

Abstract

The blood flukes of the genus *Schistosoma* are important parasites that cause serious chronic diseases in mammals, including humans, in tropical and subtropical countries. Treatment of these diseases is challenging; therefore, new molecular targets are still being sought for the development of vaccines and more effective drugs. To achieve this, better understanding of interactions between the parasite and the host at the molecular level is an important prerequisite. These processes can be studied by quantitative and qualitative determination of metabolite differences in healthy and infected individuals using metabolomics. The work represents a review of low molecular weight substances in tissues and body fluids of schistosome hosts, in which a change in concentration of metabolites putatively related to the infection was observed. Only metabolites with a hypothetical or known mechanism of these changes in the context of infection are covered. The thesis also includes a brief overview of basic methods of analytical chemistry, which are used in studies based on metabolomics.

Key words: *Schistosoma* spp.; intermediate host; definitive host; spectrometry; metabolomics; low molecular compounds