

*Schistosoma mansoni* **CERCARIA IS ABLE TO SYNTHESIZE AND SECRETE PHOSPHOLIPIDS.**

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Schistosomiasis is an infectious disease caused by several species of *Schistosoma*. It is estimated that 200 million people are infected worldwide. Few biochemical studies were performed to disclose the lipid metabolism of the *Schistosoma* species during the infection cycle. In this work, we have analyzed the synthesis and secretion of phospholipids from cercaria of *Schistosoma mansoni*.

The *S. mansoni* cercarias were obtained from infected snails using light induction and incubated with inorganic phosphate,  $^{32}\text{P}_i$  for 30 minutes. After centrifugation, the cercaria cells (pellet) and its secretion (supernatant) were separated; and both subjected to a lipid extraction. The labeled lipids were separated by high performance thin-layer chromatography (HPTLC) for phospholipids. The HPTLC plate was autoradiographed and analyzed by densitometry. Phosphatidylcholine and phosphatidylethanolamine were the major phospholipids present in the cercaria secretion.

Furthermore, the uptake of phospholipids from cercaria cells was also studied using microscopy. *S. mansoni* cercaria cells were incubated with phosphatidylcholine conjugated with bodipy labeled fatty acid for 30 minutes. After that, the cells were visualized using a fluorescence microscope. The fluorescent labeling was diffusely distributed in the entire cercaria. Together our results indicated that *S. mansoni* cercarias are able to synthesize phospholipids and secrete them. Besides, the cells can also take up phospholipids from incubation medium. The purification of a phospholipase from cercaria secretion is currently under investigation.

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