                        | 0.941         |                        |                |                        | 0.2567          |                        |               |                |   |  |  |
|                        | oGCL      | Fig. S2J               |                |                        |               | Fig. S2K               |                |                        |                 | Fig. S2L               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
|                        |           | Mean +/- SEM           | n              | Mean +/- SEM           | n             | Mean +/- SEM           | n              | Mean +/- SEM           | n               | Mean +/- SEM           | n             | Mean +/- SEM   | n |  |  |
|                        |           | 113 +/- 41.92          | 9              | 32 +/- 7.365           | 9             | 53 +/- 23.26           | 9              | 20 +/- 5.148           | 9               | 51 +/- 15.15           | 9             | 12 +/- 5.408   | 9 |  |  |
|                        |           | Mann-Whitney (p-value) |                |                        |               | Mann-Whitney (p-value) |                |                        |                 | Mann-Whitney (p-value) |               |                |   |  |  |
|                        | 0.1051    |                        |                |                        | 0.4685        |                        |                |                        | 0.042           |                        |               |                |   |  |  |
|                        | Mol       | Fig. S2P               |                |                        |               | Fig. S2Q               |                |                        |                 | Fig. S2R               |               |                |   |  |  |
|                        |           | <u>Sham</u>            |                | <u>LFPI</u>            |               | <u>Sham</u>            |                | <u>LFPI</u>            |                 | <u>Sham</u>            |               | <u>LFPI</u>    |   |  |  |
| Mean +/- SEM           |           | n                      | Mean +/- SEM   | n                      | Mean +/- SEM  | n                      | Mean +/- SEM   | n                      | Mean +/- SEM    | n                      | Mean +/- SEM  | n              |   |  |  |
| 646 +/- 168.3          |           | 9                      | 519 +/- 70.61  | 9                      | 291 +/- 87.14 | 9                      | 312 +/- 49.48  | 9                      | 345 +/- 86.66   | 9                      | 199 +/- 24.53 | 9              |   |  |  |
| Mann-Whitney (p-value) |           |                        |                | Mann-Whitney (p-value) |               |                        |                | Mann-Wh                |                 |                        |               |                |   |  |  |

| Marker           | Region    | Totals           |                 |                  |                 | Anterior               |                 |                  |                 | Posterior        |               |                |   |
|------------------|-----------|------------------|-----------------|------------------|-----------------|------------------------|-----------------|------------------|-----------------|------------------|---------------|----------------|---|
| KI67             | SGZ       | <b>Fig. S3A</b>  |                 |                  |                 | <b>Fig. S3B</b>        |                 |                  |                 | <b>Fig. S3C</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 11169 +/- 705.3  | 5               | 10654 +/- 744.5  | 5               | 5625 +/- 687.5         | 5               | 4784 +/- 545.4   | 5               | 5544 +/- 370.4   | 5             | 5870 +/- 299.4 | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | t-test (p-value)       |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.6292    |                  |                 |                  | 0.3662          |                        |                 |                  | 0.5133          |                  |               |                |   |
|                  | hilus     | <b>Fig. S4A</b>  |                 |                  |                 | <b>Fig. S4B</b>        |                 |                  |                 | <b>Fig. S4C</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 802.8 +/- 134.1  | 5               | 756 +/- 67.59    | 5               | 243 +/- 60.57          | 5               | 225 +/- 29.58    | 5               | 559.8 +/- 105.3  | 5             | 531 +/- 55.19  | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | Mann-Whitney (p-value) |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.7633    |                  |                 |                  | 0.8016          |                        |                 |                  | 0.8147          |                  |               |                |   |
|                  | oGCL      | <b>Fig. S4G</b>  |                 |                  |                 | <b>Fig. S4H</b>        |                 |                  |                 | <b>Fig. S4I</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 208.8 +/- 62.96  | 5               | 163.8 +/- 9.178  | 5               | 118.8 +/- 38.54        | 5               | 66.6 +/- 5.4     | 5               | 90 +/- 32.57     | 5             | 97.2 +/- 7.742 | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | Mann-Whitney (p-value) |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.4995    |                  |                 |                  | 0.1667          |                        |                 |                  | 0.8351          |                  |               |                |   |
|                  | Moi       | <b>Fig. S4M</b>  |                 |                  |                 | <b>Fig. S4N</b>        |                 |                  |                 | <b>Fig. S4O</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
| Mean +/- SEM     |           | n                | Mean +/- SEM    | n                | Mean +/- SEM    | n                      | Mean +/- SEM    | n                | Mean +/- SEM    | n                | Mean +/- SEM  | n              |   |
| 1251 +/- 237.2   |           | 5                | 1345 +/- 151.8  | 5                | 570.6 +/- 71.13 | 5                      | 561.6 +/- 101.7 | 5                | 680.4 +/- 177.8 | 5                | 783 +/- 102.4 | 5              |   |
| t-test (p-value) |           |                  |                 | t-test (p-value) |                 |                        |                 | t-test (p-value) |                 |                  |               |                |   |
| 0.7482           |           |                  |                 | 0.944            |                 |                        |                 | 0.6306           |                 |                  |               |                |   |
| DCX              | SGZ + GCL | <b>Fig. S3D</b>  |                 |                  |                 | <b>Fig. S3E</b>        |                 |                  |                 | <b>Fig. S3F</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           |                  |                 |                  |                 |                        |                 |                  |                 |                  |               |                |   |
|                  |           | t-test (p-value) |                 |                  |                 | t-test (p-value)       |                 |                  |                 | t-test (p-value) |               |                |   |
|                  |           |                  |                 |                  |                 |                        |                 |                  |                 |                  |               |                |   |
| BrdU             | SGZ       | <b>Fig. S3G</b>  |                 |                  |                 | <b>Fig. S3H</b>        |                 |                  |                 | <b>Fig. S3I</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 5085 +/- 636.7   | 5               | 5575 +/- 284.3   | 5               | 2626 +/- 237           | 5               | 2938 +/- 240.8   | 5               | 2459 +/- 2637    | 5             | 2637 +/- 100.7 | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | t-test (p-value)       |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.5025    |                  |                 |                  | 0.3836          |                        |                 |                  | 0.7447          |                  |               |                |   |
|                  | Hilus     | <b>Fig. S4D</b>  |                 |                  |                 | <b>Fig. S4E</b>        |                 |                  |                 | <b>Fig. S4F</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 455.4 +/- 60.88  | 5               | 374.4 +/- 46.99  | 5               | 192.6 +/- 43.68        | 5               | 158.4 +/- 30.73  | 5               | 262.8 +/- 47.91  | 5             | 216 +/- 56.06  | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | Mann-Whitney (p-value) |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.323     |                  |                 |                  | 0.6905          |                        |                 |                  | 0.5434          |                  |               |                |   |
|                  | oGCL      | <b>Fig. S4J</b>  |                 |                  |                 | <b>Fig. S4K</b>        |                 |                  |                 | <b>Fig. S4L</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
|                  |           | Mean +/- SEM     | n               | Mean +/- SEM     | n               | Mean +/- SEM           | n               | Mean +/- SEM     | n               | Mean +/- SEM     | n             | Mean +/- SEM   | n |
|                  |           | 63 +/- 7.53      | 5               | 66.6 +/- 28.83   | 5               | 27 +/- 9               | 5               | 16.2 +/- 7.742   | 5               | 36 +/- 9.859     | 5             | 50.4 +/- 24.08 | 5 |
|                  |           | t-test (p-value) |                 |                  |                 | t-test (p-value)       |                 |                  |                 | t-test (p-value) |               |                |   |
|                  | 0.9068    |                  |                 |                  | 0.3896          |                        |                 |                  | 0.5951          |                  |               |                |   |
|                  | Moi       | <b>Fig. S4P</b>  |                 |                  |                 | <b>Fig. S4Q</b>        |                 |                  |                 | <b>Fig. S4R</b>  |               |                |   |
|                  |           | <u>Sham</u>      |                 | <u>LFPI</u>      |                 | <u>Sham</u>            |                 | <u>LFPI</u>      |                 | <u>Sham</u>      |               | <u>LFPI</u>    |   |
| Mean +/- SEM     |           | n                | Mean +/- SEM    | n                | Mean +/- SEM    | n                      | Mean +/- SEM    | n                | Mean +/- SEM    | n                | Mean +/- SEM  | n              |   |
| 1013 +/- 163.3   |           | 5                | 984.6 +/- 152.3 | 5                | 406.8 +/- 81.02 | 5                      | 543.6 +/- 142.8 | 5                | 606.6 +/- 116.5 | 5                | 441 +/- 41.44 | 5              |   |
| t-test (p-value) |           |                  |                 | t-test (p-value) |                 |                        |                 | t-test (p-value) |                 |                  |               |                |   |
|                  |           |                  |                 |                  |                 |                        |                 |                  |                 |                  |               |                |   |

| 31 DPI - CONTRALATERAL |           |                        |    |                 |        |                        |    |                 |        |                        |    |                 |    |
|------------------------|-----------|------------------------|----|-----------------|--------|------------------------|----|-----------------|--------|------------------------|----|-----------------|----|
| Marker                 | Region    | Totals                 |    |                 |        | Anterior               |    |                 |        | Posterior              |    |                 |    |
| Ki67                   | SGZ       | Fig. S5A               |    |                 |        | Fig. S5B               |    |                 |        | Fig. S5C               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 6795 +/- 198.8         | 5  | 7463 +/- 332.3  | 5      | 2959 +/- 319.6         | 5  | 3040 +/- 206.5  | 5      | 3836 +/- 188.2         | 5  | 4423 +/- 219.9  | 5  |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.1229    |                        |    |                 | 0.8368 |                        |    |                 | 0.0772 |                        |    |                 |    |
|                        | Hilus     | Fig. S6A               |    |                 |        | Fig. S6B               |    |                 |        | Fig. S6C               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 475.2 +/- 46.97        | 5  | 541.8 +/- 29.08 | 5      | 144 +/- 36.34          | 5  | 225 +/- 26.24   | 5      | 331.2 +/- 17.17        | 5  | 316.8 +/- 35.82 | 5  |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.2624    |                        |    |                 | 0.1083 |                        |    |                 | 0.7264 |                        |    |                 |    |
|                        | oGCL      | Fig. S6G               |    |                 |        | Fig. S6H               |    |                 |        | Fig. S6I               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 70.2 +/- 8.249         | 5  | 113.4 +/- 26.33 | 5      | 16.2 +/- 8.726         | 5  | 43.2 +/- 15.69  | 5      | 54 +/- 14.23           | 5  | 70.2 +/- 20.6   | 5  |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.1561    |                        |    |                 | 0.1711 |                        |    |                 | 0.5358 |                        |    |                 |    |
|                        | Mol       | Fig. S6M               |    |                 |        | Fig. S6N               |    |                 |        | Fig. S6O               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 1235 +/- 82.36         | 5  | 995.4 +/- 108.1 | 5      | 513 +/- 43.72          | 5  | 358.2 +/- 24.05 | 5      | 721.8 +/- 66.59        | 5  | 637.2 +/- 393.5 | 5  |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.1162    |                        |    |                 | 0.0146 |                        |    |                 | 0.4647 |                        |    |                 |    |
| DCX                    | SGZ + GCL | Fig. S5D               |    |                 |        | Fig. S5E               |    |                 |        | Fig. S5F               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 39374 +/- 1381         | 5  | 38768 +/- 1763  | 5      | 18396 +/- 1063         | 5  | 20230 +/- 732.3 | 5      | 20878 +/- 2418         | 5  | 18581 +/- 1297  | 5  |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
| 0.7934                 |           |                        |    | 0.1931          |        |                        |    | 0.4268          |        |                        |    |                 |    |
| BrdU                   | SGZ       | Fig. S5G               |    |                 |        | Fig. S5H               |    |                 |        | Fig. S5I               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 1091 +/- 44.96         | 10 | 1048 +/- 67.9   | 10     | 700.2 +/- 38.55        | 10 | 666 +/- 59.38   | 10     | 386.1 +/- 30.31        | 10 | 381.6 +/- 27.86 | 10 |
|                        |           | t-test (p-value)       |    |                 |        | Mann-Whitney (p-value) |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.6022    |                        |    |                 | 0.8108 |                        |    |                 | 0.9142 |                        |    |                 |    |
|                        | Hilus     | Fig. S6D               |    |                 |        | Fig. S6E               |    |                 |        | Fig. S6F               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 115.2 +/- 18.39        | 10 | 141.3 +/- 28.27 | 10     | 50.4 +/- 13.16         | 10 | 51.3 +/- 12.87  | 10     | 63 +/- 8.161           | 10 | 90 +/- 21.17    | 10 |
|                        |           | Mann-Whitney (p-value) |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.7516    |                        |    |                 | 0.9615 |                        |    |                 | 0.2495 |                        |    |                 |    |
|                        | oGCL      | Fig. S6J               |    |                 |        | Fig. S6K               |    |                 |        | Fig. S6L               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 75.6 +/- 12.74         | 10 | 54 +/- 10.82    | 10     | 36 +/- 7.707           | 10 | 30.6 +/- 8.818  | 10     | 39.6 +/- 9.506         | 10 | 23.4 +/- 4.49   | 10 |
|                        |           | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |        | t-test (p-value)       |    |                 |    |
|                        | 0.2126    |                        |    |                 | 0.6503 |                        |    |                 | 0.1407 |                        |    |                 |    |
|                        | Mol       | Fig. S6P               |    |                 |        | Fig. S6Q               |    |                 |        | Fig. S6R               |    |                 |    |
|                        |           | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |        | Sham                   |    | LFPI            |    |
|                        |           | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n      | Mean +/- SEM           | n  | Mean +/- SEM    | n  |
|                        |           | 301.5 +/- 58.71        | 10 | 257.4 +/- 21.14 | 10     | 154.8 +/- 48.61        | 10 | 122.4 +/- 21.56 | 10     | 139.5 +/- 17.56        | 10 | 135 +/- 15.93   | 10 |
|                        |           | Mann-Whitney (p-value) |    |                 |        | Mann-Whitney (p-value) |    |                 |        | Mann-Whitney (p-value) |    |                 |    |
|                        | 0.7246    |                        |    |                 | 0.9558 |                        |    |                 | 0.6669 |                        |    |                 |    |