Transcript levels of GPCRs with a potential relevance in reproduction were shown for the mature stages of the dioecious trematode *S. mansoni* and the hermaphrodite trematode *F. hepatica* using recently published RNAseq data sets [32, 80]. Orthologs shared by both species are shown as triangles. Orthologs of the bF-group are among the most abundantly transcribed GPCRs in adult *F. hepatica* and female *S. mansoni*, while GPCRs of the sM-bM-sF group showed a wider range of expression in the hermaphrodite compared the dioecious stages. GPCRs of the sT-bT group exhibited generally low transcript levels. This is explained by the small fraction of testis tissue in adult trematodes. The occurrence of male gonad-associated transcripts in the female, and *vice versa*, indicate additional biological functions of these GPCRs.