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DIURETIC POTENTIAL AND CHARACTERIZATION  
OF SOME SECONDARY METABOLITES FROM  
(ELEUSINE INDICA)

A Thesis Presented  
to the Chemistry Department  
De La Salle University

In Partial Fulfillment for the  
Degree of Master of Science  
in Chemistry

Drexel Hilongos Camacho  
Manila, Philippines

10 December 1996

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
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## APPROVAL SHEET

This thesis hereto entitled:

### "DIURETIC POTENTIAL AND CHARACTERIZATION OF SOME SECONDARY METABOLITES FROM *ELEUSINE INDICA*"

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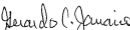
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## ABSTRACT

*Eleusine indica* was investigated to establish its diuretic potential and its secondary metabolite profile. The crude alcoholic extract was fractionated several times by sequential extraction and by chromatographic separation. The fractions were tested for toxicological and diuretic activity.

The crude alcoholic extract is non-toxic at 1000  $\mu\text{g/mL}$  (brine shrimp assay) and at 2,500 mg/Kg bw (mice). Among the four extracts obtained by liquid-liquid partitioning, the aqueous ethanolic fraction was found to possess the highest diuretic activity. Its diuretic activity is significantly higher than the positive standard furosemide as well as some other medicinal plant extracts previously screened.

Analysis of the urine excreted indicated the presence of a loop diuretic and an acidifying diuretic. Three osmotic diuretics were identified: NaCl, KCl and  $\text{NH}_4\text{Cl}$ .

A bicyclic lactonic terpene with a nine-membered ring is characterized for the first time in genus *Eleusine*. A C-26 sterol (24-norcholesta-3-ol) previously isolated from a scallop, is likewise characterized for the first time in a terrestrial plant. The isolation of this sterol may contribute to the biosynthetic investigations on the unique C-26 skeleton. Characterization is also described for a fatty acid derived compound.

