**Supplementary File 7.** MDS-IES pairs share homologous sequences in the three species (related to Figure 4 - figure supplement 2).

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|  |  |  |  |
| --- | --- | --- | --- |
|  | *E. woodruffi* | *Oxytricha* | *Tetmemena* |
|  | recent -> ancestral | recent -> ancestral |
| similar lengtha | all  | Group 1b | Group 2 | Group 3 | Group 1 | Group 2 | Group 3 |
| # MDS-IES pairs | 248 | 504 | 370 | 4055 | 520 | 1005 | 3222 | 369 |
| # pairs with a homologous core sequence | 224 | 272 | 17 | 20 | 2 | 16 | 20 | 2 |
| Ratio | 90.32% | 53.97% | 4.59% | 0.49% | 0.38% | 1.59% | 0.62% | 0.54% |
| G test with Williams correction *p-value* | - | - | 9.09e-09 | 0.022 |

a MDS length is between 0.8 \* IES length and 1.2 \* IES length.

b MDS-IES pairs were dated on a phylogenetic tree as shown in Figure 4 - figure supplement 2C.