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In vitro Anti-inflammatory Activity of Alcoholic Bark Extract of *Dalbergia sissoo* Roxb.

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***SUMMARY. Dalbergia sissoo* ethanol stem bark extract of (DSESBE) was assessed for its anti-inflammatory activity by *in vitro* methods. Qualitative analysis of DSESBE revealed the presence of flavonoids, saponins, tannins, glycosides, and terpenoids. *In vitro* anti-inflammatory activity of DSESBE was estimated using HRBC membrane stabilizing activity and inhibition of protein denaturation assay at different concentrations. Dexamethasone was used as a standard drug. The results showed that DSESBE significantly ($p < 0.01$) protects both HRBC membrane stabilizing and inhibition of protein denaturation inhibition. The DSESBE at 1000 mg/kg showed the most potent *in vitro* anti-inflammatory activity compared to the other dose groups (100, 200, and 500 mg/kg) throughout the observation period. The *in vitro* anti-inflammatory activity increased with increasing doses. It is concluded that flavonoids, phenols, and terpenoids present in the DSESBE may be responsible for the *in vitro* anti-inflammatory activity.**

RESUMEN. Se evaluó la actividad antiinflamatoria del extracto etanólico de corteza de tallo de *Dalbergia sissoo* (DSESBE) mediante métodos *in vitro*. El análisis cualitativo de DSESBE reveló la presencia de flavonoides, saponinas, taninos, glucósidos y terpenoides. La actividad antiinflamatoria *in vitro* de DSESBE se estimó utilizando la actividad estabilizadora de la membrana HRBC y la inhibición del ensayo de desnaturalización de proteínas a diferentes concentraciones. Se utilizó dexametasona como fármaco estándar. Los resultados mostraron que DSESBE protege significativamente ($p < 0,01$) tanto la estabilización de la membrana HRBC como la inhibición de la inhibición de la desnaturalización de proteínas. El DSESBE a 1000 mg/kg mostró la actividad antiinflamatoria *in vitro* más potente en comparación con los otros grupos de dosis (100, 200 y 500 mg/kg) durante todo el período de observación. La actividad antiinflamatoria *in vitro* aumentó con dosis crecientes. Se concluye que los flavonoides, fenoles y terpenoides presentes en el DSESBE pueden ser responsables de la actividad antiinflamatoria *in vitro*.

KEY WORDS: Dalbergia sissoo, ethanolic extract, *in vitro* anti-inflammatory activity, membrane stabilizing activity, protein denaturation.

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