

**In vitro anticoagulant activities of *Melastoma malabathricum* Linn. aqueous leaf extract : a preliminary novel finding.**

ABSTRACT

Limitations of existing anticoagulants have prompted a search for novel agents of natural origin. Fundamentals to this research was the observation that the aqueous leaf extract of *Melastoma malabathricum* Linn. possesses potent anticoagulant property. In vitro coagulation assays such as activated partial thromboplastin time (aPTT), prothrombin time (PT) thrombin time (TT) and mixing studies were performed on citrated plasmas of healthy volunteer donors spiked with different concentrations of the leaf extract (100-1000 $\mu$ g/ml). The results showed that aPTT of plasma samples spiked with extract was markedly prolonged in a concentration-dependent manner ( $p < 0.001$ ), but was otherwise for PT and TT. Both types of mixing studies corrected the initially prolonged aPTT to normal range. The extract exhibited no inter-gender variability in its anticoagulant activity. This study highlights that the anticoagulant activity of *M. malabathricum* aqueous leaf extract affects the intrinsic pathway of the coagulation cascade by causing clotting factor(s) deficiency.

**Keyword:** *Melastoma malabathricum* Linn.; Anticoagulant activity; Mixing studies.