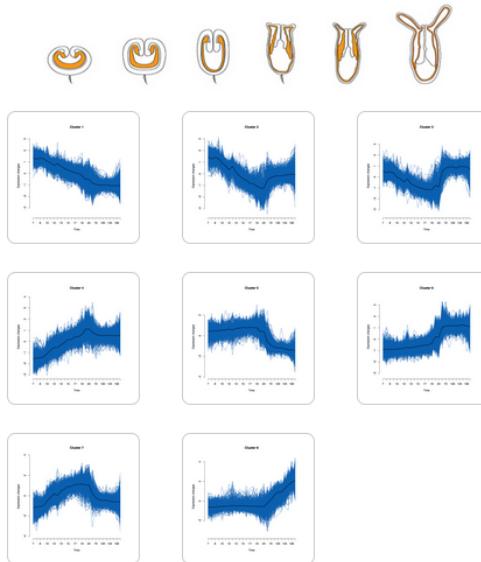
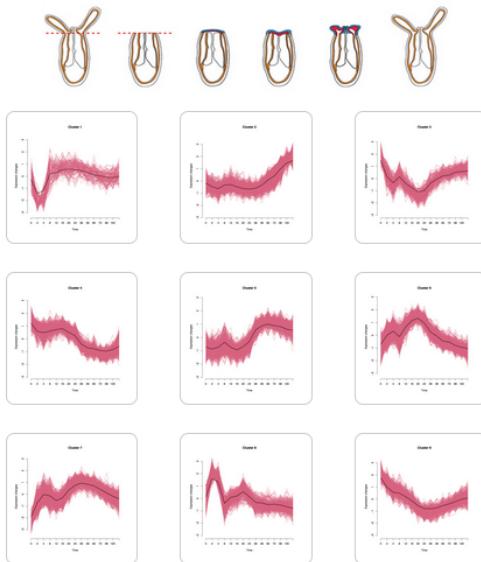


A

Embryogenesis**Regeneration**

Bi

Bii

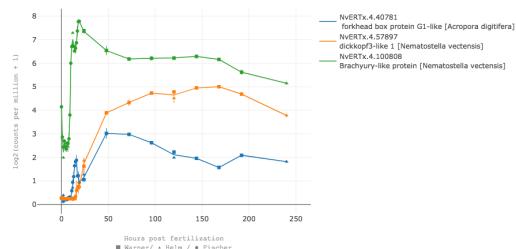
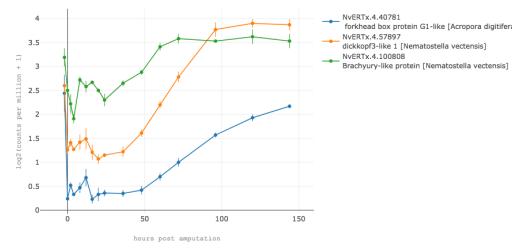
Embryonic Expression**Regeneration Expression**

Figure S1: The NvERTx Co-Expression Clusters Page. A) Screen shot of the Co-expression Clusters page. Users can directly explore co-expression clusters to identify groups of genes that share expression patterns during embryogenesis (blue) or regeneration (red). B) Example output plots from NvERTx comparing multiple gene expression patterns. Three genes from regeneration cluster 2, *Nvbra* (NvERTx.4.100808, yellow), *Nvdickkopf3* (NvERTx.4.57897, red), and a FoxG1-like protein (NvERTx.4.40781, blue) are co-expressed during regeneration (i) but not embryogenesis (ii).

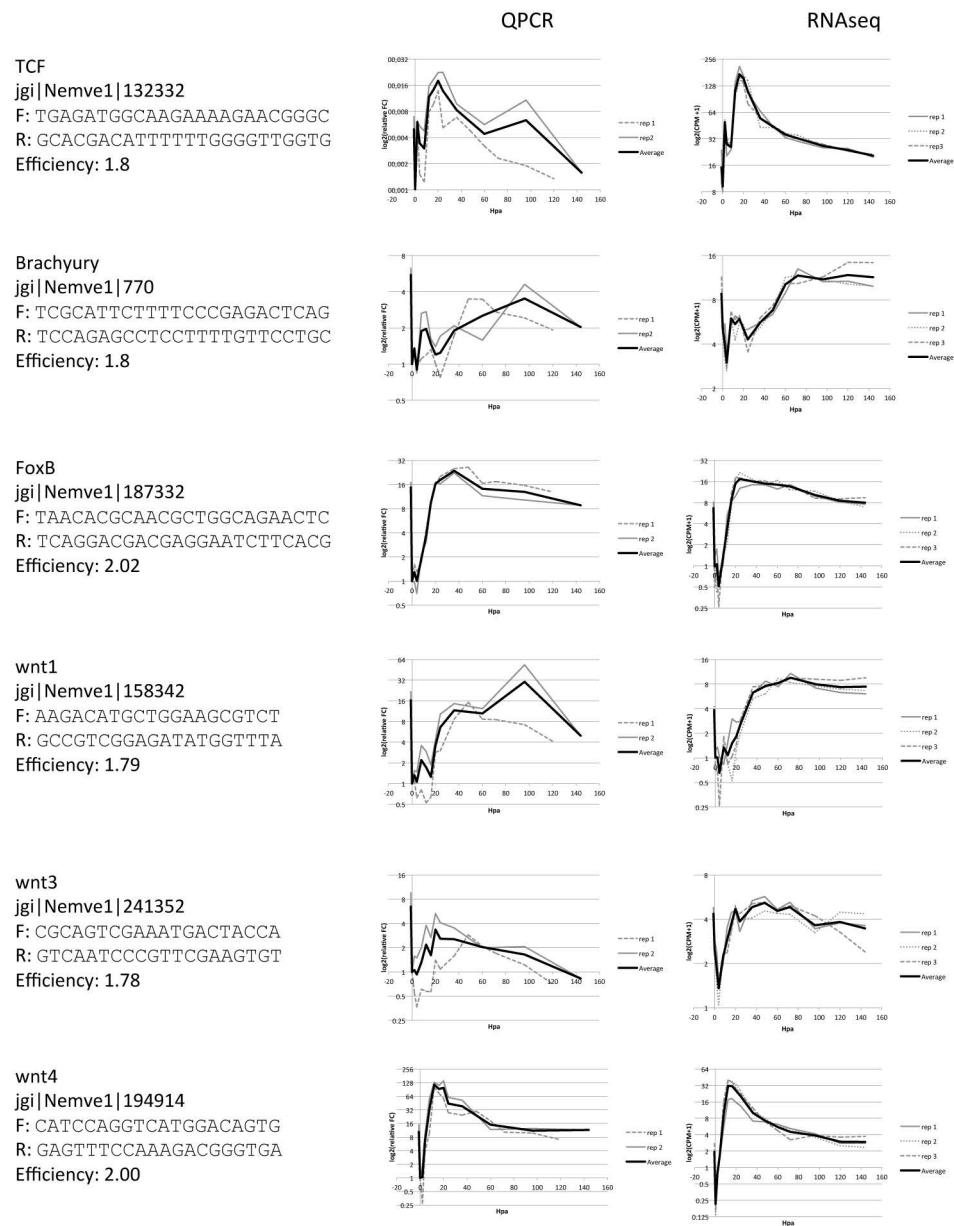


Figure S2: RT-QPCR of selected genes compared to regeneration RNAseq data. RT-QPCR traces (replicates grey, average black) are shown in terms of $\log_2(\text{relative fold change})$ versus hours post regeneration (Hpa). RNAseq traces (replicates grey, average black) are shown in terms of $\log_2(\text{counts per million} + 1)$ versus Hpa.

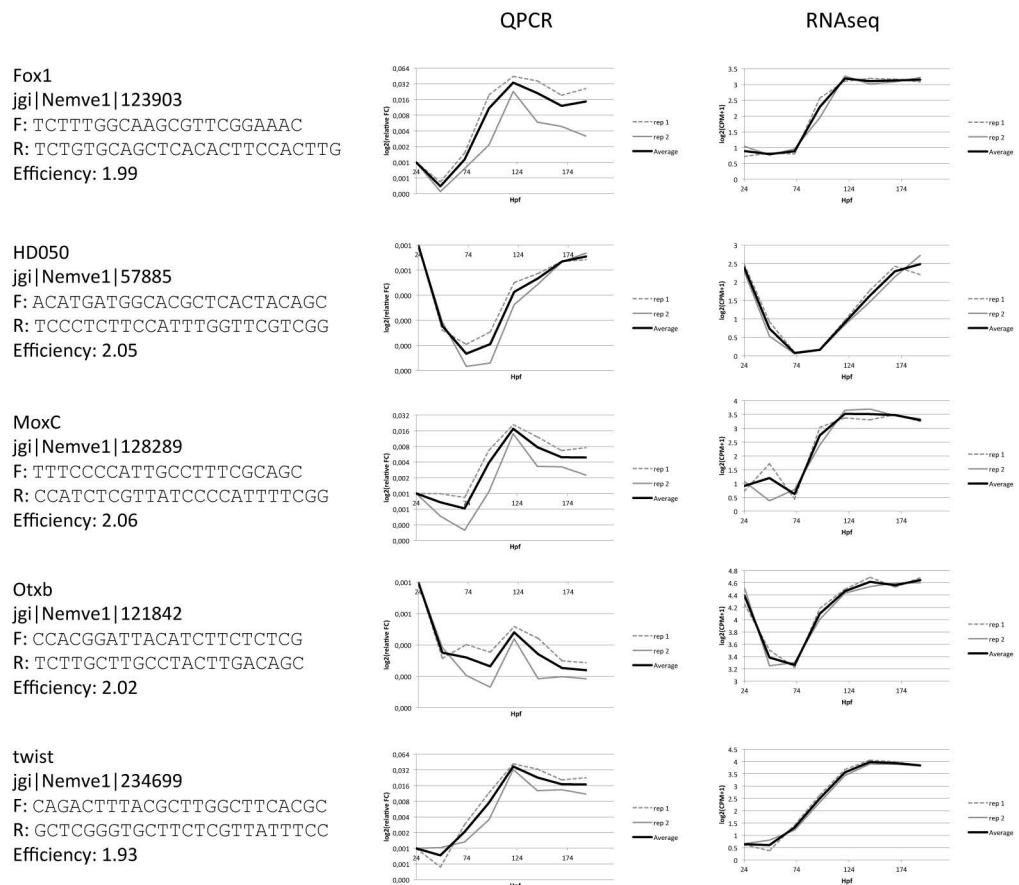


Figure S3: RT-QPCR of selected genes compared to embryogenesis RNAseq data (Warner dataset). RT-QPCR traces (replicates grey, average black) are shown in terms of $\log_2(\text{relative fold change})$ versus hours post fertilization (Hpf). RNAseq traces (replicates grey, average black) are shown in terms of $\log_2(\text{counts per million} + 1)$ versus Hpf.

Table S1: Assembly statistics from Trinity assembly.

<i>N50</i>	1678
<i>Median contig length</i>	384
<i>Average contig length</i>	837.30
<i>Total assembled bases</i>	196247212

Table S2: NvERTx.4 annotation statistics. 234,381 transcripts map to 19,565 unique Nemve1 genes.

<i>Total assembled transcripts</i>	234381
<i>Transcripts with ORF</i>	231294
<i>Transcripts without ORF</i>	3087
<i>Transcripts with hit to nr</i>	85475
<i>Transcripts with hit to uniprot</i>	69335
<i>Transcripts with hit to Nemve1</i>	102581
<i>Unique Nemve1 'genes'</i>	19565
<i>Transcripts without annotation</i>	110531