

ABSTRACTCONSTITUENTS OF COLUBRINA ELLIPTICA, CECROPIA PELTATA
AND ENTADA POLYSTACHYA.

SHALIZA MOHAMMED

This dissertation describes the isolation and structural elucidation of a number of natural products from three Caribbean medicinal plants: Colubrina elliptica, Cecropia peltata and Entada polystachya. The methanolic extracts of the plant materials were repeatedly chromatographed to give pure components which were identified by spectroscopic methods.

Chapter 1 outlines the rationale in the study of the natural products and also introduces the various spectroscopic techniques employed in the elucidation of the structures.

Chapter 2 describes the isolation and discusses the detailed structural elucidation of three bitter novel modified dammarane saponins (designated S4, S4a and S6), a known jujubogenin glycoside (S5) and apigenin 6,8-di-C- β -glucopyranoside obtained from the bark of Colubrina elliptica.

Chapter 3 deals with the isolation and identification of seven pentacyclic triterpene acids namely, oleanolic,

ursolic, 19 α -dihydroxyursolic, 2 α -dihydroxyoleanolic, 2 α -dihydroxyursolic, 2 α ,19 α -trihydroxyursolic and 2 α ,23-dihydroxyoleanolic acids and one glycoside, sitosterol 3 β -D-glucopyranoside, from the dry-fallen leaves of Cecropia peltata. These triterpene acids and sterol glycoside were also found in the green leaves indicating that no qualitative change in the chemical composition of the leaves occurred on drying.

The final chapter outlines the isolation and identification of (+)-catechin from the acetone solubles of the leaves and stems of Entada polystachya and two aglycones, oleanolic and entagenic acids, from the hydrolyzed methanolic extract.