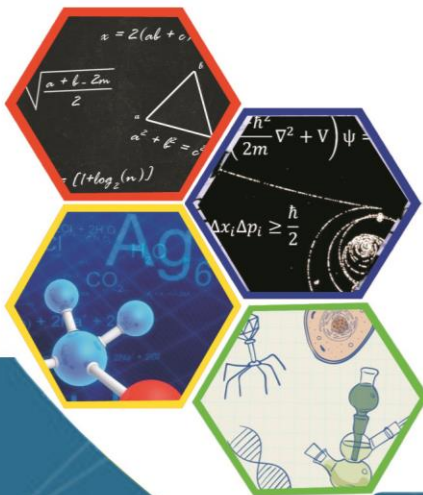




PROCEEDING

The 2nd International Seminar of Basic Science
Natural Science For Exploration The Sea-Island Resources
Ambon, May 31st 2016



Organized by
Faculty of Mathematics and Natural Science
Pattimura University



PROCEEDINGS

The 2nd International Seminar of Basic Science

“Natural Science for Exploration The Sea-Island Resources”

Poka-Ambon, 31st May 2016

**Mathematic and Natural Science Faculty
Universitas Pattimura
Ambon
2016**

PROCEEDINGS

The 2nd International Seminar of Basic Science

May, 31st 2016

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2nd edition

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The 2nd International Seminar of Basic Science

May, 31st 2016

Welcoming Address By The Organizing Committee

Today, We have to thank the The Almighty Allah SWT for the implementation of this international seminar. This is the second seminar about Basic Science in The Faculty of MIPA Pattimura University. The seminar under the title “Natural Sciences for Exploration the Sea-Island Resources” will be carried out on May 31st 2016 at Rectorate Building, Pattimura University. There are 200 participants from lecturers, research institute, students, and also there are 34 papers will be presented.

My special thanks refer to the rector of Pattimura University and the Dean of MIPA Faculty, Prof. Dr. Pieter Kakissina, S.Pd., M.Si. I also would like to express my deepest gratitude to Prof. Amanda Reichelt-Brushett, M.Sc., Ph.D. ; Kazuhiko Ishikawa, Ph.D. ; Nicolas Hubert, Ph.D. ; Prof. Dr. Kirbani Sri Brotopuspito ; Prof. Dr. Marjono, M.Phil. ; Gino V. Limon, M.Sc., Ph.D. as the keynote speakers.

The last, We hope this international seminar usefull for all of us, especially Mollucas People and very sorry if any mistake. Thank you very much.

Dr. La Eddy, M.Si.

Chairman of Organizing Committee

Opening Remarks By Dean of Mathematic and Natural Sciences Faculty

I express my deepest gratitude to The Almighty God for every single blessing He provides us especially in the process of holding the seminar until publishing the proceeding of International Seminar in celebrating the 18th anniversary of MIPA Faculty, Pattimura University. The theme of the anniversary is under the title “Natural Sciences for Exploration the Sea-Island Resources”. The reason of choosing this theme is that Maluku is one of five areas in Techno Park Marine in Indonesia. Furthermore, it is expected that this development can be means where the process of innovation, it is the conversion of science and technology into economic value can be worthwhile for public welfare especially coastal communities.

Having the second big variety of biological resources in the world, Indonesia is rich of its marine flora and fauna. These potential resources can be treated as high value products that demand by international market. Basic science of MIPA plays important role in developing the management of sustainable marine biological resources.

The scientific articles in this proceeding are the results of research and they are analyzed scientifically. It is expected that this proceeding can be valuable information in terms of developing science and technology for public welfare, especially people in Maluku.

My special thanks refer to all researchers and reviewers for your brilliant ideas in completing and publishing this proceeding. I also would like to express my gratefulness to the dies committee-anniversary of MIPA Faculty for your creativity and hard working in finishing this proceeding, God Bless you all.

Prof. Dr. Pieter Kakisina, S.Pd., M.Si.

Dean of Mathematic and Natural Sciences Faculty

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May, 31st 2016

ACKNOWLEDGMENT

The following personal and organization are greatfully
acknowledgment for supporting
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Hotel Mutiara Ambon

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EFFECT OF ETHANOL EXTRACT GAMBIR LAUT LEAVES (*Clerodendrum inerme* L) TO OVARIES WEIGHT OF MICE

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ABSTRACT

This study aims to determine the effect of ethanol extract Gambir Laut leaves against ovarian performance mice. The treatment consists of the control mice (P0) were given distilled water and ethanol extract treatment Gambir Laut leaves : P1 (350 mg / ml), P2 (700 mg / ml) and P3 (1400 mg / ml) at a dose of 0.2 ml / 20- 30 g / BW. The results showed that ethanol extract Gambir Laut leaves caused a decrease in ovarian weight with ovarian weight is 0.04 g P0, is 0.02 g P1, is 0.02 g P2, and 0.01 g P3. Ovarian weight loss occurs because the active compounds in the ethanol extract Gambir Laut leaves as saponins and flavonoids are anti-estrogen that may interfere with the development of ovarian follicles.

Keywords: *Clerodendrum inerme* L., ovary, anti-estrogen.

INTRODUCTION

Population growth in Indonesia each year to reach 1.49%. This means that every year the number of people in Indonesia increased by about 3 to 3.5 million. Pressing the government rate of population increase in family planning program (KB).

Chemical compounds contained in Gambir Laut leaves are alkaloids, flavonoids, saponins, tannins, and triterpenoids which is where the group of active compounds are potentially as antifertilitas (Winarno et al, 1997). Saponins and flavonoids are compounds that are estrogenic.

High estrogen due to external factors can increase uterine sensitivity to oxytocin resulting in uterine motility and increased genital tract as well as disruption of fertilization and embryo development (Madyawati et al, 2003 in Rusmiati, 2009). This study aimed to determine the effects of ethanol extracts Gambir Laut leaves against ovarian performance mice.

MATERIALS AND METHODS

This study uses a completely randomized design (CRD) with four treatments, P0 (control), P1 (300mg / ml), P2 (700 mg / ml) and P3 (1400 mg / ml) at a dose of 0.2 ml / 20-30g/BB. ethanol extract Gambir Laut leaves administered orally by means of force-fed (gavage) for 15 days (three estrous cycle). Day 16, mice were dissected at necropsy and weighed heavy on the ovaries (right and left). The data analysis of ovarian weight using Analysis Of Variance (ANOVA) at the 95% confidence level.

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RESULTS AND DISCUSSION

Effect of ethanol extract gambier laut leaves (*Clerodendron inerme* L) to performance ovaries mice can be seen in Table 1.

Table 1. Results of Gambir Laut leaves ethanol extract treatment to the weight ovaries of mice

No.	Ethanol Extract Of Leaves Gambir Laut (mg / g BB)	Ovarium Weight (g) ± SD	
		Right	Left
1	Control	0,04 ± 0,01 ^a	0,04 ± 0,01 ^a
2	350	0,02 ± 0,01 ^b	0,02 ± 0,01 ^b
3	700	0,02 ± 0,01 ^b	0,01 ± 0,00 ^b
4	1400	0,01 ± 0,00 ^b	0,01 ± 0,00 ^b

The results showed that ethanol extract Gambir Laut cause leaves decrease ovarian weight. Ovary in the control group of mice is more severe than in the ovaries of mice that were given ethanol extract Gambir Laut leaves. Ethanol extract on a group of mice that were given different doses showed no significant difference.

Decrease of ovarian weight occurs because Gambir Laut leaves contain compounds teratogenic metabolites, such as tannins, flavonoids, triterpenoids, saponins (Laboratory of Traditional Medicine, Faculty of Pharmacy USU, 2012). The active compounds in ethanol extract Gambir Laut leaves such as saponins and flavonoids are active compounds that have anti-estrogen, that effect can inhibit secretion of estrogen. When estrogen levels become lower, Anti-estrogen effect causes disturbances in folliculogenesis and ovulation (Campbell, 2004). Estrogen is produced by the follicle degraaf as a result of stimulus from Follicle Stimulating Hormone (FSH). According Partodiharjo (1980), the larger follicle de graaf, higher estrogen levels produced. This shows when the lower estrogen levels, the smaller follicles de graaf formed and consequently the corpus luteum size will be reduced.

Increased estrogen levels will give negative feedback to the hypothalamic-pituitary ovarian axis which then would reduce the secretion of FSH and Luteinizing Hormone (LH). FSH and (LH) have a role in the synthesis of estrogen and progesterone in the ovary. Levels of the hormone progesterone that is produced depends on the development of the corpus luteum, if the development of the corpus luteum place normally it will produce normal hormone levels. Conversely, if during the process of development of the corpus luteum progesterone production declines resulting in disrupted.

CONCLUSION

The results showed ethanol extract Gambir Laut leaves (*Clerodendron ineme*) effect on ovarian weight of mice.

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