Introduction And The aim of work

INTRODUCTION

Schistosomiasis is a chronic and debilitating disease that exacerbates poverty***(King, 2007).*** Although close to 800 million individuals are at risk of contracting the disease and over 200 million people are thought to be infected, schistosomiasis is often neglected(***Hotez et al., 2009).***

Morbidity due to schistosomiasis includes hepatic and intestinal fibrosis(*S. mansoni* and *S. japonicum*), and ureteric and bladder fibrosis and calcification of the genitourinary tract(*S. haematobium*) ***(Gryseels et al., 2006).***

In schistosomiasis, there is yet no vaccine available and the current mainstay of control is chemotherapy. Praziquantel(PZQ) is the drug of choice for the treatment of schistosomiasis ***(Utzinger et al., 2001),*** because of its safety, broad- spectrum activity, and reasonable cost(***Cioli, 2000).***

In view of concern about the development of tolerance or resistance(or both) to PZQ and because of the efficacy of PZQ against adult worms only, there is a need for the development of new drugs for the treatment of schistosomiasis, a number of compounds with promising antischistosomal properties have been identified ***(Xiao et al., 2007),*** the cysteine protease inhibitors and K11777alkylaminoalkanethiosulfuric acids(***Abdulla et al., 2007).***

In such areas, it might be possible the use of mefloquine which is anti malarial drug ***(White, 2008)*** also as antischistosomal drug ***(Xio et al., 2002).*** The antimalarials artemether and mefloquine have promising antischistosomal properties (***Keiser and Utzinger, 2007).***

However, the mechanisms of action of these schistosomicides are not yet known. Mefloquine might inhibit hemozoin formation ***(Keiser et al., 2009)*** and it has been shown that artemether interacts with haemin to

exert a toxic effect on schistosomes ***(Xiao et al., 2001).*** Interestingly, artemether also exhibits immunosuppressive activity (***Wang et al., 2009).***

Oral administration of a single dose of mefloquine(400mg/ kg) to mice infected with either juvenile or adult stages of *S. mansoni* and *S. japonicum,* two of the three most important schistosome species resulted in very high or complete total and female worm burden reductions(***Gryseels et al., 2006).***