

**Fig. S2. Morphological alteration of the constricted region and M4B during symbiont colonization in 2**<sup>nd</sup> **instar nymphs of** *R. pedestris.* (a-i) A GFP-labelled *Burkholderia* symbiont was orally administered, and the infection dynamics and morphogenesis of the M4B region were observed. Merged fluorescence and DIC images are shown. M4B is closed during symbiont infection (c-f) and reopened by backflow of symbiont cells during the colonization (g-i). Abbreviations: M3, midgut 3<sup>rd</sup> section; M4, midgut 4<sup>th</sup> section; CR, constricted region; M4B, M4 bulb. Bars: 0.1 mm.