## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Sample manifest for the samples used in the study

File Name: Supplementary Data 2

Description: Seurat markers identified by "ROC" test

File Name: Supplementary Data 3

Description: Literature markers used to help identify schistosomula populations

File Name: Supplementary Data 4

Description: Cloning information for all markers used for validation

File Name: Supplementary Data 5

Description: Orthologous genes for S. mediterranea and S. mansoni used in the Random Forest Analysis

File Name: Supplementary Data 6

Description: Manually curated marker genes for representative populations between S. mediterranea

(Plass, et al., 2018) and S. mansoni

File Name: Supplementary Data 7

Description: The number of independent in situ hybridization experiments performed