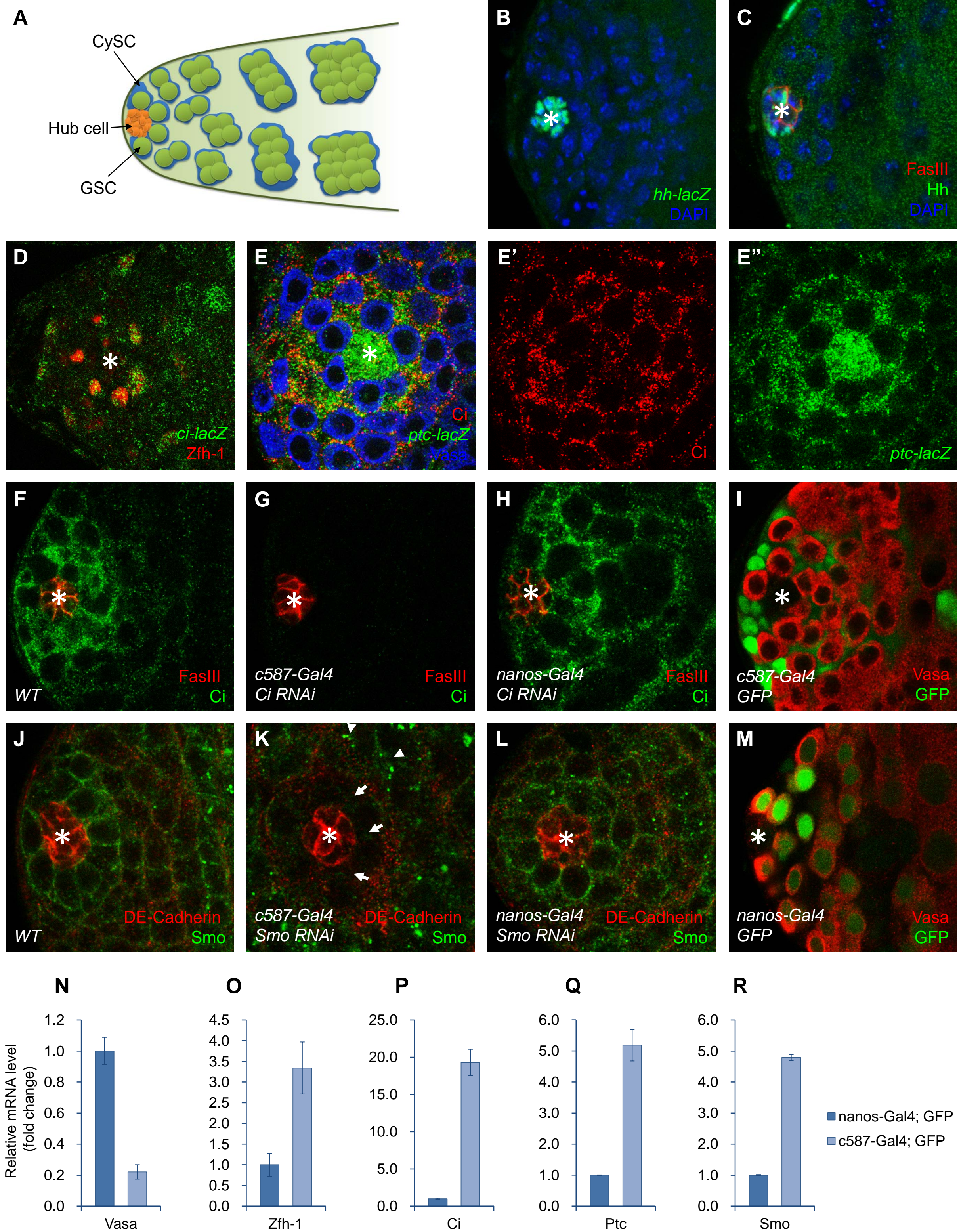


# Supplementary information



## Supplementary information

### Figure S1 Hub cells derived Hh is received by cyst cells in *Drosophila* testis.

(A) A diagram shows the stem cells and niche of testis tip. (B) *hh-lacZ* (green) is expressed in the hub cells, which show a relative small and tight DAPI staining (blue). (C) Hh protein (green) accumulates in the hub cells. The hub cells are identified by FasIII (red) and DAPI (blue). (D) Zfh-1 (red) accumulates to high levels in CySCs and merges with *ci-lacZ* (green) staining. (E-E'') *ptc-lacZ* (green) staining co-localizes with Ci (red) and occupies the intervals of germline specific Vasa (blue). (F-H) Wildtype (F) or *Ci RNAi* expressed by *c587-Gal4* (cyst cells specific) (G) or *nanos-Gal4* (germline cells specific) (H) testes are immunostained to show Ci (green) and FasIII (red). Ci staining is abolished in *c587-Gal4; Ci RNAi* testis. (I) GFP shows the expression region of *c587-Gal4*, which is separated by Vasa (red). (J-L) Wildtype (J) or *Smo RNAi* expressed by *c587-Gal4* (K) or *nanos-Gal4* (L) testes are immunostained to show Smo (green) and DE-Cadherin (red, another marker of Hub). *c587-Gal4; Smo RNAi* testis shows a reduction of Smo around the hub cells (arrows), though some Smo staining still exists far from the hub cells (arrowheads). (M) *nanos-Gal4* expressed in germline cells, as reveals by GFP (green) and merges with Vasa (red). (N-R) Relative mRNA levels of indicated genes from FACS sorted *c587-Gal4; GFP* or *nanos-Gal4; GFP* positive cells are shown. Data are collected by realtime PCR and present as Mean  $\pm$  SEM,  $n \geq 3$ . All the apexes of testes are positioned to the left and asterisks indicate the hub cells.