

APPENDIX A:

Supplementary Table 1: Qualitative representation of predominant ‘up-regulated’ transcripts (vertical arrows) organized by specific biological functions in intramolluscan larval stages of *S. mansoni* miracidia, 4 day-sporocysts (mira and spo-4d, respectively; Vermeire *et al.* 2006), 6- and 20-day old sporocysts (spo-6d and spo-20d, respectively; Williams *et al.* 2006; Taft *et al.* 2009), secondary sporocysts and cercariae (2nd spo and cerc, respectively; Jolly *et al.* 2007), *S. japonicum* miracidia, sporocysts and cercariae (Gobert *et al.* 2009), and female (cerc-fem) and male (cerc-male) cercariae of *S. mansoni* (Fitzpatrick *et al.* 2008).

Biological function	Example of proteins	<i>S. mansoni</i>					<i>S. japonicum</i>			<i>S. mansoni</i>		
		mira	spo-4d	spo-6d	spo-20d	2 ^d spo	cerc	mira	spo	cerc	cerc-female	cerc-male
Anti-oxidants	Glutathione peroxidase 1 (GPX)	↑		↑	↑							
	Peroxiredoxins (Prxs)		↑	↑	↑							
	Translationally-controlled tumor protein	↑	↑	↑	↑							
	Thioredoxin					↑				↑		
	GST26			↑	↑							
	GST28			↑	↑	↑						
	Cu/Zn SOD		↑	↑	↑							
	Sec SOD	↑										
	Mn SOD			↑								
	PRx1		↑	↑	↑							
	Prx2		↑		↑							
	Glycerol 3 phosphate dehydrogenase	↑				↑	↑					
	Chaperone/heat shock protein	p40 egg antigen (HSP27)	↑									
HSP90		↑				↑						
HSP40/DnaJ		↑										
HSP70/BiP		↑				↑						↑
USP (universal stress protein-like)		↑										
Cytochrome C copper chaperone											↑	
Carbohydrate metabolism/energy production	Glycogen phosphorylase homologues	↑										
	Triose phosphate isomerase	↑					↑	↑	↑			
	Phosphoglucomutase	↑										
	Phosphoenol pyruvate carboxykinase	↑										
	Carboxykinase (PEPCK)	↑										
	Glycoprotein kappa-5	↑										
	ATP-synthase lipid binding protein					↑						
	High mobility group-like prot. 2					↑						
	Cytochrome b					↑						
	Cytochrome c		↑	↑	↑	↑	↑	↑	↑	↑		
	NADH dehydrogenase 4					↑↑	↑					
	NADH dehydrogenase 5/6					↑6	↑5/6				↑5	
	ATPase subunit6					↑↑	↑					
LDH	↑											

Calcium interactive protein	SME16	↑													
	Calcineurin B	↑													
	Calreticulin		↑	↑	↑										
	Calmodulin		↑	↑	↑				↑	↑					
	8KD-Ca bp containing EF-hand domains								↑						
	Calcium channel beta subunit 2	↑													
	Calcium ATPase	↑													
	Calponin homologue								↑	↑		↑			
Protease	16 Kd ca-binding protein	↑													
	Cathepsin		↑ ^C	↑	↑	↑						↑(L)	↑(L)		
	Elastase		↑	↑	↑	↑									
	Preprocathepsin		↑	↑	↑										
	Serine-enzyme								↑					↑	
	Succinate dehydrogenase	↑													
	Esterase a												↑		
Motility	Enolase							↑↑	↑						
	Dynein light chain (Sj21·7 and Sm10)									↑	↑				
	Muscle glycogen phosphorylase -like	↑								↑					
	Monocarboxylate transporter									↑					
	Plexin domain										↑↑				
	Pyruvate kinase										↑	↑			
	UDP-glucose dehydrogenase										↑	↑			
	Leu transmembrane prot 1											↑			
	Dynamin 1												↑↑		
	Actin bp 1												↑↑		
	Glutamine synthetase												↑		
	Sj16 anti inflamm									↑		↑			
	Tubulin beta chain							↑↑	↑						
	Actin-F							↑↑	↑				↑		
	Fibrillarlin							↑↑	↑					↑	
	Myosin light chain	↑						↑	↑						
	Myosin heavy chain							↑↑	↑						
	Other	Polo-like kinase		↑	↑	↑									
		14.3.3 fatty acid binding protein		↑	↑	↑									
Stathmin-like protein spo1								↑↑	↑						
ATP guanidokinase								↑	↑						
Phosphofructokinase		↑													
Endothelin B receptor													↑		
Rho3		↑													
Sm16 anti-inflammatory glycoprot.									↑↑	↑		↑			
Flavo-hemoglobin															
MGE,													↑		
Egg secreted protein 3-6		↑											↑		
Insulin-like peptide receptor										↑					

Manipulation of gene expression in larval Schistosoma