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Evaluation of the Anti-inflammatory and Anti-hemolytic Potential of Polyphenolic Components of Common Mallow (*Malva sylvestris*)

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Abstract

This work aims at the assesment of anti-inflammatory and anti-hemolytic effect of *Malva sylvestris*. The anti-inflammatory potential was evaluated by the inhibition of protein denaturation method. It was followed by the study of anti-hemolytic potential, based on two methods (haemolysis by hydrogen peroxide (H₂O₂) and by hypotonic haemolysis). The macerated aqueous extract of *M. sylvestris* (250 µg/ml) exhibited the highest inhibition percentage of BSA denaturation compared to other extracts but it appeared to be slightly lower than the drug diclofenac sodium (80.97±1.23%). On the other hand, the macerated aqueous extract showed more protective power against haemolysis (93.42±3.45%). While it was almost similar to the percentage recorded for ascorbic acid (93.68±3.21%). For the second method, it was observed that the decocted acetone extract of *M. sylvestris* showed a rate of haemolysis inhibition which was the highest (98.09±1.26%) but that it remained slightly lower than aspirin (98.77±0.44%). All of these results showed that *M. sylvestris* extracts have interesting anti-inflammatory and anti-haemolytic potential and therefore have considerable interest as an alternative treatment against inflammatory mechanisms.

Key Words: Anti-hemolytic, Anti-inflammatory, *Malva sylvestris*, Polyphenols.
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