

## Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: List of module 27 TEs. TEs significantly associated with module 27 are listed along with their module membership score.

File name: Supplementary Data 2

Description: List of module 27 genes. Genes significantly associated with module 27 are listed along with their module membership score.

File name: Supplementary Data 3

Description: Differentially expressed genes from the scRNA-seq larval testes dataset. Differentially expressed genes for each cluster compared to the union of all other clusters, as identified by scanpy are listed in this table. Two-sided tests of significance were performed and both unadjusted and adjusted p values are provided.

File name: Supplementary Data 4

Description: RNAFISH probes. Target and probe sequences used for RNA-FISH along with design parameters.