Abstract:

Schistosomatidae is a family of blood-dwelling trematodes which cause serious disease in humans and warm blooded animals. Human schistosomiasis affects over 258 million people worldwide. The fundamental pathological manifestations of the disease are not caused by adult worms, but by responses to antigens released from eggs, which remain trapped in the tissues. All stages of these parasites release excretory-secretory products, which mostly comprise of proteins which are, to a certain extent, species- and stage-specific. These products have many functions that play roles in successful transmission of the parasite and its interactions with the host. Various approaches to the collection and analysis of these molecules do not always accurately reflect the secretory processes in vivo, because they always employ in vitro techniques. The research of these secreted molecules discovered many mechanisms, through which the parasite successfully modulates and evades host immune system. Despite the fact, that many of these molecules were identified as potential vaccine candidates, still no sufficiently effective vaccine has been developed. With great technological advances used for the identification of these proteins, this area is becoming more and more topical. This review focuses on composition of excretory-secretory products of intravertebrate stages of schistosome parasites and on the importance of individual components for their biology.

Key words: Schistosoma, Trichobilharzia, schistosomiasis, antigen, excretory-secretory products, cercaria, schistosomulum, egg