

TRADITIONAL SYSTEM OF MEDICINE FOR THE TREATMENT OF DIABETES USING SELECTED HERBAL DRUGS AND THEIR STANDARDIZATION

Plants are considered to be the potential source for phytoconstituent with diverse anti diabetic activity and identification of such plants for their use in medicine is of great significant. The present study focuses on phytochemical and anti diabetic activity of *Adiantum incisum* and *Homalium zeylanicum* deals with phytochemical, anti oxidant and anti diabetic investigation of a widely used traditional medicinal plants. A scrutiny of the literatures revealed that the information by research available on the plant species regarding phytochemical anti oxidant and anti diabetic activity was negligible. This study was structured for the screening of anti diabetic activity, un explored phyto constituents in order to ascertain its folklore claims and characterization of compounds, quercetin and butylinic acid. Qualitative preliminary phytochemical analysis was performed initially with different chemical reagent to detect the nature of phyto constituent and their presence in each extracts. Various bioactive compounds such as alkaloid, glycosides, flavonoids, phenolic compounds, terpenoids and sapoins were present in ethyl acetate and ethanolic extract of *Adiantum incisum* and *Homalium zeylanicum*. Carbohydrates and sterols were present in petroleum ether extracts.

Based on phyto constituent, the ethyl acetate extract and ethanolic extract of both plants performed in vitro anti oxidant study.

The ethyl acetate and ethanolic extracts of *Adiantum incisum* and *Homalium zeylanicum* were evaluated for their in vitro anti oxidant activity. The study revealed that both plants having anti oxidant property.

The ethyl acetate and ethanolic extract of *Adiantum incisum* and *Homalium zeylanicum* was screened for in-vivo anti diabetic activity in STZ induced diabetic rats. The study showed the anti diabetic activity of *Adiantum incisum* and *Homalium zeylanicum* ethanolic extract of high dose having anti diabetic activity and also reveals that antidiabetic activity is dose dependent manner. The therapeutic activity were carried out and significantly reported for the first time in this plant.

Based on the above study ethanolic extracts of both plants was selected for the isolation of active constituents present in *Adiantum incisum* and *Homalium zeylanicum* by using GC-MS, HPLC, HPTLC and preparative HPTLC. After the preparative HPTLC the scabed spot was compared with standard compounds Quercetin and butylinic acid. The ethanolic extract of AI having the flavonoid Quercetin. The ethanolic extract of *Homalium zeylanicum* having betulinic acid which were characterized by HPTLC and MASS spectral studies.

To conclude that result of this work provides to the extent possible, a significant basis to the traditional use of *Adiantum incisum* and *Homalium zeylanicum* the significant study revealed the efficacy of the anti diabetic activity and it definetly have wide scope in future. Hence *Adiantum incisum* and *Homalium zeylanicum* can be recommended therapeutically for the investigated medicinal plants the observations will stimulate further research in the field of ethanopharmacology and clinical applications of phyto constituents.

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