ABSTRACT

Malaria, a global disease affecting 300-500 million and resulting in death of one to two million people annually, is caused by the protozoa, Plasmodium. The most deadly species Plasmodium falciparum is becoming increasingly resistant to drugs and it becomes essential to find out new antimalarial agents. Haemoglobin degradation is a parasite specific catabolic process and is very essential for the survival of parasite inside the human body. Two asparatic proteases from Plasmodium falciparum, Plasmepsin (Plm) I and II, initiate the degradation of haemoglobin. In this study, the haemoglobin degrading enzyme Plasmepsin II had been used as the target macromolecule. The phytocompounds and the synthetic drugs were docked in the active site of Plasmepsin II using glide software. Docked compounds were ranked according to the glide values and it was concluded that 6 natural compounds showed better results than the drugs and can be used against malarial Plasmepsin II.