# USE OF OXIDATIVE STRESS AS NEW TOOL TO PARASITICIDE ACTION UPON *Schistosoma mansoni*

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Schistosomiasis is the second most prevalent parasitic disease in the world and approximately 5 million infected people live in Brazil. As drug-resistant parasite rise during sub-curative therapy, refractory cases are becoming more frequent in several regions. It was previously shown that quinoline drugs (QD) inhibit hemozoin formation, one of the main pathways of heme detoxification in *S. mansoni*. Here we tested several QD associated with a pro-oxidant drug (POD-1) to achieve a possible synergic effect that would be used as a new treatment against schistosomiasis. Either QD or POD-1 alone showed a little effect on the viability of cultured *S. mansoni*, assessed by phase microscopy, scanning (SEM) and transmission electron microscopy (TEM). Adult worms treated with QD isolated presented many necrotic foci and tegumental nanoanatomy was remarkably altered, with worm surface blebbing and peeling clearly demonstrated by SEM. QD- POD-1 association leads to a increased mortality (60- 100% of cultured worms) as compared with only one drug treatment (0- 25% of mortality). Together, these data show that QD- POD-1 association can be a new possible therapeutic strategy against schistosomiasis.

Supported by: FIOCRUZ, PROCAD-CAPES, FAPESB, WHO-TDR-SSI and CNPq