

## S2 Table

**Micronuclei and Epigenetic Modifications.** Changes in abundance of micronuclei and epigenetic modifications during the first week of lamprey development.

| Days post fertilization | Number of primary nuclei | Number of micronuclei |       |           |                 | Change in MNi abundance relative to previous time point | Proportion of MNi 5MeC+                         |                      | Proportion of MNi H3K9me3+ |                      |
|-------------------------|--------------------------|-----------------------|-------|-----------|-----------------|---|---|----------------------|----------------------------|----------------------|
|                         |                          | Total                 | 5MeC+ | H3K9 me3+ | 5MeC+ H3K9 me3+ |   | (95% Bayesian central confidence interval (CI)) | Change from previous | (95% CI)                   | Change from previous |
| 1                       | 18                       | 8                     | 0     | 5         | 0               | -   | <b>0.00</b> (0.00-0.34)                         | -                    | <b>0.63</b> (0.30-0.86)    | -                    |
| 1.5                     | 70                       | 101                   | 7     | 57        | 0               | 0.19**  | <b>0.07</b> (0.03-0.14)                         | 0.07                 | <b>0.57</b> (0.47-0.66)    | -0.06                |
| 2                       | 103                      | 155                   | 96    | 2         | 0               | 0.00  | <b>0.62</b> (0.54-0.69)                         | 0.55**               | <b>0.01</b> (0.004-0.05)   | -0.55**              |
| 2.5                     | 118                      | 114                   | 62    | 4         | 0               | -0.05   | <b>0.54</b> (0.45-0.63)                         | -0.08                | <b>0.04</b> (0.01-0.09)    | 0.02                 |
| 3                       | 191                      | 146                   | 48    | 5         | 1               | -0.22**   | <b>0.33</b> (0.26-0.41)                         | -0.22**              | <b>0.03</b> (0.02-0.08)    | 0.00                 |
| 5                       | 134                      | 71                    | 3     | 2         | 2               | -0.29**   | <b>0.04</b> (0.02-0.12)                         | -0.29**              | <b>0.03</b> (0.01-0.10)    | -0.01                |
| 7                       | 209                      | 23                    | 0     | 0         | 0               | -0.07   | <b>0.00</b> (0.00-0.14)                         | -0.04                | <b>0.00</b> (0.00-0.14)    | -0.03                |

\*\* Pearson's  $\chi^2$  p<0.01