CENTRAL LUZON STATE UNIVERSITY

PHYTOCHEMICAL SCREENING AND TERATOGENIC EFFECT OF *Durio zibethinus* ON ZEBRAFISH *(Danio rerio)* EMBRYOS

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An Undergraduate Thesis Presented to the Faculty of the Department of Biological Sciences, College of Arts and Sciences Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, In Partial Fulfillment of the Requirements for the Degree of

BACHELOR OF SCIENCE IN BIOLOGY

JUNE 2017

Republic of the Philippines
CENTRAL LUZON STATE UNIVERSITY
Science City of Muñoz, Nueva Ecija

COLLEGE OF ARTS AND SCIENCES
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APPROVAL SHEET

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ACKNOWLEDGEMENT

The author would like to express her genuine gratitude to all persons who gave their time and effort to finish this undergraduate thesis paper.

To her adviser, **Dr. Eden S. David**, for all advices to improve this paper, for sharing her knowledge, for editing, and correcting this manuscript and also for the support during conduction of the study and final defense.

To her critic, **Mr. Rich Milton R. Dulay**, for his suggestions, ideas, and assistance during conduction of the study and for the constructive criticisms during final defense.

To **Dr. Angeles M. De Leon**, for the suggestions and for correcting the format of this paper.

To **Ma'am Juliet** of College of Fisheries for lending the zebrafishes.

To her family: **Dade, Mame, Alexa,** and **Baby cassey** for their love, caring, financial support, and for serving as her inspirations.

To her co-advisees, **Meryll** and **Ailene** for their support, patience, kindness, and in giving their ideas with regards to the study.

To her friends, **Pat, Ji, Jec, Kim, Sars, Far, Kaye, Ayeen** and **Ukang**, for their kindness and for always cheering her up.

Lastly, to **Almighty God**, the pillar upon her feet, for giving the researcher her life to enjoy and for giving her strength and perseverance. The researcher is and always be thankful for the life he gave her, she will always be grateful of what and how things

will happen.

The author could not be able to complete this undergraduate thesis paper without them. Thank you for the help and for the memories. God bless us all!

To those people who were not mentioned but played important role in this fruitful endeavor, her sincere appreciation is extended.

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ABSTRACT

ESTANISLAO, JANINE E. Bachelor of Science in Biology, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, July 2016. **PHYTOCHEMICAL SCREENING AND TERATOGENIC EFFECT OF *Durio zibethinus* EXTRACT ON ZEBRAFISH EMBRYOS (*Danio rerio*) EMBRYOS.**

Manuscript Number: BIO-M-2nd17-002

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In this study, teratogenic effect of *Durio zibethinus* plant parts (leaves, stem-bark and fruit rind) were evaluated using zebrafish embryos and phytochemicals screened on the aqueous extract of durian plant parts was done.

Higher concentrations such as 2% and 3% in the stem-bark showed coagulation of embryos, as well as in leaves and fruit rind after 24 hours of exposure which is a manifestation of the lethality of the extract. The heartbeat of the embryos in the lower concentrations was significantly lower to the heartbeat of the embryos in the control.

Phytochemical screening was carried out qualitatively following the protocol described by Sofowora (1993). The study revealed that saponins were found present in the fruit rind and stem bark of the *D. zibethinus*, while cardiac glycosides were found present in the stem-bark.

D. zibethinus stem-bark was the most toxic plant part followed by the leaf then fruit rind. *D. zibethinus* exhibits teratogenic property and growth retardation was the most notable teratogenic effect of the plant.

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