

# Identification of a *Schistosoma mansoni* worm surface antigen involved in immune-dependent chemotherapy of experimental schistosomiasis

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One strategy schistosome worms may use to evade the immune response is the adoption of a heptalaminate surface membrane in order to conceal key surface tegumental proteins. Praziquantel causes damage to the outer worm membrane exposes some normally masked antigens allowing them to be recognized by antibodies. Parasite death results from synergistic action between the drug and the antibodies. Here we report characterization of worm surface antigens that putatively induced synergistically-active antibodies in rabbits that had been infected with *S. mansoni* cercariae. We employed the rabbit-*S.mansoni* model using an immune-proteomic approach to identify the key targets in the parasite's crude extracts and on the surfaces of PZQ-treated adult worms and *in vitro* mechanically-transformed schistosomula. The rabbit antisera reacted predominantly against a 30kDa molecule that was purified and identified by tandem mass spectrometry (MS/MS) as Sm29. Antibodies against this antigen could be potential immune-effector candidates acting synergistically with PZQ and may culminate in protection.