



**Supplementary Figure S4.** GSEA-GO analysis in the different germ cell clusters of the young and old datasets; related to Fig. 3. (A–D) Representative aging-associated GO terms of DEGs in Diff-SPGs (A), SPCs (B), RSs (C), and ESs (D). Dot size indicates the range of  $-\log_{10}$  (adjusted P-value). The colour keys, ranging from grey to red (top) or grey to blue (bottom), indicate the absolute value of the NES. GSEA, Gene set enrichment analysis; GO, gene ontology; NES, normalized enrichment score; DEGs, differentially expressed genes.