

عنوان مقاله:

Membrane Stabilization and Inhibition of Protein Denaturation as Mechanisms of the Anti-Inflammatory Activity of some Plant Species

محل انتشار:

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خلاصه مقاله:

Several reports have shown the potential of medicinal plants as vital sources of anti-inflammatory agents and this study is aimed at investigating the anti-inflammatory potential of selected medicinal plants used for the treatment of inflammation in folk medicine. The methanol and acetone extract of *Lecaniodiscus cupanioides*, *Talinum fruticosum*, *Ocimum gratissimum*, *Senna occidentalis*, *Senna alata* were subjected to anti-inflammatory assays using membrane stability and inhibition of albumin denaturation methods and absorbance measured at 560 and 660 nm respectively. The mean IC_{50} and SEM values were determined using normalized response variable through non-linear regression XY analysis on prism graphpad® (v.8). In the membrane stability experiment, the extracts tested showed varying levels of erythrocyte lysis inhibition within the range of (IC_{50} : $89.08 \pm 6.339 \mu g/mL \leq IC_{50} \leq 278.3 \pm 5.678 \mu g/mL$) while the standard drug (ibuprofen) has an IC_{50} : $61.93 \pm 8.359 \mu g/mL$, *Lecaniodiscus cupanioides* acetone (IC_{50} of $89.08 \pm 6.339 \mu g/mL$) extract showed to be most active when compared to other extracts. In the inhibition of albumin denaturation experiment, the tested extracts showed different level of activity within the range of (IC_{50} : $22.89 \pm 5.52 \mu g/mL \leq IC_{50} \leq 210.6 \pm 6.71 \mu g/mL$). The acetone extracts of *senna occidentalis* ($22.89 \pm 5.52 \mu g/mL$) and *Lecaniodiscus cupanioides* ($80.9 \pm 9.11 \mu g/mL$) showed significant activity with the lowest IC_{50} compared to other extracts while the standard drug (aspirin) had an IC_{50} of ($4.055 \pm 2.72 \mu g/mL$). The findings of this study shows that *Lecaniodiscus cupanioides* acetone extract has the most significant anti-inflammatory properties, therefore justifying its traditional use in the treatment of inflammatory injury and tissue damage.

کلمات کلیدی:

Lecaniodiscus cupanioides, Anti-inflammatory, membrane stability, albumin denaturation

لینک ثابت مقاله در پایگاه سیویلیکا:

