



**Figure S7** The melanic phenotype of *G. holbrooki*.

(A-D) Transmission electron microscopy images of sections of male *G. holbrooki* (WLC2514) skins. (A,B) Melanic, (C,D) wildtype male. The skin layers are named according to (KOTTLER *et al.* 2014). (E-H) Development of macromelanocytes in a newborn male (WLC2514). (E) Male at the day of birth; no macromelanocytes are visible. (F) Two days after birth; macromelanocytes start to appear on the caudal peduncle (white arrow). (G,H) Nine days after birth; the macromelanocyte pattern has enlarged. Pictures were taken under incident light conditions. E, epidermis; I, iridophores in the hypodermis; Md, melanocyte in the dermis; Me, melanosome; Mh, melanocyte in the hypodermis; Mu, muscle; S, scale; SC, stratum compactum of dermis. Scale bars: (A) 5  $\mu$ m, (B) 500 nm, (C) 6  $\mu$ m, (D) 500 nm, (E) 1 mm, (F) 500  $\mu$ m, (G) 1 mm, (H) 500  $\mu$ m.

## Reference

Kottler, V. A., I. Koch, M. Flötenmeyer, H. Hashimoto, D. Weigel *et al.*, 2014 Multiple pigment cell types contribute to the black, blue, and orange ornaments of male guppies (*Poecilia reticulata*). PLoS One 9: e85647.