CYTOTOXICITY OF ANNONA MURICATA EXTRACT WITH ADDITION OF ALLIUM SATIVA AND CURCUMA MANGGA FOR CANCER TREATMENT

By

Kevin Jonathan

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SWISS GERMAN UNIVERSITY

EduTown BSD City

Tangerang 15339

Indonesia

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

Kevin Jonathan

_____ _____

Student Date

Approved by:

Dr. rer. nat Maruli Pandjaitan

_____ _____

Thesis Advisor Date

Kholis Abdurachim Audah, M.Sc, Ph.D

_____ _____

Thesis Co-Advisor Date

Dr. Dipl.–Ing. Samuel P. Kusumocahyo

_____ _____

Dean Date

ABSTRACT

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Dr.rer.nat Maruli Pandjaitan, Advisor

Kholis Abdurachim Audah, M.Sc, Ph.D, Co-Advisor

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Soursop leaves (*Annona muricata*) are composed of a lot of alkaloid chemical constituents such as *Annonaceous* acetogenins, which are believed to have cytotoxic properties against tumor cell lines. Garlic (*Allium sativa*) and white turmeric (*Curcuma mangga*), are also believed to have those properties of inhibiting the proliferation of cancer cells, besides being used as a natural flavor enhancer. The general objective of this research was to prove that the extract of Soursop leaves combined with Garlic and White turmeric is effective to inhibit the growth of cancer cell lines. They will be extracted using ethanol, and later will be distilled to remove all the alcohol remained in the extract, because it was meant to be consumed. MTT assay was done in order to obtain the inhibition of cancer cell activity of the extract. NADH oxidation enzyme inhibition was performed to obtain the optmal concentration, and BSLT was conducted to show the bioactivity of the extract. The extract showed an inhibition result of 59.78% while the LC_{50} obtain from the extract using BSLT was 93.73 ppm.

Keywords: Soursop leaves, NADH inhibition activity, Allium sativa, Curcuma mangga, anti-cancer activity, MTT, Lethal Concentration.

DEDICATION

I dedicate this thesis work for my beloved family, and those who supports me all the time during the thesis work.

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Tangerang, June 17th, 2016

Kevin Jonathan

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