SECONDARY METABOLITE SCREENING AND ANTIMICROBIAL ACTIVITY OF *Homalomena philippinensis* Engl. ex Engl. & K. Krause (ARACEAE) RHIZOME EXTRACT

A Research Presented to the
Biological Sciences Department
College of Science and Computer Studies
De La Salle University-Dasmariñas
City of Dasmariñas, Cavite

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Human Biology

CHINEE ANNE MARIE C. GABA
ZSAZSA D. ORTILLA

April 2016
ABSTRACT

*Homalomena philippinensis* is a widespread species in the Philippines and known for its horticultural value but little information is available on its properties and content. The study was conducted to determine the presence of secondary metabolites and its possible antimicrobial activities. The rhizome was collected in Majayjay, Laguna and the presence of secondary metabolites was determined using phytochemical screening. For antimicrobial activity, disc diffusion assay was used against pathogenic and non-pathogenic microorganisms, namely, *Staphylococcus aureus*, *Escherichia coli*, *Candida albicans* and *Saccharomyces cerevisiae*. Oxacillin and gentamicin were used in bacteria while anidulafungin was utilized for fungi as control. Secondary metabolites such as carbohydrates, flavonoids, proteins, sterols and tannins are present while alkaloids were absent. The extract showed mild inhibitory effect against *Staphylococcus aureus* while it showed no inhibition in *Escherichia coli*, *Candida albicans* and *Saccharomyces cerevisiae*.

*Keywords: Homalomeana philippinensis, Araceae, Disc Diffusion Assay, Secondary metabolites, Microbial activity*