

Supporting Information

Synergy of Omeprazole and Praziquantel *in vitro* Treatment Against *Schistosoma mansoni* Adult Worms

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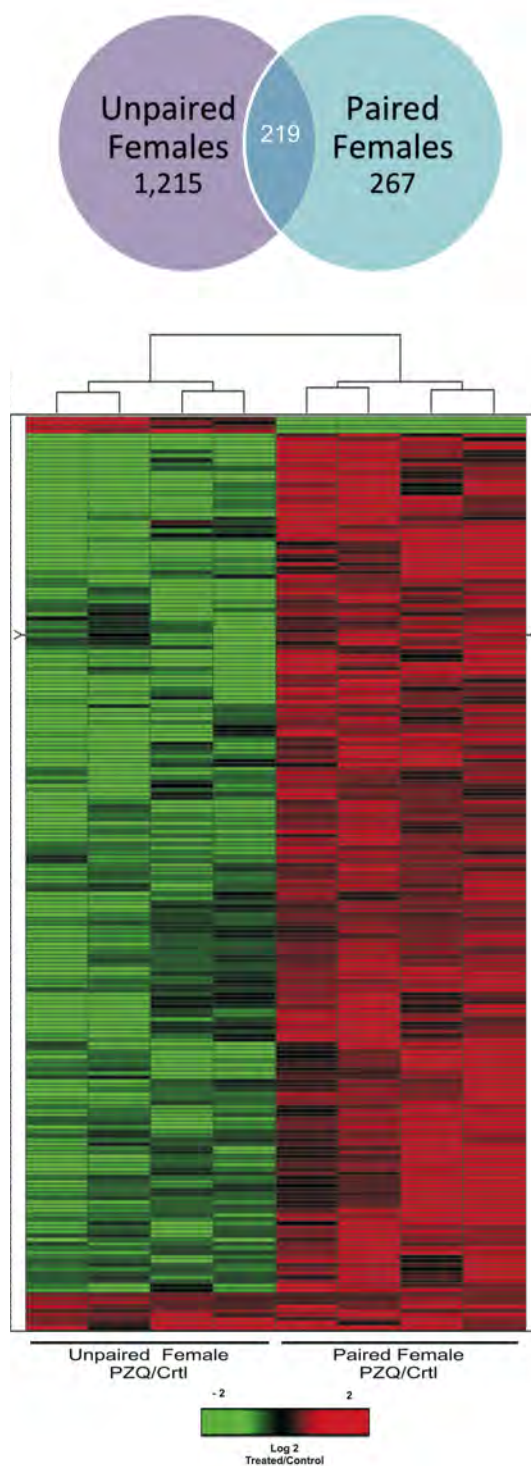


Fig A – Differentially expressed genes detected in paired and unpaired mature *S. mansoni* females. (Upper) Venn diagram of the genes affect by PZQ in both paired and unpaired mature females, when compared with their respective no-drug controls. **(Lower)** Heat map of 219 differentially expressed genes affect by PZQ in both experimental conditions, namely paired females and unpaired mature females.

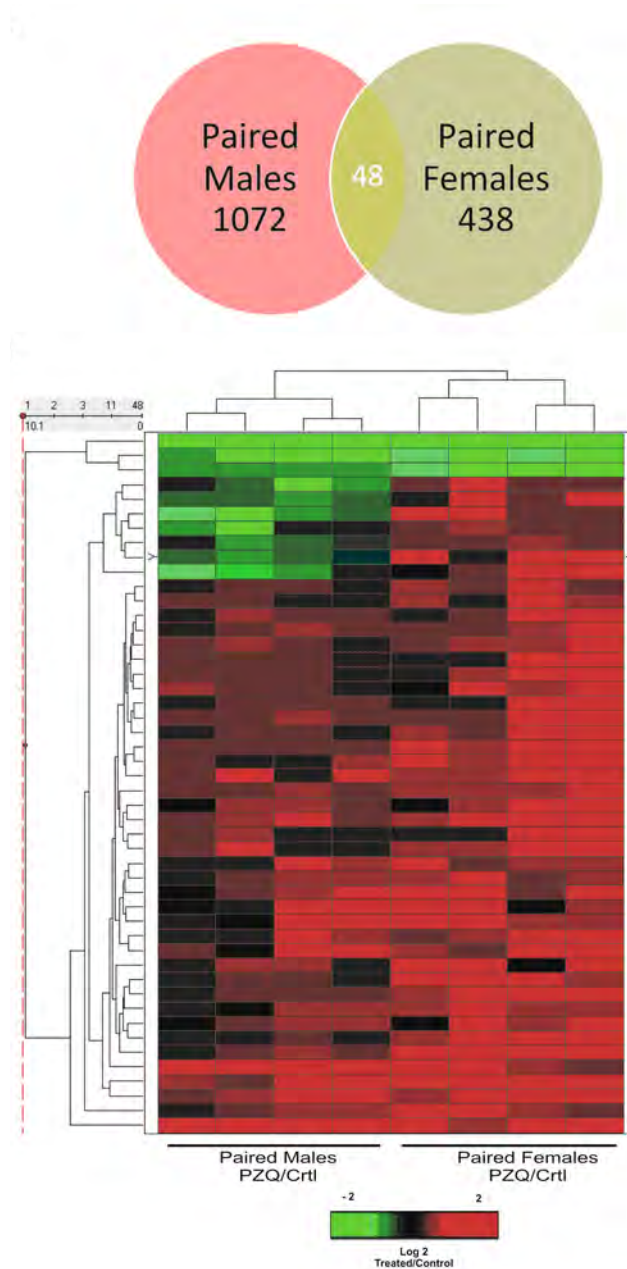


Fig B – Differentially expressed genes detected in paired male and female adult worms. (Upper) Venn diagram of the genes affect by PZQ in paired males and paired females, when compared with their respective no-drug controls. **(Lower)** Heat map of 48 differentially expressed genes affected in both experimental conditions (paired males and females).

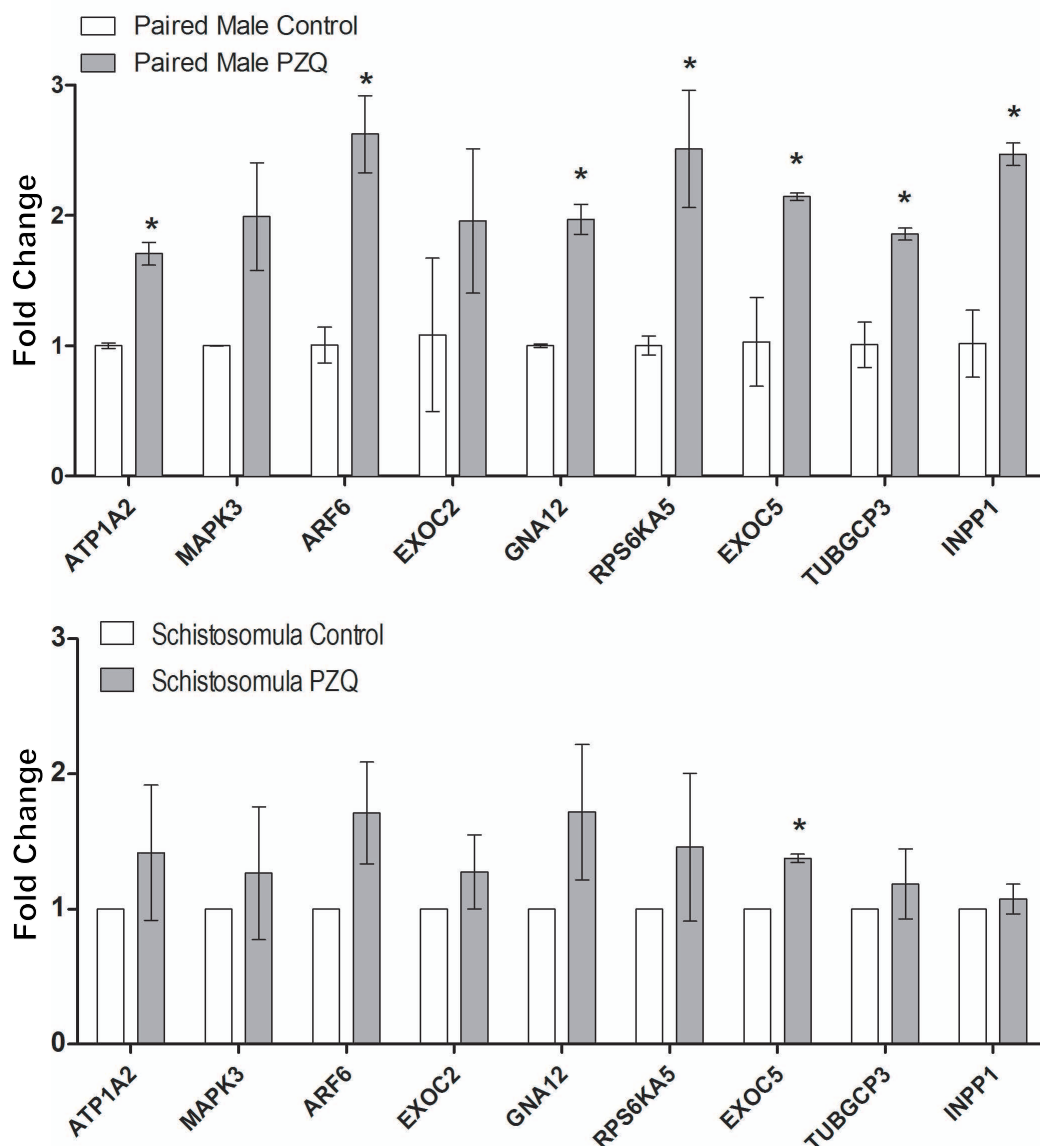


Fig C - Measurement by Reverse Transcription Real Time PCR of the expression changes induced by PZQ treatment in *S. mansoni*. (Upper) Genes affected by PZQ in paired males, when compared to their non-treated control. **(Lower)** Genes affected by PZQ in 3h old schistosomula, when compared with their non-treated controls. A t-test was used to calculate the significance of the difference between PZQ and Control (n = 2 biological replicates, with 3 technical replicates each); genes with significant difference (p < 0.05) are marked with asterisks.

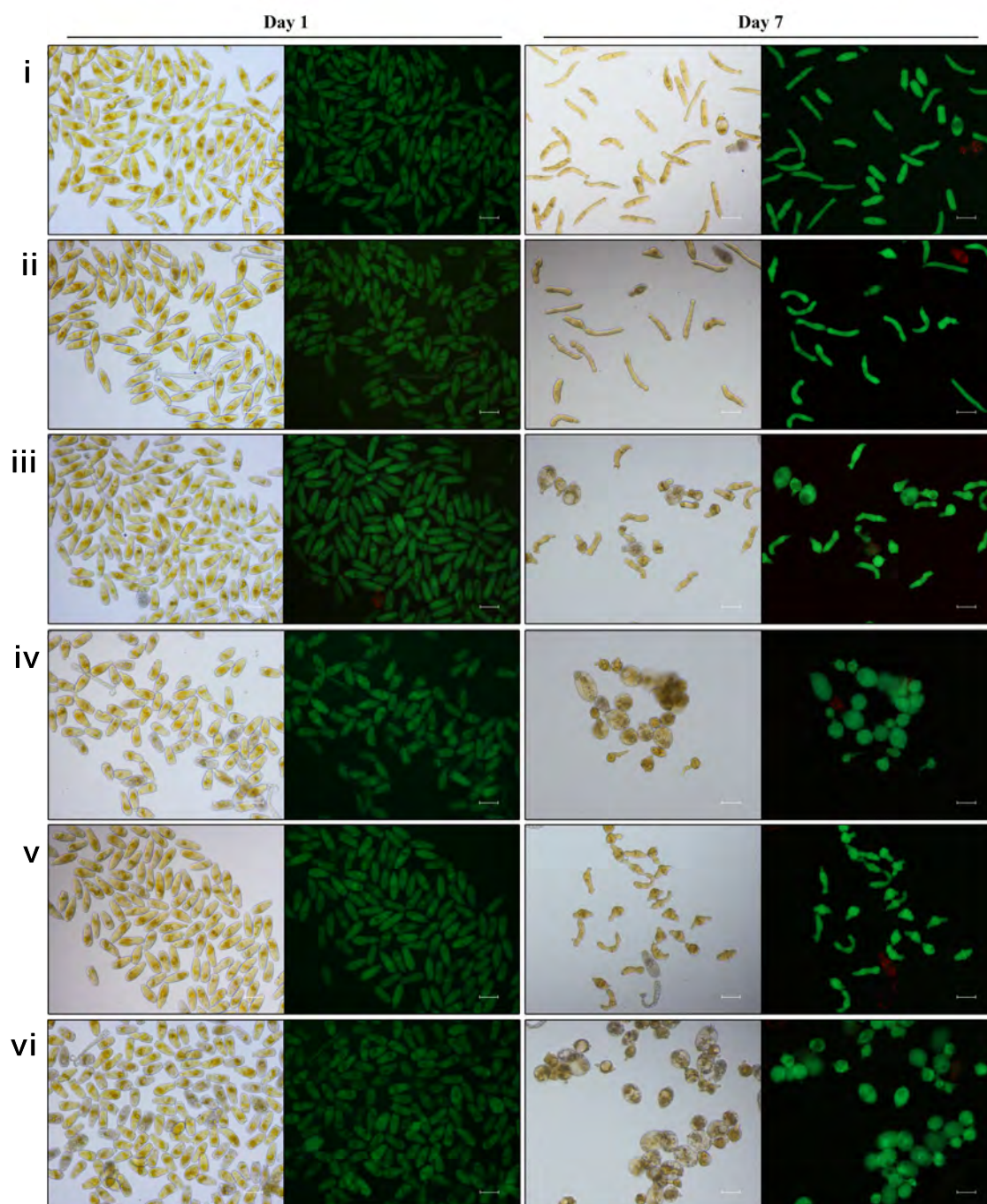


Fig D - Schistosomula viability after 1 day and 7 days treatment with OMP or OMP+PZQ. Schistosomula were photographed on day 1 (columns 1 and 2) or on day 7 (columns 3 and 4) after treatment. Columns 1 and 3 show light microscopy images; columns 2 and 4 show green fluorescence of FDA from live cells, and red fluorescence of PI from dead cells. (i) negative control with no drugs; (ii) 25 $\mu\text{g/ml}$ OMP; (iii) 150 or (iv) 532 ng/ml PZQ; (v) 25 $\mu\text{g/ml}$ OMP + 150 ng/ml PZQ; and (vi) 25 $\mu\text{g/ml}$ OMP + 532 ng/ml PZQ. The calibration bar shows 100 μm .

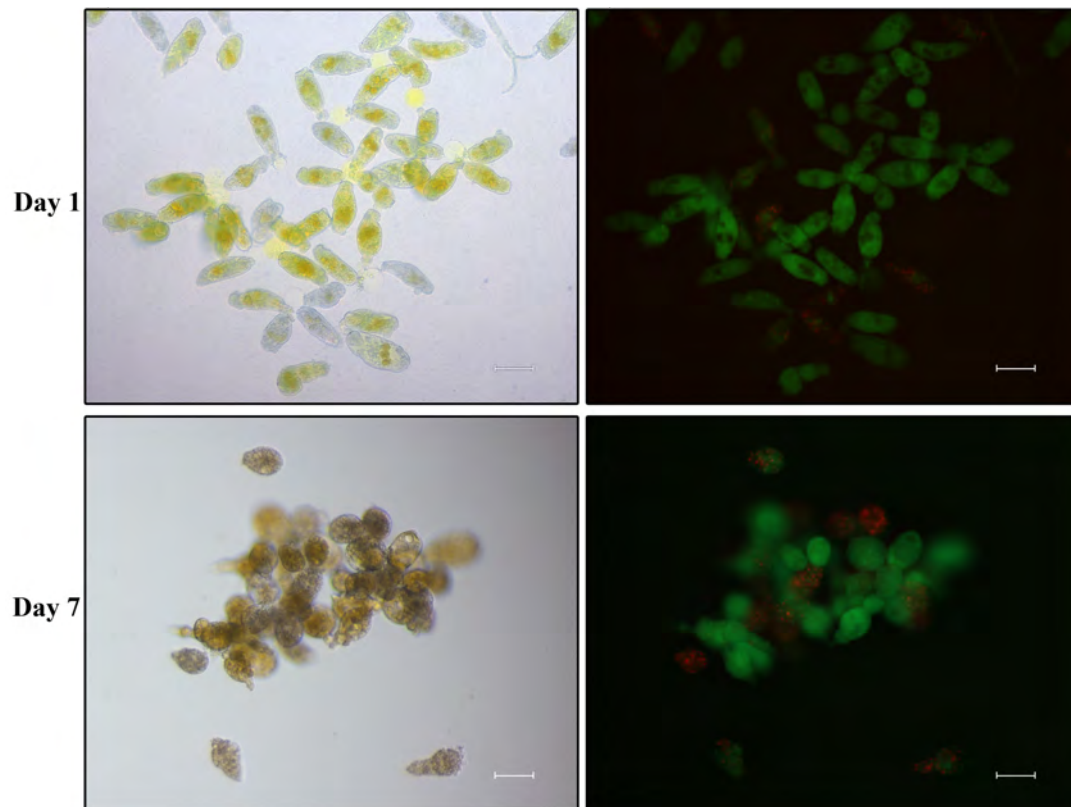


Fig E - Schistosomula viability in a positive control assay with an extremely high concentration of PZQ. Schistosomula were treated with 10 $\mu\text{g/ml}$ PZQ (20 to 60 X higher than the sub-lethal test concentrations of the other experiments) and photographed after 1 day (top panels) and 7 days (bottom panels). On day 1 all schistosomula remained viable. Approximately 30% of the larvae were dead on day 7. **(Left)** Light microscopy at days 1 and 7. **(Right)** Green fluorescence of FDA from live cells, and red fluorescence of PI from dead cells, at days 1 and 7. The calibration bars show 100 μm .