

ABSTRACT BOOK

1st ICPHS 2021

INTERNATIONAL CONFERENCES IN
PHARMACEUTICAL & HEALTH
SCIENCES



Wednesday - Thursday, 06 - 07th October 2021
Virtually from Pharmacy Department
Health Polytechnic of Gorontalo
Ministry of Health Indonesia

Support by :





**Department of Pharmacy
Health Polytechnic of Gorontalo**

Jl. Taman Pendidikan No. 36 Kota Gorontalo

Telp : 0435-827193 Fax : 0435-827182

Website <https://poltekkesgorontalo.ac.id/>

ABSTRACT BOOK

The 1st International Conferences in Pharmaceutical and Health Sciences
**Formulation of Natural Product-Based Drugs in Non-Communicable
Disease Therapy**

Virtually from Health Polytechnic of Gorontalo,
Ministry of Health, Indonesia
Wednesday-Thursday, October 6-7, 2021

Published By:
Health Polytechnic of Gorontalo

ABSTRACT BOOK

The 1st International Conferences in Pharmaceutical and Health Sciences : Formulation of Natural Product-Based Drugs in Non-Communicable Disease Therapy

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PREFACE

Praise be to God Almighty for His grace and guidance at the 1st International Conferences In Pharmaceutical and Health Sciences (ICPHS 2021). It is with deep satisfaction that I write this Foreword to the Abstract Book of ICPHS 2021 held in Gorontalo, Indonesia on October 06-07, 2021. This conference carries the theme "Formulation of Natural Product-Based Drugs in Non-Communicable Disease Therapy". Non-communicable diseases (NCDs) are a major burden of disease with significant economic impacts, especially in low-and middle-income developing countries.

The problem of effectiveness and also costs a lot for treatment, so it is necessary to search for new alternative treatments, one of which is traditional medicine or commonly called herbal. It is hoped that this event can be used as a place to exchange ideas with experts regarding the development of natural medicines for the treatment of non-communicable diseases.

As an annual conference, 2021 will be the first to be held by the Department of Pharmacy, Poltekkes, Ministry of Health, Gorontalo. This time we invited speakers from 4 different countries with their respective expertise, and most importantly we are very happy that many lecturers, student researchers and postgraduate students also attended and presented their papers in this conference. And personally, I would like to say that this academic conference enhances the academic atmosphere among the participants. We hope that the abstract book that we publish online can serve as a reminder to all participants about the messages and academic atmosphere that have been felt and shared during the conference. And to all the participants, presenters, and authors of the full paper, on behalf of the graduate school, I would like to express my deep gratitude for making this conference and process a real and memorable one.

This event cannot be held without the cooperation of various parties. Therefore, we would like to thank various parties who have contributed to this ICPHS 2021 event and see you again on the 2nd ICPHS in 2022.

Gorontalo, October 01 November 2021

Head of Committee

Ysrafil, S.Farm.,M.Biomed

WELCOME SPEECH

DIRECTOR OF POLTEKKES KEMENKES GORONTALO

Dear Head of the Board for Development and Empowerment Human Resources of Health of the Indonesian Ministry of Health

Speakers

The ranks of the academic community of the Health Polytechnic of the Ministry of Health of Gorontalo

Distinguished guests and all participants of the conference

Assalamualaikum wr.wb

Indonesia is currently facing a double burden of disease, namely communicable and non-communicable diseases. Changes in disease patterns are strongly influenced, among others, by changes in the environment, community behavior, demographic transitions, technology, economy and socio-culture. The increase in burden due to non-communicable diseases (NCD) is in line with the increase in risk factors including increased blood pressure, blood sugar, body mass index or obesity, unhealthy eating patterns, lack of physical activity, and smoking and alcohol.

In 2016, about 71 percent of the causes of death in the world are non-communicable diseases (NCDs) which kill 36 million people per year. About 80 percent of these deaths occur in middle- and low-income countries. 73% of deaths are currently caused by non-communicable diseases, 35% of them due to heart and blood vessel disease, 12% by cancer, 6% by chronic respiratory diseases, 6% due to diabetes, and 15% due to other NCDs (WHO data, 2010). 2018).

Concerns about the increasing prevalence of NCDs have led to an agreement on a global strategy for the prevention and control of NCDs, especially in developing countries. PTM has become a strategic issue in the 2030 SDGs agenda so it must be a development priority in every country.

Indonesia is a country that has enormous natural wealth, both flora and fauna on land and in the ocean that can produce various chemical compounds. Indonesia is known as a country that has the second largest flora diversity after Brazil. The richness of Indonesia's flora includes 30,000

species of plants from a total of 40,000 species of plants in the world with 9,600 species of which are medicinal plants.

Various types of medicinal plants have been investigated and explored more deeply for their potential as raw materials in the manufacture of various types of medicinal preparations. This includes the development of new drug discoveries from natural ingredients that can be drug candidates for non-communicable diseases.

The international activities of this conference are expected to be a forum for exchanging information and knowledge as well as in enriching our knowledge in research, especially in the field of natural materials.

I express my highest gratitude to the speakers of this activity, prof. delvac Oceandy from the University of Manchester, UK, Prof. Taifo Mahmud from Oregon State University, USA, Prof. Habibah A. Wahab, from the University Sains Malaysia, and Prof. Agung Endro Nugroho and Dr. rer.nat. Ronny Martien from Gadjah Mada University.

Thank you for taking the time to share your knowledge with us.

I also want to say welcome to Gorontalo, the youngest province on the island of Sulawesi with a variety of local cultures that are still firmly attached to its people.

This international conference activity is organized by the Pharmacy Study Program of the Health Polytechnic of the Ministry of Health of Gorontalo, where this study program is a relatively new study program, entering 3 years in 2021.

I express my highest appreciation to the pharmacy study program for holding this international conference, I hope this activity can provide benefits for all of us.

Finally, by asking for mercy from the almighty, hopefully we can contribute thoughts in our efforts to achieve a healthy degree for all mankind.

Wassalamu'alaikum w.wb.

Gorontalo, October 06, 2021

Director of Poltekkes Kemenkes Gorontalo

Mohamad Anas Anasiru, SKM.,M.Kes

WELCOME SPEECH

HEAD OF THE BOARD FOR DEVELOPMENT AND EMPOWERMENT HUMAN RESOURCES OF HEALTH OF THE INDONESIAN MINISTRY OF HEALTH

Dear honorable:

Director of Poltekkes Kemenkes Gorontalo

Speakers

The ranks of the academic community of the Health Polytechnic of the Ministry of Health of Gorontalo

Distinguished guests and all participants of the conference

Assalammu'alaikum Wr. Wb.

First of all, let us express our gratitude for all the graces and guidance of Allah SWT, the Almighty God, who has bestowed upon us all so that we can join together to participate in the 1st International Conferences In Pharmaceutical and Health Sciences (ICPHS 2021) with the theme "*Formulation of Natural Product-Based Drugs in Non-Communicable Disease Therapy*".

Distinguished guests,

I am really happy that this international conference activity in the form of a webinar can be carried out by the Pharmacy Study Program of the Health Polytechnic of the Ministry of Health of Gorontalo. In the direction of developing a center of excellence (CoE), the Health Polytechnic of the Ministry of Health of Gorontalo specializes in Non-Communicable Diseases, and this activity is an event to further sharpen it, especially in terms of developing natural ingredients as drugs for the treatment of non-communicable diseases.

Distinguished guests,

This international conference organized by Health Polytechnic of the Ministry of Health of Gorontalo is the first and I hope it will be sustainable so that it can make a good contribution to the advancement of Health science, especially the development of medicinal formulas based on natural ingredients, apart from being a place to exchange information on research results, as

well as It is hoped that it will be able to produce outputs that can be used by stakeholders in the development of Indonesian medicinal plants so that they have an impact on various aspects (politics, environment, economy, tourism and socio-culture).

I need to say that currently, the main causes of death globally are cardiovascular disease (stroke and heart disease), cancer, diabetes and chronic lung disease, which are non-communicable diseases (NCDs). Similarly in our country, Non-Communicable Diseases (NCDs) are the most common cause of death in Indonesia. The situation where infectious diseases are still an important health problem and at the same time the morbidity and mortality of NCDs are increasing is a double burden in health services. This is a challenge that must be faced in the development of the health sector in Indonesia.

According to the World Health Organization (WHO), deaths from non-communicable diseases (NCDs) are expected to continue to increase worldwide, with the greatest increase occurring in middle and poor countries. More than two thirds or 70% of the global population will die from non-communicable diseases such as cancer, heart disease, stroke and diabetes. In total, by 2030 it is predicted that there will be 52 million deaths per year due to non-communicable diseases.

Meanwhile, Riskesdas data in 2018 shows the prevalence of Non-Communicable Diseases has increased compared to the previous Riskesdas in 2013, including cancer, stroke, chronic kidney disease, diabetes mellitus, and hypertension. Cancer prevalence rose from 1.4 per mil (Riskesdas 2013) to 1.8 per mil; the prevalence of stroke rose from 7 per mil to 10.9 per mil; and chronic kidney disease rose from 2 per mil to 3.8 per mil. Based on blood sugar examination, diabetes mellitus rose from 6.9% to 8.5%; and the results of blood pressure measurement, hypertension increased from 25.8% to 34.1%.

Referring to the data and facts above, the development of natural ingredients-based treatment for NCDs therapy is very important in addition to prevention patterns that must also be considered in order to support our process of realizing the common goal of national independence in the health sector.

On this occasion, I as the Head of the Board for Development and Empowerment Human Resources of Health of the Indonesian Ministry of Health would like to express my deepest gratitude to the organizing committee for making this international conference a reality, despite our limitations due to the ongoing COVID-19 pandemic.

My deepest gratitude to the speakers from the University of Manchester, UK; Oregon State University, USA; University Sains Malaysia and Gadjah Mada University have been willing to share their knowledge with us here.

I also thank you to the seminar participants for their active participation in contributing the results of the research presented on this occasion. Hopefully, even though it is only face-to-face virtually, it will not dampen the enthusiasm of the participants to gain as much knowledge as possible from this activity.

Finally, I congratulate you on joining the webinar and I hope this webinar can benefit all of us for the realization of a healthier and more advanced Indonesia.

Billahi taufik wal hidayah,

Wassalammu'alaikum Wr. Wb.

Gorontalo, October 06, 2021

Plt. Head of The Board for Development
and Empowerment Human Resources of
Health of The Indonesian Ministry of Health

Kirana Pritasari, MD.,MQIH

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Presentation Rundown

Room 1 Moodu

Moderator : Hartati, S.Farm, M.Farm, Apt.

Juri : Dr.Tety Sutriati Uloli, S.Si, M.Si, Apt

Day, Date : Kamis, 07 Oktober 2021

Time : 1 PM – 3 PM

Nama	Kode	Judul
Marko Jeremia Kalalo	OP202111	The Role of Medicinal Plants as Modulator of PBP2a
apt. Yuri Pratiwi Utami., S.Farm.,M.Si	OP202112	The Effect of Variations of Refining Time on the Levels and Characteristics of (<i>Etilingera Elatior</i> (Jack) R.M.Smith) Leave Essential Oil
Dr.dr.M Yulis Hamidy, M.Kes, M.Pd.Ked	OP202113	Mangrove (<i>Rhizophora</i> sp) Fruit Extract Inhibits Tumor Growth Factor (TGF)- β 1 Expression in High Cholesterol Diet-Fed Rats
Dr. Dra Syarifah Miftahul El Jannah T.,M.Biomed	OP202114	Comparison of Total Plate Count Before and After Washing hands using hand sanitizer with extract <i>Acacia nilotica</i> l. Leaf
Khairun Nida,SSi.,MBiomed.,Apt	OP202115	Diuretic Activity of an Ethanol Seed Extract of <i>Persea americana</i> Mill.
apt. Nielma Auliah, M. Farm	OP202116	Analysis of Vitamin E Levels in Processed Products Khalas Dates (<i>Phoenix dactylifera</i>) by UV-VIS Spectrophotometry
Pratiwi Y. Ishak	OP202117	Formulation and Activity Test of Antibacteria Peel Off Mask Preparation with Moringa leaves (<i>Moringa Oleifera</i> l.) Ethanol extract on <i>Propionibacterium acnes</i>
Luthfi Fadillah Suharta	PP202111	Antibacterial And Antioxidant Effectiveness of Facial Wash Soap Ethanol Extract Limus Seed (<i>Mangifera foetida</i> L)
A.Tenriugi Daeng Pine, S.Si., M.Si.	PP202112	Formulation and Quality Test of Solid Soap from Tea Leaf (<i>Camellia sinensis</i>) Ethanol Extract Origin OF Malino

Apt.Dra Harpolia Cartika, M.Farm.	OP202118	Anti-Aging Activity Test on Sunscreen Cream Combination of Corn Cob Extract (<i>Zea mays</i> L.) and Robusta Coffee Bean Extract (<i>Coffea canephora</i> Pierre Ex. A. Froehner)
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THE ROLE OF MEDICINAL PLANTS AS MODULATOR OF PBP2A

Marko Jeremia Kalalo¹, Tri Hebbber¹, Siboantua Broolin Simanjuntak¹, Surya Sumantri Abdullah¹, Irma Antasionasti¹, Ely Juliana Suoth¹, Fatimawali^{1,2,3*}

¹Pharmacy Study Program, Faculty of Mathematics and Natural Sciences, Sam Ratulangi University, Manado 95115, Indonesia

²The University Center of Excellence for Biotechnology and Conservation of Wallacea, Sam Ratulangi University, Manado 95115, Indonesia

³Department of Chemistry, Faculty of Medicine, Sam Ratulangi University, Manado 95115, Indonesia

(*Correspondens Author : Fatimawali email fatimawali@unsrat.ac.id)

ABSTRACT

Methicillin-Resistant Staphylococcus aureus (MRSA) is currently a global health problem. It causes both topical and systemic diseases. Medicinal plants are known to possess a wide range of antimicrobial properties. PBP2a (Penicillin-Binding Protein 2a) is a cell wall synthesis protein responsible for antibiotic resistance in MRSA. Modulation with the allosteric site of PBP2a showed a promising result in reversing its antibiotic-resistant. The present study aimed to assess medicinal plant bioactive compounds as modulators of PBP2a allosteric site. Bioactive compounds from *Clerodendrum squamatum* Vahl., *Alstonia scholaris* (L.) R. Br., and *Camelia sinensis* were used as ligands. Identification of the bioactive compounds were conducted by experimental method and literature search. Bioactive compounds and PBP2a structures were retrieved from PubChem and Protein Data, respectively. The molecular docking was performed with PyRx. Amongst the chosen bioactive compounds, bioactive compounds from *Camelia sinensis* showed excellent binding energy and complex stability with the allosteric site of PBP2a, with theaflavin and theaflavindigallate hold the lowest binding energy and the most interactions. Therefore, tea bioactive compounds are predicted as promising agents to reverse antibiotic resistance in MRSA through modulation of PBP2a allosteric site.

Keywords: Antibiotic resistance, bioactive compound, Medicinal plants, allosteric modulation

EFFECT OF VARIATION OF DISTILLATION TIME ON LEVELS AND CHARACTERISTICS OF PATIKALA LEAF ESSENTIAL OIL (*ETLINGERA ELATIOR* (JACK) R.M.SMITH)

Yuri Pratiwi Utami^{1,2*}, Aprilia Matelda Dwi Kristiyanti², Imrawati²

¹Kandidat Doktor Program Studi Farmasi, Fakultas Farmasi, Universitas Hasanuddin, Makassar, Indonesia.

²Program Studi Farmasi, Sekolah Tinggi Ilmu Farmasi Makassar, Makassar, Indonesia.

*Corresponding Author: E-mail: yuriutam88@gmail.com

ABSTRACT

Background: *Etilingera elatior* (Jack) R. M. Smith is a multipurpose plant and a member of zingiberaceae family that has the potential to produce essential oils, including its leaves. The purpose of this research was to determine the effect of distillation time variations on *E. elatior* leaves essential oil yield. **Material and Methods:** The material used is dried simplicia from *E. elatior* leaves with a distillation time of 4, 5 and 6 hours distillation, the distillation is carried out using the steam distillation method. **Results:** From this study, the highest percentage of yield was at the distillation time of 6 hours which resulted in 0.228%. As for the essential oil content, obtained at 4 hours distillation time of 0.15% $\%_b$ with readability of one essential oil characteristic with the component namely 2-Decen-1-ol ($C_{10}H_{20}O$), for a 5 hour distillation time of 0.1% $\%_b$ with one characteristic of essential oil that was read by the same component name at a 4 hour distillation of 2-Decen-1-ol ($C_{10}H_{20}O$) and 6 hours was 0.125% $\%_b$ with the readability of three essential oil characteristics namely 2-Decen-1-ol ($C_{10}H_{20}O$), 2,6-Octadine, 2,4-dimethyl-1 ($C_{10}H_{18}$) and Spiro [4.5] decen- 7-one, 1,8-dimethyl-8,9-epoxy-4-isopropyl- ($C_{15}H_{24}O_2$). **Conclusions:** The result showed the time of distillation has an effect on the result rendement and characteristic obtained.

Keywords: Essential oils, Distillation time, oil content, *Etilingera elatior* (Jack) R. M. Smith

MANGROVE (*RHIZOPHORA SP*) FRUIT EXTRACT INHIBITS TUMOR GROWTH FACTOR (TGF)- β 1 EXPRESSION IN HIGH CHOLESTEROL DIET-FED RATS

Muhammad Yulis Hamidy^{1*}, Huriatul Masdar², Winarto²

¹Department of Pharmacology, Faculty of Medicine, Universitas Riau, Pekanbaru, Indonesia

²Department of Histology, Faculty of Medicine, Universitas Riau, Pekanbaru, Indonesia

(Corresponding Author: **Muhammad Yulis Hamidy**; email: yulis.hamidy@gmail.com)

ABSTRACT

Background: Atherosclerosis is a chronic inflammatory disease that is caused by multiple processes. Inflammation is the main mechanism underlying the pathogenesis of atherosclerosis. One of the pro-fibrotic cytokines that play an important role in the atherosclerosis process is Tumor Growth Factor (TGF)- β 1, where the presence of high TGF- β 1 secretion due to hypercholesterolemia will trigger excessive collagen matrix formation. **Objective:** To evaluate *Rhizophora sp* fruit extract effect on TGF- β 1 expression in high cholesterol diet-fed rats. **Material and Methods:** The study was conducted on 18 rats divided into 3 groups (n=6). Group A was given a normal diet. Group B was given an atherogenic diet (vitamin D3 700,000 IU/kg on the first day and 2% cholesterol, 5% goat fat, 0.2% cholic acid and standard diet up to 100% for 3 days). Group C was given an atherogenic diet and *Rhizophora sp* fruit extract 500 mg/kg. The *Rhizophora sp* fruit extract effect on TGF- β 1 expression was assessed by immunohistochemical examination. The area of the expression is calculated using the ImageJ. **Results:** The results showed that the expression of TGF- β 1 was increased significantly in atherogenic diet-fed rats compared to normal diet-fed rats (17.3 vs. 8.9; $P=0.000$). *Rhizophora sp* fruit extract reduced this expression remarkably (17.3 vs. 11.4; $P=0.001$). **Conclusion:** *Rhizophora sp* fruit extract inhibits the the expression of TGF- β 1 in high cholesterol diet-fed rats.

Keywords: Mangrove, *Rhizophora sp*, TGF- β 1, atherosclerosis

COMPARISON OF THE NUMBER OF BACTERIAL COLONIES BEFORE AND AFTER USING HAND SANITIZER FROM *ACACIA NILOTICA* LEAF EXTRACT

Syarifah Miftahul El Jannah^{1*}, Zuraida², Desy Yulfianna², Erie Aditya²

¹Department of Environmental Health, Politeknik Kesehatan Kemenkes Jakarta II, Indonesia

²Prodi Analisis Kesehatan, Fakultas Kesehatan Universitas MH. Thamrin, Indonesia

(Corresponding Author: **Syarifah Miftahul El Jannah**; email: syarifah.miftahul@Poltekkesikt2.ac.id)

ABSTRACT

Background: Using hand sanitizers was an act of necessity during the Covid-19 pandemic. With this action it is expected to control the number of bacterial colonies on the palms of the hands. One of the herbal ingredients that can inhibit the growth of germs is *Acacia nilotica* L-leaf extract so that it can be used as an active ingredient in hand sanitizer. **Objective:** To determine the number of bacterial colonies before and after using a hand sanitizer with the active ingredient of acacia leaf extract. **Materials and Methods:** The study used random sampling analysis before and after treatment. *Acacia nilotica* leaf ethanol extract formula 10%, 20% and 30%. Each concentration was used by 11 men and 11 women as a hand sanitizer with movements according to WHO standards and left for 30 seconds. Check the count of germs on hands before and after using hand sanitizer. **Results:** The highest decrease in the number of bacterial colonies was found at a concentration of 30% reaching 64.84% in men and 89.61% in women. There were differences in the ability to decrease the number of bacterial colonies from each concentration ($P 0.003 < 0.005$). **Conclusion:** *Acacia nilotica* L leaf extract can be a candidate for active hand sanitizer ingredients.

Keywords: *Acacia nilotica* L., Bacteria colonies, COVID-19, Hand sanitizer

DIURETIC ACTIVITY OF AN ETHANOL SEED EXTRACT OF *PERSEA AMERICANA* MILL.

Khairun Nida^{1*}, Purnama Fajri², Harpolia Cartika³

¹*Jurusan Farmasi, Poltekkes Kemenkes Jakarta 2, Jl.Percetakan Negara No.23 Jakarta*

(Corresponding Author: **Khairun Nida**; email: khairunnida@poltekkesjkt2.ac.id)

ABSTRACT

Previous research conducted by Omodamiro and Jimoh showed that the ethanol seed extract of *Persea americana*, known as avocado had a diuretic activity of urine volume and electrolytes Na⁺, Cl⁻ and K⁺ which increased significantly compare to the normal control group. Thus it is necessary to conduct further research on the ethanol seed extract of avocado to determine whether increasing dose of the extract can increase the diuretic activity. The aim of the study was to determine diuretic profile of the ethanol seed extract of avocado against furosemide as appositve control. Testing of diuretic activity uses the parameter of urine volume excreted every 30 minutes for 6 hours and 24 hours. Three treatment groups containing extracts of 7 mg, 14 mg, 28 mg were compared to furosemide. The three doses of this extract had a diuretic profile that was not identical to that of furosemide, but had the same diuretic activity with the significant value ($p > 0,05$). A dose of 28 mg has a better diuretic effect than furosemide, which is characterized by the accumulation of a higher volume of urine produced. This means that the higher the dose, the better the diuretic activity.

Keywords: Diuretic, *Persea americana*, Seed extract of avocado.

ANALISIS KADAR VITAMIN E DALAM PRODUK OLAHAN BUAH KURMA KHALAS (*PHOENIX DACTYLIFERA*) SECARA SPEKTROFOTOMETRI UV-VIS

Nielma Auliah^{1*}, Nurjannah Bachri², Nurfiddin Farid¹, Muhammad Asri¹, Reskiani¹

¹Jurusan Farmasi, Program Studi S1 Farmasi/ Farmasi/Universitas Megarezky Makassar, Indonesia

²Jurusan Farmasi, Program Studi S1 Farmasi/ Farmasi/Sekolah Tinggi Ilmu Kesehatan Tarumanegara, Indonesia.

(Corresponding Author: **Nielma Auliah**; email: nielmaauliah@gmail.com)

ABSTRACT

Khalas dates (*Phoenix dactylifera*) have antioxidant, antimicrobial, and antimutagenic functions as well as dates (*Phoenix dactylifera*) which have a good antioxidant function, including high polyphenol content among other dried fruits, which have an important role in absorbing and neutralizing free radicals. To counteract these free radicals, it can be obtained from the main function of vitamin E, namely as an antioxidant in the body and vitamin E can function as a "scavenger" (catcher) of free radicals that enter the body or are formed in the body from metabolic processes. normal. A study entitled analysis of vitamin E levels in processed products of khalas date palm (*Phoenix dactylifera*) was carried out by UV-Vis spectrophotometry. The purpose of this study was to determine the comparison of vitamin E levels in processed products of khalas date palm (*Phoenix dactylifera*) by UV-Vis spectrophotometry. The method used in this research is the UV-Vis spectrophotometry method using concentrations of 0.5 ppm, 1 ppm, 1.5 ppm and 2.5 ppm. The results obtained showed that the processed product of the khalas date palm (*Phoenix dactylifera*) in the form of jam, syrup and fruit juice contained levels of vitamin E, namely for jam 2.66 mg/100 g, syrup 2.77 mg/100 g and fruit juice 3.65. mg/100 g. The conclusion that can be obtained is that the processed product of khalas date palm (*Phoenix dactylifera*) in the form of jam, syrup and fruit juice contains different levels of vitamin E where the vitamin E content of the fruit juice is much greater than the level of vitamin E in jam and syrup.

Keywords: Khalas Dates, Vitamin E, UV-Vis Spectrophotometry

FORMULATION AND TESTING OF ANTI-BACTERIAL ACTIVITY OF PEEL OFF MASK ETHANOL EXTRACT OF MORINGA LEAF (*MORINGA OLEIFERA* L.) AGAINST PROPIONIBACTERIUM ACNES BACTERIA

Pratiwi Y Ishak^{1*}, Fihrina Mohamad¹, Prisca Safriani Wicita¹, Nangsih Sulastri Slamet¹, Arlan K. Imran¹

¹*Jurusan Farmasi Poltekkes Kemenkes Gorontalo, Indonesia*

(Corresponding Author: **Pratiwi Y Ishak**; email: pratiwiy.ishak@gmail.com)

ABSTRACT

Propionibacterium acnes contain properties that can trigger acne growth. Peel-off masks preparation is feasible for face treatment. Quarcetine secondary metabolites in Moringa Leaves possess anti-bacterial functions. This quasi-experiment research aimed to identify the concentration variation effect of Moringa Leaves Ethanol Extract in peel-off mask preparation formula on the physical characteristic and anti-bacteria activity of Propionibacterium acnes, by formulating the Peel-off Mask preparation with the Moringa Ethanol Extract variation are as follows: F1 (10%), F2 (15%) and F3 (20%), followed by physical (organoleptic) test with hedonic scale from 1 (highly unfavorable) to 5 (highly favorable), pH test, irritation test, deployment test, dry length test, and anti-bacterial activity test with diffusion method, while the data analysis employed one way anova test. The findings revealed results for variant F1, F2, and F3 in organoleptic test as follows: the shape aspect obtained 4,03, 3,77 and 3,8 respectively; the color aspect obtained 4,13, 3,63 and 3,73 respectively; the smell aspect obtained 3,13, 2,9 and 2,93 respectively; pH test obtained 5,9, 5,8 and 5,6 respectively; distribution test obtained 7,66 cm, 7,24 cm and 7,25 cm respectively; the dry length obtained 23,07 minutes, 23,04 minutes and 22 minutes respectively; irritation test obtained the panelist amount of 2, 4, and 0 respectively; activity test obtained the inhibition of 11,9 mm, 13,9 mm and 17,17 mm respectively. The one way anova test results between variant F3 with positive control #2 (brand X[®] peel off mask) obtained the significant value as follows: (0,01) <(0.05) meaning F3 had significant difference with positive control #2. Conclusion; Peel Off Mask preparation with Moringa Leaves Ethanol Extract F3 (20%) is the best formula in terms of physical aspect and the largest anti-bacterial activity of 17,17 mm in strong category on Propionibacterium acnes.

Keywords: Moringa, Peel off Mask, Anti-bacteria, Propionibacterium acnes.

ANTI-BACTERIAL AND ANTIOXIDANT EFFECTIVENESS OF FACIAL WASH SOAP ETHANOL SEED EXTRACT (*MANGIFERA FOETIDA* L)

Vera Nurviana¹, Luthfi Fadillah Suharta^{1*}, Aisyah Shiddiqah Nasir¹, Hildan Akhrija Jakriyana¹, Salma Marjani Djahroh¹

Program Studi S1 Farmasi, Sekolah Tinggi Ilmu Kesehatan Bakti Tunas Husada, Jl. Cilolohan No.36, Tasikmalaya, Jawa Barat

(Corresponding Author: **Luthfi Fadillah Suharta**; email: luthfiFadillah07@gmail.com)

ABSTRACT

Limus seeds including the kernel of the fruit seeds are often considered as waste, but based on research that has been carried out ethanol extract of limus seeds has efficacy as an anti-bacterial *Staphylococcus aureus*. *Staphylococcus aureus* is one of the bacteria that can cause skin infections. In addition, limus seed kernel is also reported to have very strong antioxidant activity. The purpose of this study was to determine the effectiveness of anti-bacterial and antioxidant activity in limus seeds by making it in the form of a facial wash gel in order to obtain an effective and efficient preparation for its use. The stages of the research carried out are preparation and manufacture of extracts, phytochemical screening and preparation of preparations. The process of making the preparation is divided into 3 formulas with a concentration ratio of ethanolic extract of limus seeds, respectively, namely, formula 1 (5%), formula 2 (10%), and formula 3 (15%). Evaluation of the preparations carried out included Antioxidant and Antibacterial Activity Test, Foam Level Test, Homogeneity Test, PH Test, Extract Biological Test, Organoleptic Test. Based on the research results, it is known that formula 3 is the best formula and meets the quality requirements of facial wash gel preparations. Facial wash gel ethanol extract of limus seed has antibacterial power against *Staphylococcus aureus* bacteria and has an antioxidant with IC50 value of 2.237 ppm.

Keywords: Antibacterial, Antioxidan, Facial wash gel, Limus seeds.

FORMULATION AND QUALITY TESTING OF SOLID SOAP FROM ETHANOL EXTRACT OF TEA LEAF (*CAMELLIA SINENSIS*) ORIGIN OF MALINO

A.Tenriugi Daeng Pine^{1*}, Hernawati Basir¹, Dzulkifli¹

¹*Akademi Farmasi Yamasi Makassar, Jalan Mappala 2 Blok D5 No.10 Makassar*

(Correspondensi Author: **A.Tenriugi Daeng Pine**; email: pinefarma@gmail.com)

ABSTRACT

Soap functions to clean without damaging the skin and is able to protect the skin from the effects of free radicals. Compounds that are able to ward off free radicals are antioxidants, one of which comes from tea leaves (*Camellia sinensis*). This study aims to make solid soap from ethanol extract of tea leaves (*Camellia sinensis*) which meets good physical quality. This type of research is experimental research by formulating solid soap from ethanol extract of tea leaves (*Camellia sinensis*) of 1% and 1.5% obtained by maceration method. Tests were carried out on organoleptic aspects, and physical quality tests which included pH, foam stability, hardness and irritation test. The results of organoleptic test observations of solid soap ethanol extract of tea leaves 1% and 1.5%, namely solid form, distinctive aroma, and opaque color. The pH test of tea leaf ethanol extract soap with concentrations of 1% and 1.5% respectively were 8 and 9. The foam test results for all soap formulas were stable with foam heights of 7 and 7.5 cm. The results of the hardness test of the two formulas are 7. The results of the irritation test of the two soap formulas are non-irritating. Based on this, solid soap from tea leaf ethanol extract with a concentration of 1% and 1.5% met the requirements for physical quality and irritation tests.

Keywords: Extract, Formulation, Quality, Soap, Tea leaves, Test.

ANTI-AGING ACTIVITY TEST ON SUNSCREEN CREAM COMBINATION OF CORN COB EXTRACT (*ZEA MAYS L.*) AND ROBUSTA COFFEE BEAN EXTRACT (*COFFEA CANEPHORA PIERRE EX. A. FROEHNER*)

Harpolia Cartika¹, Yetri Elisya¹, Fatwa Hasbi¹, Khairunnida¹, Untari Kartika Widyapramesthi¹

¹Jurusan Farmasi, Poltekkes Kemenkes Jakarta 2, Jl. Percetakan Negara No.23, Jakarta Pusat, 10560

(Correspondensi Author: **Harpolia Cartika**; email: harpolia.cartika@poltekkesikt2.ac.id)

ABSTRACT

Aging facial skin can be characterized by the appearance of wrinkles, reduced skin moisture/dry and rough, and the occurrence of pigmentation such as black spots. Aging is a natural process associated with degenerative processes, besides external factors such as air pollution, sunlight, especially ultraviolet (UV) rays can accelerate aging of facial skin. Phenolic compounds in corn cobs and coffee beans have the potential as a sunscreen that can slow down the aging process of the skin. This study uses an experimental method. Sunscreen cream containing corncob extract (10%) and robusta coffee beans (15%) has an IC50 value of 97.34 ppm with a strong antioxidant category and an SPF value of 37 extra protection levels. The cream was evaluated for physical properties and stability using the cycling test method, then tested for anti-aging activity with parameters such as wrinkles in vivo using female Sprague-Dawley rats observed by SEM. The results of the physical evaluation of the cream formula in the form of organoleptic tests, homogeneity, pH, spreadability, viscosity, and adhesion met the requirements for the physical evaluation of the cream. The results of the anti-aging activity test provide a wrinkle score with details of the average wrinkle score on the skin of the animal's paw with a cream base treatment of 2.5, a test cream of 1.5 and a comparison cream of 1. This indicates that the combination test cream of cob extract Corn and robusta coffee beans have the potential to slow down the aging process by protecting the skin from UV exposure.

Keywords: Antiaging, Cob extract, Combination of corn, Robusta coffee bean, Sunscreen.

PRESENTATION RUNDOWN

Room 2 Otanaha

Moderator : Raden Ayu Cahyaning Alam, S.Gz.

Jury : dr.Sari Eka pratiwi, M.Biomed.

Day, Date : Kamis, 07 Oktober 2021

Time : 1 PM – 3 PM

Nama	Kode	Judul
Riskah Nurámalia S.Ft, Physio, M. Biomed	OP202121	Overview of Physical Activity, Balance, and Cardiorespiratory Fitness of the Elderly
Niluh Nita Silvia.,SST.M.Keb	OP202122	Health Education About Stunting Can Increase Knowledge of Posyandu Cadres
Falnianty Hamzah	OP202123	Impact of Covid-19 on Male Fertility
Fakhriatul Falah	OP202124	Analysis of Mortality Risk and Severity Predictor Of Covid-19 Patient with Pre Existing Diabetes
drg. Rosmaladewi Talli, S.KG, M.Kes	OP202125	Quality of Life Analysis of Elderly Dental Users In Borong District, Sinjai Regency, South Sulawesi
Eka Pratiwi Teha	OP202126	Lack of Vitamin D Correlation With the Event of Pre-Eclampsia
Nancy Olii.,S.SiT.,MPH	OP202127	The Effect of Red Guava (<i>Psidium guava</i> l.) Juice on Pregnant Women's Hemoglobin
Rista Apriana, S.Kep.,Ns.,M.Kep	OP202128	Quality of Nursing Services Affect the Patient Satisfaction In Hospital
Fatmawati Mohamad, S.Pd, S.Kep, Ns, MPH	OP202129	The Effects of Consumption of Chayote (Sechium Edule) Juice on Reducing Blood Pressure in Elderly Patients with Hypertension at Putra Mandiri Foundation in Gorontalo
Nurhamidi	PP202121	Control Model Analysis of Stunting Risk Determinants In Children

Nurul Hidayah Base	PP202122	Ethnopharmacology Study of Medicinal Plants for Hypertension in Bontonompo Village, Bontonompo District, Gowa Regency
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OVERVIEW OF PHYSICAL ACTIVITY, BALANCE, AND CARDIORESPIRATORY FITNESS OF THE ELDERLY

Riskah Nurámalia¹, Meutiah Mutmainnah Abdullah², Miftahul Khaerah Dzakhirah³,
Mardiansyah⁴, Yulianti Ruhama⁵

¹Program Studi S1 Fisioterapi, Fakultas Keperawatan Universitas Hasanuddin, JL. Perintis
Kemerdekaan Km. 10 Makassar

(Corresponding Autor: **Riskah Nurámalia**; email: riskanuramalia75@gmail.com)

ABSTRACT:

Background: The elderly population continues to increase which it is important to maintain fitness in old age by doing physical activity to improve the physical capacity and functional ability which has an impact on the quality of life of the elderly. **Objective:** to know the overview of physical activity, balance, and cardiorespiratory fitness of the elderly at Batara Hati Mulia Foundation, Gowa Regency. **Method:** Research method by observational research with categorical descriptive planning. The subjects were 92 elderly adults which were match with inclusion and exclusion criteria. Activities-specific Balance Confidence (ABC) and International Physical Activity Questionnaire (IPAQ) were used to determine physical activity category, Time Up and Go Test (TUG) and Dynamic Gait Index (DGI) were used to determine balance category, also Borg Scale and 6 Minutes Walking Test (6MWT) were used to determine cardiorespiratory category **Results:** The results showed that the majority of the elderly still had moderate and heavy activities, which had low physical function as much as 33.7% and had moderate physical function as much as 40.2%. The balance aspect is described by TUG and DGI assessments respectively 58.2% and 76.1% at high risk of falling. Cardiorespiratory fitness is in the very low category (71.7%) which is described by the 6MWT assessment.

Keywords: *Physical Activity, Balance, Cardiorespiratory Fitness, Elderly*

HEALTH EDUCATION ABOUT STUNTING CAN INCREASE KNOWLEDGE OF POSYANDU CADRES

Niluh Nita Silfia^{1*}, Asri Widyayanti¹, Sriyanti Kusika¹, Hastuti Usman¹

¹*Poltekkes Kemenkes Palu*

(*Correspondens Author: **Niluh Nita Silfia**; email: niluhnita@yahoo.co.id)

ABSTRACT

Health education is a way of supporting health programs that can produce changes and increase knowledge in a short time. Posyandu cadres are the main driver of all activities carried out at posyandu. Data from the Health Office of stunting toddlers as of January 1 – November 24, 2019 who experienced stunting in Palu City reached 18.1%, while Donggala Regency which experienced the highest incidence of stunting reached 35.3%. The purpose of the effect of health education on stunting on the knowledge of posyandu cadres in the working area of Anuntodea Tipo Health Center and Pantoloan Health Center Palu City. Pre-experimental research method with one group pretest posttest design. The population is all Posyandu cadres under five who are in the working area of Anuntodea Tipo Health Center in Palu City and Pantoloan Health Center in 2021. The knowledge score of Posyandu cadres before being given health education about stunting in the working area of Anuntodea Tipo Health Center and Pantoloan Health Center Palu City obtained knowledge of cadres before the study was 48.88 (8.72) with the lowest score being 33 and the highest score being 73. Knowledge score of posyandu cadres after being given health education about stunting in the working area of Anuntodea Tipo Health Center and Pantoloan Health Center Palu City with an average score of 78.18 (8.89), the lowest answer score is 60 and the highest answer score is 100. There is an effect of Health Education on Stunting on Posyandu Cadre Knowledge with p value = 0.000. Conclusion of Health Education on Stunting on Knowledge of Posyandu Cadres. Suggestions are stunting services that do not yet exist in posyandu services in accordance with the five main stunting prevention service packages and give attention and appreciation to posyandu cadres so that they can be maintained and improved to produce good performance.

Keywords: Health Education; Stunting; Cadre Knowledge

IMPACT OF COVID-19 ON MALE FERTILITY

Falniyanti Hamzah

Department of Midwifery, Poltekkes Kemenkes Gorontalo, Gorontalo, Indonesia

(Corresponding author : **Falniyanti Hamzah**; email:
falniyantihamzh@gmail.com)

ABSTRACT

The number of confirmed COVID-19 cases is rising. Males accounted for 52,4% of the verified COVID-19 cases in Indonesia. There are also several issues with male fertility during the epidemic. Studies about the impact of Covid-19 on male fertility is still limited, so the author's goal is to find out what effect Covid-19 has on male fertility. The method that was used was a literature review. The study was carried out by looking for articles on scientific websites using the terms COVID-19, fertility, and sperm as search terms. The results of the research are 80% of journals published in 2020, 87% of journals published abroad and 83% of relevant journal contents. In addition to finding that there is an impact of Covid-19 on male fertility, the authors also found factors related to COVID-19. These characteristics include the age of men over 30 years old, who are more susceptible to Covid-19 infection. Men having a BMI of more than 23 are more likely to become infected with Covid-19. A history of disorders linked to Covid-19, including cancer, and its impact on fertility. Men who are infected with COVID-19 are at risk of developing urogenital problems. According to the conclusion of this study, men over 30 years old with a BMI of 23 and a history of cancer who are infected with COVID-19 will be risky not to be suburban if afflicted. Men who have been infected with COVID-19 are advised to conduct sperm tests and follow stricter health measures to avoid infection with Covid-19.

Keywords: COVID-19, Male, Fertility

ANALYSIS OF MORTALITY RISK AND SEVERITY PREDICTOR OF COVID-19 PATIENT WITH PRE EXISTING DIABETES

Fakhriatul Falah

Department of Nursing Poltekkes Kemenkes Gorontalo

(Correspondens author : **Fakhriatul Falah**; email:fakhriatulfalah@gmail.com)

ABSTRACT

Background : Diabetes Mellitus patient number in Indonesia are increasing every year. Indonesia ranks 6th out of ten countries with the highest number of diabetes patients, at around 10.3 million patients per year 2017 and expected to increase to 16.7 million patients per year at 2045. Previous research found that 30% of the COVID-19 patients who died were patients with comorbid Diabetes Mellitus. **Objective**: To analyze risk of mortality in COVID-19 patients with diabetes mellitus. **Methods**: Comprehensive literature search from 4 databases; Pubmed Central (PMC), Proquest, Google Scholar and Cengage Learning. Journals used from 2020 - 2021 with keywords: diabetes, covid 19, clinical outcomes, risk of mortality, severity predictor. The selection criteria for data extraction were full text journals, subject used were patients with diabetes mellitus or hyperglycemia, retrospective study design. **Results**: COVID-19 patients with diabetes mellitus showed a greater risk of death and severity compared to patient without diabetes. Severity predictor evaluated from many researches were increasing of inflammation biomarkers , coagulation markers and lower levels of lymphocyte. **Conclusion**: Patients with comorbid diabetes mellitus are at risk for more severe complications than other diseases. **Implication**: COVID-19 patients admitted to the hospital with diabetes required regular follow-up and appropriate action

Keyword: COVID-19, Diabetes Mellitus, Comorbid, Literatur review

THE QUALITY OF LIFE ANALYSIS OF THE ELDERLY USING REMOVABLE DENTURES IN BORONG DISTRICT, SINJAI REGENCY, SOUTH SULAWESI

Rosmaladewi Talli^{1*}

¹*Universitas Megarezky, Jl. Antang Raya No. 43 Makassar*

(Correspondens author : **Rosmaladewi Talli**; email:dewitalli@gmail.com)

ABSTRACT

Tooth loss can interfere with the comfort of the individual who experiences it and affects social relationships, physical and psychological health, and ultimately has an impact on the quality of life. The purpose of this study was to analyze the quality of life of the elderly using removable partial dentures and complete removable dentures in Batu Belerang Village and Biji Nangka Village, Borong District, Sinjai Regency, South Sulawesi. The design used in this study is an observational study with a cross sectional study approach. The research instrument is the OHIP 14 questionnaire to assess the quality of life. The sampling method was purposive sampling technique that met the inclusion and exclusion criteria with a sample of 31 respondents. Data were analyzed by univariate and bivariate. The results of the OHIP-14 dimension study showed that 28 elderly people (90.32%) who used dentures had good quality of life and 3 people (9.68%) had moderate quality of life. The results of the chi square test on denture sources and the quality of life of the elderly get a p value = 0.029 ($p < 0.05$). In summary we conclude that the quality of life of the elderly using dentures based on OHIP-14 is quite good. There is a significant relationship between the sources of dentures with the quality of life of the elderly.

Keywords: Dentures, Elderly, Quality of Life OHIP-14

LACK OF VITAMIN D CORRELATION WITH THE EVENT OF PRE-ECLAMPSIA

Eka Pratiwi Teha¹, Yusni Podungge^{1*}

¹Poltekkes Kemenkes Gorontalo, Jl. Taman Pendidikan Kota Gorontalo,

(Correspondes Author : **Eka Pratiwi Teha**; ekapratiwiteha29@gmail.com)

ABSTRACT

Maternal Mortality Rate (MMR) in the world and in Indonesia is still a serious problem because it is a national health indicator (WHO, 2016). About 800 mothers in the world one of the causes of maternal and fetal morbidity and mortality is preeclampsia (PE), the incidence ranges from 0.51%-38.4%. Preeclampsia affects 5%-7% of all pregnant women. Pregnancy hypertension accounts for 10% of the causes of AKI and is the largest cause of maternal and perinatal morbidity and mortality worldwide (Preeclampsia and Maternal Mortality: a Global Burden. Preeclampsia Foundation. 2017). Vitamin D and calcium deficiency have been reported as one of the causes of preeclampsia. The method used is literature study. The study was conducted by searching for journals on scientific sites using the keywords Pre-eclampsia, Vitamin D and AKI. Vitamin D deficiency affects maternal and fetal calcium balance and has also been reported as one of the causes of preeclampsia. Reducing serum calcium can cause an increase in blood pressure in preeclamptic women.

Keywords: Pre-eclampsia, Vitamin D and AKI

THE EFFECT OF RED GUAVA (*PSIDIUM GUAVA L.*) JUICE ON PREGNANT WOMEN'S HEMOGLOBIN

Nancy Oliy

Department of Midwifery, Poltekkes Kemenkes Gorontalo, Ministry of Health Republic Indonesia

(Correspondes Author : **Nancy oliy**; email: nancyolii@poltekkesgorontalo.ac.id)

ABSTRAK

Anemia in pregnancy has been the main nutritional issue in Indonesia; it is one of the factors that cause pregnant women to end up with death. An alternative to avoid anemia among pregnant women is consuming fruits with the highest source of iron and vitamin C, such as red guava, that can synthesize hemoglobin. This study aimed to analyze the influence of red guava (*Psidium guajava* L.) juice on pregnant women's hemoglobin level in Kota Utara Community Health Center, Gorontalo. This pre-experimental research employed a one-group pre-test post-test design. The fruit used was ripe red guava (2.5 months after flowering) with red flesh, soft texture, and sweet taste. As many as 250 mL of guava juice were given to pregnant women in the third trimester for 14 days. Moreover, 60 respondents were selected as the sample using purposive sampling. The data of hemoglobin levels were collected and analyzed in univariate and bivariate analysis with a paired t-test. The results indicated a significant difference in pregnant women's hemoglobin levels before and after consuming red guava juice. In conclusion, consuming red guava juice positively influences the hemoglobin level of pregnant women in the site area. The study recommended consuming 250 mL of red guava juice every day as an alternative to increase pregnant women's hemoglobin levels.

Keywords: Anemia, Guava juice, Hemoglobin level, Pregnant women

QUALITY OF NURSING SERVICES AFFECT THE PATIENT SATISFACTION IN HOSPITAL

Rista Apriana^{1*}, Ida Ratnasari²

¹*Majoring in Nursing Science, Poltekes of Health Ministry Gorontalo*

²*Nursing science study programe of STIKES Widya Husada Semarang*

(Correspondes Author: **Rista Apriana**; email:radjaairlangga001@gmail.com)

ABSTRACT

Improved quality of services is needed to provide patient satisfaction. Quality of nursing care consists of five dimensions these are responsiveness, assurance, tangibles, emphaty, and reliability. The aimed of this study was determined the relationship of nursing care quality with patient satisfaction level in hospital. The type of this research was non-experiment research and used cross sectional design. This research used purposive sampling technique, obtained 98 patients in Hospital. The data were collected using questionnaire and analyzed using pearson product moment test. The average quality of nursing care was at score 77.36, with the standard deviation at 8.91. The average patient satisfaction was at a score of 101.59, with the standard deviation at the score of 11.60. The result of Pearson Product Moment statistic test showed that there was a significant and positive correlation between the quality of nursing services with the level of patient satisfaction with the strong relationship correlation proved with p-value = 0,000 and $r = 0,592$. It showed that increasing the quality of nursing services given to the patient can increased the level of patient satisfaction.

Keywords: Correlation, Patient satisfaction, Quality of nursing services,

THE EFFECTS OF CONSUMPTION OF CHAYOTE (SECHIUM EDULE) JUICE ON REDUCING BLOOD PRESSURE IN ELDERLY PATIENTS WITH HYPERTENSION AT PUTRA MANDIRI FOUNDATION IN GORONTALO

Fatmawati Mohamad¹, Wenny Ino Ischak¹, Suwarni Loleh¹, Dita Muliaty A. Manoppo¹

Department of Nursing, Health Polytechnic, Ministry of Health Gorontalo

(Correspondes Author: **Fatmawati Mohamad**; email: fatmawatimohamad@poltekkesgorontalo.ac.id)

ABSTRACT

Background: Hypertension is a common degenerative disease in the elderly. One of the non-pharmacological therapies in reducing hypertension is consuming herbs, such as chayote (*Sechium edule*). Chayote contains several chemical compounds and nutrients, which have hypotensive effects as well as diuretics. This study aimed to determine the effect of chayote juice on reducing blood pressure in the elderly with hypertension. The research was conducted at the Putra Mandiri Foundation in Gorontalo on 10 February to 8 March 2020. **Method:** This pre-experimental study applied a one-group pre-posttest design and the Wilcoxon statistical test. The independent variable was the administration of the chayote juice, and the dependent variable was a decrease in blood pressure. **Results:** A total of 31 patients as the sample fulfilling the inclusive criteria was selected by employing a purposive sampling method. The mean blood pressure decreased from 144.19 / 90.00 mmHg to 124.19 / 77.10 mmHg. The results of data analysis showed significant differences blood pressure before and after the administration of chayote juice with a value of 0,000 ($p < 0.05$). In other words, H_0 was rejected and H_a was accepted. **Conclusions:** that there was an effect of consuming chayote juice on the decrease in blood pressure of the elderly with hypertension.

Keywords: Chayote Juice, Elderly, Hypertension.

CONTROL MODEL ANALYSIS OF STUNTING RISK DETERMINANTS IN CHILDREN

Nurhamidi^{1*}, Fathurrahman¹, Aprianti¹

*Department of nutrition, Health Polytechnic, Ministry of Health Banjarmasin MiCokrokusumo
Street No.4 A Banjarbaru City 70714, South Kalimantan Indonesia*

(Correspondes Author: **Nurhamidi**; email: nurhamidi1122@gmail.com)

ABSTRACT

Background Stunting in Batola district from the results of monitoring nutritional status from 2013 - 2017 was 47.23% (Info Banua co.id) and Gampa Asahi village was the highest at 50% This study aims to analyze the risk factors related to the determinants of children under five, mothers and the environment on stunting so that an analysis of the control model can be developed **Materials and Methods** conducted in 2019 in Sungai Gampa Village, Rantau Badauh District, Materials used Questionnaire, Microtoise, Food Model, Food sample, Food Picture Book Case control, population of all children under five, the technique of sampling the case is the total population, while the control is done by simple random sampling. cases of 50 stunting toddlers and control of 50 normal toddlers. Data analysis, bivariate Chi Square and then with multivariate multiple logistic regression test. Risk factors for stunting Energy intake, protein, infectious diseases, immunization status, history of exclusive breastfeeding, complementary feeding, maternal knowledge, family income, availability of energy and protein foods, parenting, and health services, and environmental health. **Result** showed that there were 6 variables related to the incidence of stunting, namely energy and protein intake, history of infectious disease, history of immunization, exclusive breastfeeding, and maternal knowledge with $p < 0.05$. The results of logistic regression showed that there was an effect of exclusive breastfeeding and protein consumption on the incidence of stunting in children under five. **Suggestions** for handling stunting by campaigning on the importance of giving exclusive breastfeeding to babies from an early age to couples of childbearing age and prospective mothers and increasing quality protein intake.

Keywords: Children under five, Determinants of risk, Mothers, Stunting

KAJIAN ETNOFARMAKOLOGI TUMBUHAN OBAT UNTUK PENYAKIT HIPERTENSI DI KELURAHAN BONTONOMPO KECAMATAN BONTONOMPO KABUPATEN GOWA

Nurul Hidayah Base^{1*}, Yusriyani¹, Siti Hardianti¹

¹*Farmasi, Akademi Farmasi Yamas, Jl. Mappala 2 Blok D5.No.10 Makassar*

(Correspondes Author: **Nurul Hidayah Base**; email: nurulhidayahbase@gmail.com)

ABSTRACT

Medicinal plants are all plant species that are known or believed to have medicinal properties. The medicinal plants are grouped into three, namely traditional medicinal plants, modern medicinal plants, and potential medicinal plants. An ethnopharmacology study of medicinal plants in the treatment of hypertension was carried out to examine information about the use of medicinal plants including the name of the plant, the part of the plant used, how to process and use it based on the habits of the people in Bontonompo Village, Bontonompo District, Gowa Regency. The research was conducted using the Snowball sampling method using observation, interviews, and documentation techniques. The information obtained is then reviewed using the literacy method to obtain scientific information from research results as well as from reference books and regulations set by the government. The results showed that there were 13 types of medicinal plants used in the treatment of hypertension, consisting of 46.15% leaves, 38.64% fruit, 7.69% roots, and 7.69% tubers. On average, medicinal plants are processed by boiling using boiling water and then consumed by drinking and 84.6% feel the symptoms of the disease are reduced after using medicinal plants regularly.

Keywords : Medicinal plants, study, ethnopharmacology, hypertension disease

PRESENTATION RUNDOWN

Room 3 Tilamuta

Moderator : Arlan K.Imran, S.Farm, M.Farm, Apt.

Jury : Zulfiayu, S.Si, M.Si, Apt.

Day, Date : Kamis, 07 Oktober 2021

Time : 1 PM – 3 PM

Name	Code	Title
apt. Sukmawati Syarif, S.Farm, M.Kes	OP202131	In Vitro Activity Combination Extract Test of Turmeric (<i>Curcuma domestica</i> Val) and Dates (<i>Phoenixdactylifera</i> L) as Antiinflammatory
apt. Ika Ristia Rahman, M.Farm	OP202132	Antioxidant Screening and Sunscreen Activity Nanocream Purified Extract of Kenikir Leaves (ETDK) and Tampoi Fruit Peel Extract (EKBT)
apt. Nurjannah Bachri, M. Farm	OP202133	Formulation and Testing of Effectiveness of Red Ginger (<i>Zingiber officinale</i> var. Rubrum) Rhizome Extract Cream for Acute Inflammation in Wistar White Rats (<i>Rattus norvegicus</i>)
apt. Besse Yuliana, S.Si., M.Si	OP202134	Formulation and Physical Stability Test of Snakehead Fish Mucus (<i>Channa striata</i>) as Wound Dressing for Diabetes Mellitus
apt. Junvidya Heroweti, S.Farm,MPH	OP202135	The Effectiveness of Healing in the Wounds of Patchouli Oil Spray Gel on Rabbit (<i>Oryctolagus cuniculus</i>)
apt. Ida Kristianingsih, S.Si., M.Farm	OP202136	Characterization and Antioxidant Activity of Soothing Gel Contains Aloe Extract (<i>Aloev vera</i> L) And Wuluh Starfruit (<i>Averrhoa bilimbi</i> L) with DPPH Method
Rissa Laila Vifta, S.Si., M.Sc.	OP202137	Analysis of Total Flavonoids of <i>Medinilla Speciosa</i> from Bandungan and Formulation in Gel
apt. Taufiq Dalming, S.Farm., M.Si.	PP202131	Formulation and Effectiveness Testing of White Oil (<i>Melaleuca cajuputi</i>) Shampoo as a Pediculocide

IN VITRO ACTIVITY COMBINATION EXTRACT TEST OF TURMERIC (*CURCUMA DOMESTICA VAL*) AND DATES (*PHOENIXDACTYLIFERA L*) AS ANTI-INFLAMATORY

Sukmawati^{1*}, Aulia Wati², A. Muflihunna¹

¹Departement Chemistry, Faculty of Pharmacy, Universitas Muslim Indonesia

²Departement Pharmacology, Faculty of Pharmacy, Universitas Muslim Indonesia

(Corresponding Autor: **Sukmawati**; email: sukmawati.syarif@umi.ac.id)

ABSTRACT

Inflammation is a normal protective response to tissue injury caused by physical trauma, harmful chemicals, or microbiological agents. Lysosomes can secrete enzymes that can induce inflammation. The lysosome membrane is analogous to the membrane of human red blood cells. This study aims to determine the anti-inflammatory potential of the combined extract of Turmeric (*Curcuma domestica val*) and Dates (*Phoenix dactylifera L*) in terms of its ability to stabilize red blood cell membranes with the erythrocyte membrane stability method. The research was started by taking blood and making a suspension of red blood cells. The red blood cell suspension was divided into 3 treatment groups, namely negative control, positive control (diclofenac sodium), and test solutions with concentrations of 50, 75, and 100 ppm, then let stand for 30 minutes and centrifuge. The absorption of the supernatant was measured using UV-Vis Spectrophotometer at a wavelength of 413 nm. The results showed that the concentration of 100 ppm gave the greatest percentage of inhibition, which is 65.64%. From the results obtained, it can be concluded that the higher the extract concentration, the better the inflammatory power.

Keywords: Anti-inflamation, Dates, Erythrocyte, In Vitro, Turmeric.

SCREENING OF ANTIOXIDANT AND SUNSCREEN ACTIVITY NANOCREAM PURIFIED EXTRACT OF KENIKIR LEAVES (ETDK) AND TAMPOI FRUIT PEEL EXTRACT (EKBT)

Ika Ristia Rahman^{1*}, Dian Kartikasari¹, Erwan Kurnianto¹, Sulastri Herdaningsih¹

¹*Akademi Farmasi Yarsi Pontianak, Pontianak, Indonesia*

(Corresponding Autor: Ika Ristia Rahman; email: ika.ristia.apt@gmail.com)

ABSTRACT

Background: UV lights are free radicals that can cause damage to the skin, such as redness, burning, pigmentation, and even cancer. Kenikir leaf purified extract (ETDK) and Tampoi fruit peel extract (EKBT) contain flavonoid compounds. Flavonoid compounds can be antioxidants and sunscreens due to the presence of chromophore groups that can absorb UV rays to reduce exposure to the skin. **Objectives:** This study aims to determine the antioxidant activity and the ability of sunscreen nanocream Purified extract of Kenikir leaves and Tampoi fruit peel extract. **Material and metode:** Nanocream is made with 3 ETDTK-EKBT combination formulas, II ETDK formulas, III EKBT formulas. The antioxidant activity test was carried out using the DPPH (1,1-diphenyl-2-picrylhydrazyl) method and the sunscreen activity test using the UV-Vis spectrophotometric method to calculate the SPF value of the preparation (Mansur's method). **Result:** The results showed that the nanocream formula had a strong antioxidant activity with the percent inhibition of formula I 78.28%, formula II 68.49%, and formula III 73.00%. The activity test results as a sunscreen formulation of purified extract nanocream from Kenikir leaves and nanocream from Tampoi fruit peel extract had extra protection ability with a sun-protecting factor value of 7 while the nano cream formula combined extract with an SPF value of 10 gave the maximum protection category. **Conclusion:** nanocreams have potential as antioxidants and sunscreens.

Keywords: Antioxidant, Sunscreen, *Cosmos caudatus*, *Baccaurea macrocarpa*, Nanocream

FORMULATION AND TESTING OF EFFECTIVENESS OF RED GINGER (*ZINGIBER OFFICINALE* VAR. RUBRUM) RHIZOME EXTRACT CREAM FOR ACUTE INFLAMMATION IN WISTAR WHITE RATS (*RATTUS NORVEGICUS*)

Nurjannah Bachri^{1*}, Sri Wahyuningsih², Nurhikma Awaluddin³, Nuradzira Nasir⁴

¹Jurusan Farmasi, Program Studi S1 Farmasi, STIKes Tarumanagara, Jakarta, Indonesia

²Jurusan Farmasi, Program Studi S1 Farmasi, Universitas Megarezky, Makassar, Indonesia

(Corresponding Autor: Nurjannah Bachri; email : janetbachri@gmail.com)

ABSTRACT

Background : This study aims to determine the effect of administration of red ginger (*Zingiber officinale* var. Rubrum) rhizome extract cream on changes in acute inflammation in test animals white rats (*Rattus norvegicus*) Wistar strain. **Material and methods** : This type of research is a laboratory experiment that aims to see the anti-inflammatory effect of using red ginger (*Zingiber officinale* var. Rubrum) rhizome extract cream on white rats (*Rattus norvegicus*) wistar strain. The preparation of red ginger (*Zingiber officinale* var. Rubrum) rhizome extract cream with all concentrations of 1%, 3% and 5% gave an acute inflammatory healing effect because the active substance contained in the red ginger rhizome (*Zingiber officinale* var. Rubrum) was gingerol. **Result** : Where gingerol has an anti-inflammatory effect due to its strong inhibition of prostaglandin biosynthesis. Based on the research results that have been obtained, it can be concluded that the red ginger rhizome extract (*Zingiber officinale* var. Rubrum) can be formulated in cream preparations. **Conclusion** : The formulation of the red ginger (*Zingiber officinale* var. Rubrum) rhizome extract cream had an anti-inflammatory effect in research animals of white rats (*Rattus norvegicus*) Wistar strain. Based on statistical tests using One Way ANOVA, it was shown that the most effective formulation for providing anti-inflammatory effects was F2 (preparation of red ginger (*Zingiber officinale* var. Rubrum) rhizome extract cream) 3%).

Keyword : Cream, Inflammation, Red ginger, White rat

FORMULATION AND PHYSICAL STABILITY TEST OF SNAKEHEAD FISH MUCUS (*CHANNA STRIATA*) AS WOUND DRESSING FOR DIABETES MELLITUS

Besse Yuliana^{1*}, Sanje Padang², Sinta Somoy³

¹Department of Pharmacy, Faculty of Pharmacy, Megarezky University, Makassar, Indonesia.

²Department of Pharmacy, Faculty of Pharmacy, Megarezky University, Makassar, Indonesia.

(Corresponding Autor: **Besse Yuliana**; email: yuliasarif@gmail.com)

ABSTRACT

Snakehead fish (*Channa striata*) is a fresh water fish with high protein content, and mucus containing active proteins plays an important role in wound healing. This study aims to obtain active protein from snakehead fish mucus used in wound dressing formulations and evaluate wound dressing preparations through physical stability tests. The method used is a laboratory experiment using lyophilized samples of snakehead fish (*Channa striata*) mucus with a concentration of 5%, 10%, and 15%. Evaluation of wound dressing preparations included organoleptic testing, weight uniformity testing, pH testing, moisture percentage testing, elasticity testing, thickness testing, skin irritation testing, adhesion testing, and protein content analysis. The results showed that snakehead fish slime contains active protein and can be formulated in wound dressing which are evaluated based on the physical stability of the preparation. The conclusion is that snakehead fish mucus containing active protein can be used as a wound dressing preparation material that meets the requirement for topical preparation and is physically stable.

Keywords: Mucus, Physical Stability, Snakehead fish, Wound dressing.

THE EFFECTIVENESS OF WOUNDS HEALING OF PATCHOULI OIL SPRAY GEL ON RABBIT (*ORYCTOLAGUS CUNICULUS*)

Junvidya Heroweti^{1*}, Danang Novianto Wibowo², Isnina Rokhmatun Khasanah³, Safira Salma³

¹*Departemen Farmakologi dan Farmasi Klinis, Universitas Wahid Hasyim*

²*Departemen Farmasetika, Universitas Wahid Hasyim*

³*Universitas Wahid Hasyim*

(Corresponding Autor: **Junvidya Heroweti**; email: junvidyaheroweti@gmail.com)

ABSTRACT

Patchouli plant (*Pogostemon cablin* Benth) produces essential oil- plants containing sesquiterpenes and patchouli alcohol compounds that function as anti-inflammatory. In addition, patchouli oil also contains terpenoid compounds that have antibacterial and antifungal activity. This study aims to determine the effect of wound healing in patchouli oil spray gel on rabbits. The spray gel formulation used in this study was to add the active substance of pure patchouli oil with concentrations of 5%, 7.5%, and 10%. The resulting spray gel formulation was tested on rabbit cuts with six treatments, namely positive control (bioplacenton), negative control (base), control without treatment, patchouli oil spray gel with concentrations of 5%, 7.5%, and 10%. The test was carried out for 14 days, giving the ointment two times a day (every 12 hours). The analysis was carried out by calculating the average percentage of wound healing time and analyzed using the one-way ANOVA test. The results of the three formulations of patchouli oil spray gel showed that the preparation with a concentration of 10% had no significantly different results ($P>0.05$) compared to the positive control.

Keywords : Patchouli alcohol, Patchouli oil, Spray gel, Wounds healing

ANTIOXIDANT ACTIVITY OF SOOTHING GEL CONTAINING ALOE VERA (*ALOE VERA L*) AND WULUH STARFRUIT (*AVERRHOA BILIMBI L*) EXTRACT AS ANTIOXIDANT USING DPPH METHOD

Ida Kristianingsih^{1*}, Septian Fajarusubah²

¹*Fakultas Farmasi, Institut Ilmu Kesehatan Bhakti Wiyata Kediri, Jawa Timur, Indonesia.*

(Corresponding Autor: **Ida Kristianingsih**; email: ida.kristianingsih@iik.ac.id)

ABSTRACT

The skin is the body's largest organ, with a surface area of about 2m². Free radicals can cause skin damage, so it's important to look after your skin. Antioxidants are substances that can prevent skin damage by neutralizing free radicals. Antioxidant properties are found in aloe vera and wuluh starfruit extracts. Flavonoids are one of the compounds that can be used as antioxidants. The extract was obtained by maceration extraction. Gel is a semisolid preparation that provides a cool feeling, good spreadability, does not leave marks on the skin, is easy to use and easy to wash. This study aims to look at the characteristics and antioxidant activity of *aloe vera* extract and and wuluh starfruit gel preparations using the DPPH method. The preparation is made with three formulations, F1 with one type of active substance Averrhoa bilimbi extract 1 %, F2 with one type of active substance Aloe vera extract 1 % and F3 is a combination of two active substances averrhoa bilimbi extract and aloe vera extract 1 %. Based on the testing of antioxidant activity F1, F2 and F3 has an activity capable of counteracting free radicals. Based on the results obtained F1 has the highest antioxidant activity IC₅₀ 507,98 ± 3,33 ppm.

Keywords: Soothing Gel, *Aloe vera L*, *Averrhoa bilimbi L*, antioxidant, DPPH

ANALYSIS OF TOTAL FLAVONOIDS OF *MEDINILLA SPECIOSA* FROM BANDUNGAN AND FORMULATION IN GEL

Rissa Laila Vifta^{1*}, Yoga Saputra¹, Abdillah Luqman Hakim¹

¹Program Studi Farmasi, Fakultas Kesehatan, Universitas Ngudi Waluyo

(Corresponding Author: **Rissa Laila Vifta**; email: rissalailavifta@unw.ac.id)

ABSTRACT

One of the Indonesian plant species that has not been fully studied for its use in medicine was *Medinilla speciosa* or called it by Parijoto. Parijoto fruit contains flavonoid compounds that have pharmacological activity as antioxidants. The formulation of the Parijoto fruit extract in gel can be used in topically product. This research was aimed to analyze the total flavonoid content in Parijoto fruit extract and evaluate the physical characteristics of the Parijoto fruit extract in gel formula. Extraction of Parijoto fruit using maceration method with 96% ethanol solvent, qualitative and quantitative analysis of flavonoids, as well as testing of physical characteristics including homogeneity, organoleptic, pH test, dispersibility test, viscosity, adhesion test with storage at temperature (100°C) and (400°C)). The results showed that the yield of Parijoto fruit extract was 11.56% w/w. Qualitative identification showed the presence of flavonoid compounds in Parijoto fruit extract. Total flavonoids between quercetin and rutin were 310.03 mgQE/g and 73.29 mgRE/g, respectively. The results of the physical characteristics test of the gel met the standard requirements for the physical properties test during storage for 5 cycles for 10 days on the parameters of homogeneity test, pH test, dispersion test, viscosity, adhesion test, but did not meet the requirements of organoleptic test so that it can be concluded that the preparation of parijoto fruit extract gel unstable.

Keywords : Maceration, Flavonoids, Gel, *Medinilla speciosa*, Quersetin

FORMULATION AND EFFECTIVENESS TESTING OF EUCALYPTUS ESSENTIAL OIL (MELALEUCA CAJUPUTI) SHAMPOO AS A PEDICULOSIDE

Taufiq Dalming¹, Dedy Ma'ruf¹, Audri Larasati Milenia¹

¹Prodi D III Farmasi, Institut Ilmu Kesehatan Pelamonia Kesdam XIV/Hsn, Jalan Garuda No. 3AD Makassar.

(Corresponding Author: **Taufiq Dalming**; email: taufiqdalming@gmail.com)

ABSTRACT

Human head lice (*Pediculus humanis capitis*) are the most insects on the top which will interfere with an individual's activities and may cause disease. Pediculoses are insecticides which will kill fleas, pediculoses are often obtained from chemicals and natural materials, one among the pediculoses from natural ingredients is essential oil. The aim of this study was to work out whether essential oil are often made into shampoo preparations and the way the effectiveness of pediculoses after being made into shampoo preparations. The formulation of essential oil shampoo was made into 4 formulas with a degree of essential oil of 15%, 20%, 25%, and 30%. The shampoo formulation consists of sodium lauryl sulfate, cocamide DEA, NaCl, Na-CMC, acid, propanediol, glycerin, propyl paraben, methyl paraben, and tea. The shampoo obtained is thick, features a distinctive aroma, is white in color, features a pH of 8 and a foam height of 1.2-1.7 cm. The typical regardless of lice mortality was 79.1% to 100%, this result was better than the positive control which was only up to 25% of the amount of lice deaths for 45 minutes. It had been concluded that essential oil applied within the shampoo formula was effective as a pediculicide.

Keywords: Essential oil, Pediculoses, Shampoo.

PRESENTATION RUNDOWN

Room 4 Limboto

Moderator : Rahma Dewi Agustini, S.ST.M.Keb

Jury : Ysrafil, S.Farm.M.Biomed.

Day, Date : Thursday, 07 Oktober 2021

Time : 1 PM – 3 PM

Name	Code	Title
apt. Esti Ambar Widyaningrum, M. Farm.	OP202141	Correlation of Number of Drug to Potentially Inappropriate Medication (PIMs) Based on the 2019 Beers Criteria in Geriatric Hypertension Outpatients at "X" Hospital in Trenggalek
apt. Made Krisna Adi Jaya, S.Farm., M.Farm.	OP202142	Study on Patient's Desire to Get Oral Antibiotics for Self Medication at Community Pharmacy in Bali Province, Indonesia
apt. Reza Agung Sriwijaya, M.Farm	OP202143	Evaluation of Drug Storage System in Pharmaceutical Installation RS.X Palembang in 2019
apt. Widyastiwi, M.Si.	OP202144	Correlation of Metered Dose Inhaler Use Technique and Asthma Control Level in Asthma Patients at a Hospital in Bandung, West Java, Indonesia
apt. Sri Wahyuningsih, M.Si.	OP202145	Face Serum Ethyl Acetate Fraction of Beluntas Leaves (<i>Pluchea indica</i> L.) as Antibacterial
apt. Malinda Prihantini, M.Si.	OP202146	Application of Lakes System in Preparation of Hair Dyes Pomade Cream of Red Dragon (<i>Hylocereus polyrhizus</i>) Fruit Peel Juice and Acute Dermal Irritation
Chairunnisa Uri Mahardika	OP202147	Description of Mother's Knowledge, Attitude, and Compliance Towards DPT Immunization Age 2-9 Months Babies at PMB Yullies Eka f., S.Tr.Keb, Palangka Raya City

Okta Nursanti, S.Farm., M.S.Farm.	PP202141	Molecular Docking Compounds Contained in (<i>Phyllanthus acidus</i> L.) as Ligands to the Estrogen Receptor Alfa
Vera Nurviana, M.Farm	PP202142	Study of Etnomedisin on Degenerative Diseases in Traditional Village of Kuta, Ciamis District, West Java, Indonesia
Dr. apt. I Gusti Agung Ayu Kartika, S.Farm., M.Si.	PP202143	Anti Osteoporosis Potential of Pachypostaudin B, a New Compound of <i>Peperomia pellucida</i> : In Vitro and In Silico Studies

CORRELATION BETWEEN THE NUMBER OF DRUGS PRESCRIBED AND POTENTIALLY INAPPROPRIATE MEDICATION (PIMs) BASED ON THE 2019 BEERS CRITERIA IN GERIATRIC HYPERTENSION OUTPATIENTS AT DR. SOEDOMO HOSPITAL IN TRENGGALEK

Esti Ambar Widyaningrum^{1*}, Kumala Sari PDW¹, Sri Suhartatik², Rimawati³, Eka Kartika Sari⁴

¹Lecturer at The Faculty of Pharmacy, IIK Bhakti Wiyata Kediri

²Head of Pharmacy Installation, Dr. Soedomo Regional General Hospital, Trenggalek

³Pharmacist, Dr. Soedomo Regional General Hospital, Trenggalek

⁴Undergraduate Pharmacy Student, IIK Bhakti Wiyata Kediri

(Corresponding Autor: **Esti Ambar Widyaningrum**; email : esti.ambar@iik.ac.id)

ABSTRACT

Background: Geriatric patients are elderly patients with multiple diseases and/or disorders due to decreased organ, psychological, social, economic, and environmental functions who require integrated health services with a multidisciplinary approach that works in an interdisciplinary manner. Based on the results of the 2018 Basic Health Research, the most non-communicable disease in the elderly is hypertension with a prevalence of 62.63%. Uncontrolled hypertension can lead to complications such as stroke, CHD, and kidney failure. The more incidence of complications, causing the geriatrics to get more drugs (polypharmacy). Polypharmacy is one of the risk factors for the occurrence of Potentially Inappropriate Medication (PIMs) or the potential for inappropriate treatment that often occurs in geriatric patients. One of the explicit criteria that can be used to identify the incidence of PIMs in geriatric patients is the 2019 Beers Criteria.

Objectives: This study was to determine the relationship between the incidence of PIMs and the number of drugs given to hypertensive geriatric outpatients at Dr. Soedomo Regional General Hospital in Trenggalek. This study employed an observational study with an analytical approach and retrospective. This study included a sample of 85 prescriptions for outpatient geriatric hypertension outpatient at Dr. Soedomo Regional General Hospital in Trenggalek in the period October - December 2020 taken using the purposive sampling technique. Data were analyzed using the C contingency coefficient correlation test. **Results:** 67,1% of prescriptions contained ≥ 5 kinds of drugs and 32,9% of prescriptions contained < 5 kinds of drugs. Based on the incidence of PIMs, there were 97.6% of prescriptions for PIMs and 2.4% of prescriptions without PIMs. The C contingency coefficient correlation test shows the correlation coefficient (r)

of 0.216 with a positive direction and p-value = 0.041. **Conclusions:** The number of drugs has a significant correlation and can cause the incidence of PIMs in geriatric patients with weak correlation strength. Collaboration between pharmacists and doctors is needed to provide the best therapy to patients, to maximize the role of pharmacists in monitoring drug use in geriatric patients at Dr. Soedomo Hospital in Trenggalek.

Keywords: Geriatrics, Polypharmacy, PIMs, Beers Criteria.

STUDY ON PATIENT'S DESIRE TO GET ORAL ANTIBIOTICS FOR SELF MEDICATION AT COMMUNITY PHARMACY IN BALI PROVINCE-INDONESIA

Made Krisna Adi Jaya¹, Dewa Ayu Swastini¹

¹*Departement of Pharmacy, Faculty of Math and Science, Udayana University, Bali-Indonesia*

(Corresponding author: **Made Krisna Adi Jaya**; email: krisnaadijaya@unud.ac.id)

ABSTRACT

Background: Oral antibiotics are one of the drugs that must be used wisely. Irrational use can cause fatal problems, including resistance and increased mortality due to infection. Many people try to get oral antibiotics without a doctor's prescription. This behavior is worrying because it can lead to irrational use of antibiotics. **Objective:** This study aimed to identify the factors that encourage people to get oral antibiotics without a doctor's prescription, especially in the province of Bali-Indonesia, as an effort to self-medication. **Methods:** A cross-sectional study design was conducted to identify factors that encourage patients to take oral antibiotics without a doctor's prescription. The identified factors were then analyzed in relation to the demographic characteristics of the patient. **Results:** A total of 400 respondents were successfully observed. A total of 59% of respondents came to the community pharmacy to try to get Amoxicillin, 75% stated complaints of cough, cold, painful swallowing. As many as 52% of respondents stated that they knew about this antibiotic from their previous healing experience with the same symptoms, and 95% of them tried to buy oral antibiotics because it was more efficient and save money. Factor analysis found three characteristics influencing this behavior: age, distance from residence to the pharmacy, and insurance ownership. **Conclusion:** Public knowledge in the province of Bali regarding the use of oral antibiotics and their dangers is still very minimal. This founding is worrying regarding the potential for resistance that threatens the future.

Keywords: Oral Antibiotics, Self Medication, Community Pharmacy

EVALUATION OF DRUG STORAGE SYSTEM IN PHARMACEUTICAL INSTALLATION HOSPITAL X PALEMBANG IN 2019

Reza Agung Sriwijaya¹, Ahmad Fatoni, Anggraini

Bhakti Pertiwi College of Pharmacy Palembang, Indonesia, Pharmacy Community, STIFI Bhakti Pertiwi, Palembang, Indonesia

(Corresponding author: **Reza Agung Sriwijaya**; email: agungsriwijayareza@gmail.com)

ABSTRACT

A study entitled "Evaluation of the Drug Storage System in the Pharmacy Installation of Hospital X in the city of Palembang in 2019 has been carried out". This study aims to determine the description of the drug storage system in the pharmaceutical installation of Rs. X Palembang in 2019 which refers to the Minister of Health no. 72 of 2016[1]. This type of research is descriptive with direct observation of pharmaceutical facilities and the activities of pharmacy staff in the drug storage system. Data collection was based on retrospective data and direct interviews with pharmacy staff at the Rs.X pharmacy installation in the city of Palembang. The data obtained a score of 14 or 93.3% with a very good category on the drug storage system at the pharmacy installation of Hospital X in the city of Palembang and has been in accordance with pharmaceutical services based on the Minister of Health number 72 of 2016 especially in the management of pharmaceutical preparations and medical consumables.

Keywords: storage system, Pharmacy installation, Permenkes no 72/16

CORRELATION OF METERED DOSE INHALER USE TECHNIQUE AND ASTHMA CONTROL LEVEL IN ASTHMA PATIENTS AT A HOSPITAL IN BANDUNG, WEST JAVA, INDONESIA

Widyastiwi^{1*}, Tsania Nurilsyam¹, Mohammad Roseno¹, Inne F. Lhaksmiwati²

¹Pharmacy Department, Poltekkes Kemenkes Bandung, Bandung, Jawa Barat, Indonesia.

²Educational Management, Sekolah Tinggi Ilmu Ekonomi Pasundan, Bandung, Jawa Barat, Indonesia

(Corresponding author: **Widyastiwi**; email: widyastiwi_farmasi@staff.poltekkesbandung.ac.id)

ABSTRACT

Background: Asthma is still a major health problem in global population, including Indonesia. Antiasthma drugs available in various dosage forms, including inhaler. However, several problems related to inhalation route were found due to its unique device form and spesific use technique. One of the major problems related to inhalation route is inappropriate use technique of inhaler device, which could lead to treatment failure. Therapy outcome can be measured through Asthma Control Test (ACT). **Objectives:** This study was aimed to evaluate correlation between metered dose inhaler (MDI) use technique and asthma control level in patients. **Methods:** A cross-sectional analytic study was conducted in May - June 2021. Thirty patients who met inclusion criteria were enrolled in this study. Patients' MDI use technique and asthma control level were evaluated using a valid and standardized questionnaire. Statistics analysis was performed to determine the correlation between MDI use technique and asthma control level. **Results:** This study showed that most of asthmatic patients were women in older age, with mild asthma severity for more than 10 years. The most prevalent medication used was Fenoterol HBr, followed by salbutamol, and salmeterol/fluticasone combination. Inappropriate MDI use was found in 70,0% patients, with major problem found in patients' breathing technique before and during MDI use. Asthma control test was performed and showed that 90,0% of asthmatic patients involved in this study have an uncontrolled asthma. Statistical analysis using Pearson product-moment correlation test showed a positive correlation between proper use of MDI and asthma control level ($r=0.425$, $p<0.05$). **Conclusions:** Patient who properly use MDI may have a higher score in asthma control test, thus have a better control of asthma. This study emphasized pharmacist role as patient educator in ensuring appropriate inhaler use in order to achieve therapeutic goals.

Keywords: Asthma control level, Asthma Control Test (ACT), Inhaler use technique, Metered dose inhaler (MDI)

FACIAL SERUM FACIAL ETHYLACETATE FRACTION OF BELUNTAS LEAVES (*PLUCHEA INDICA* L.) AS ANTIBACTERIAL

Sri Wahyuningsih^{1*}, Nurhikma Awaluddin¹, Nurjannah Bachri², Inda Andriani¹

¹Fakultas Farmasi, Universitas Megarezky

²Prodi S1 Farmasi, STIKes Tarumanagara

(Corresponding author: **Sri Wahyuningsih**; email: sriwahyuningsih@universitasmegarezky.ac.id)

ABSTRACT

Beluntas leaves (*Pluchea indica* L.) is a plant that has functions as an antibacterial, containing secondary metabolites, namely flavonoids, alkaloids, saponins, and tannins. This research aimed to determine the ethyl acetate fraction as a result of the partitioning of beluntas leaves extract (*Pluchea indica* L.) can be formulated into a facial serum as an antibacterial against *Propionibacterium acnes*. The method of this research is to formulating a facial serum from the ethyl acetate fraction of beluntas leaves extract (*Pluchea indica* L.) with various concentrations of 1%, 3%, and 5% and testing the antibacterial activity against *Propionibacterium acnes* using the well diffusion method antibacterial. The results of the facial serum formula showed that there was no significant difference before and after the cycling test and each formula still has the normal range of serum preparations. The results of the antibacterial activity showed that F3 with a concentration of 5% has an inhibition zone diameter of 18.83 mm. Based on these results, it was shown that the ethyl acetate fraction of beluntas leaves (*Pluchea indica* L.) facial serum has physical and chemical stability and strong potential as an antibacterial.

Keywords: facial serum, ethyl acetat fraction, beluntas leaves, antibacterial

DESCRIPTION OF MOTHER'S KNOWLEDGE, ATTITUDE, AND COMPLIANCE TOWARDS DPT IMMUNIZATION AGE 2-9 MONTHS BABIES AT PMB YULLIES EKA F., S.TR.KEB, PALANGKA RAYA CITY

Sukmawati A Damiti^{1*}, Chairunnisa Uri Mahardika¹, Maria Magdalena¹, Eline Charla SB¹, Endang Suprihani²

¹Department of Midwifery, Health Polytechnic of Palangka Raya, George Obos Street No. 30, 32, Menteng, Jekan Raya Distric, Palangka Raya City, Central Kalimantan Province,

²Doris Sylvanus Hospital, Tambun Bungai Street No. 04, Langkai, Jekan Raya Distric, Palangka Raya City, Center Kalimantan Province

(Corresponding author: **Sri Wahyuningsih**; email: chairunnisa@gmail.com)

ABSTRACT

The number of children who died was 1.5 million each year due to diseases that can be prevented by immunization (WHO, 2019), including diphtheria which can be prevented by routine immunization coverage, high, evenly distributed, and maintained. The purpose of the study was to describe the knowledge, attitudes, and compliance of mothers to DPT immunization. This study uses a descriptive method to explain and explore mother's knowledge, by collecting primary data according to a cross-sectional design that has received ethical approval. The total sample was 31 respondents who immunized their children, a total of 35 mothers who immunized DPT, 4 of whom were advanced DPT immunizations which were included in the exclusion criteria. After that, the data was processed using the SPSS method. The results of research that has been conducted on 31 respondents show that respondents who know immunization in the good category are 25 respondents (80.6%) and 6 respondents are not good (19.4%). Respondents who have good or bad attitudes towards immunization, 21 respondents (67.7%) are with a good attitude and 10 respondents (32.3%) are bad. Respondents who have good or bad compliance to immunization, 20 respondents (64.5%) have bad compliance and 11 respondents (35.5 %) have good compliance. This study shows that good knowledge and attitudes of mothers do not necessarily affect the DPT immunization compliance and factors that influence a mother's compliance based on research results are a certain cultural heritage that makes compliance becomes difficult and individual factors or family support.

Keywords: immunization; DPT; knowledge; attitude; compliance

MOLECULAR DOCKING COMPOUNDS CONTAINED IN (*PHYLLANTHUS ACIDUS* L.) AS LIGANDS TO THE ESTROGEN RECEPTOR ALFA

Okta Nursanti¹, Esti Mumpuni², Enade Perdana Istyastono³

¹Faculty of Military Pharmacy, Indonesia Defense University, Sentul, Bogor 16810

²Faculty of Pharmacy, Pancasila University, Srengseng Sawah, Jakarta 12640

³Faculty of Pharmacy, Universitas Sanata Dharma, Yogyakarta

(Corresponding author: **Okta Nursanti**; email: okta.nursanti@idu.ac.id)

ABSTRACT

Background: *Phyllanthus acidus* L empirically efficacious as anticancer. In this study conducted in silico test compounds contained in *Phyllanthus acidus* against estrogen receptor alpha (ER- α). **Objective:** The purpose of this study is to look among the compounds found in *Phyllanthus acidus* L. active as ligands to the estrogen receptor alpha. **Method:** The method used to test the compounds contained in *Phyllanthus acidus* L. is using in silico virtual screening protocol validated Anita et al. (2012). **Result:** The results of the virtual screening of compounds contained in *Phyllanthus acidus* that uses application-er.sh test, obtained the active compounds as ligands in the (ER- α) is phyllanthusol a, phyllanthusol b and hypogallic acid. *Inactive* compounds as ligands in the (ER- α), namely adenosine, 4-hydroxybenzoic acid, cafeic acid and kaempferol. Representative active compounds are phyllanthusol b and representative compounds are inactive 4-hydroxybenzoic acid, two compounds were visualized in 3D using PyMOL. **Keywords:** Molecular docking, *Phyllanthus acidus* L, ligands, estrogen receptor alpha.

STUDY OF ETNOMEDISIN ON DEGENERATIVE DISEASES IN TRADITIONAL VILLAGE OF KUTA, CIAMIS DISTRICT, WEST JAVA, INDONESIA

Acep Riyadul M¹, Vera Nurviana^{2*}, Ira Rahmiyani³

¹*Prodi S1 Farmasi Sekolah Tinggi Ilmu Kesehatan Bakti Tunas Husada Tasikmalaya, Jalan cilolohan No. 36 Tasikmalaya Jawa Barat, Indonesia*

(Corresponding author: **Vera Nurviana**; email: veranurviana@stikes-bth.ac.id)

ABSTRACT

Background: The traditional village of Kuta located in Karangpaningal village, Tambaksari subdistrict, Ciamis regency, West Java has been known to respect their ancestral culture and have its own tribal laws for the management of natural resources with a view to preserving the environment. **Objectives:** The study aims to examine ethnomedicine in the treatment of degenerative diseases. **Material and Methods:** Research methods used as observational, selecting the informants using a purposive sampling technique. Data collection is obtained through deep observation and interview of the informant. The data analysis was conducted on important values, situations, fidelity level and ratio of informants' agreements. **Results:** There are 76 kinds of medicinal plants divided into the 40 families of plants used by resident of Kuta indigenous area, Ciamis regency for degenerative disease treatments with the highest value percentages in the use of cucumber 16.8% and sidaguri 12.0%, while the top 2 families of Cucurbitaceae 28.0% and Zingiberaceae 20.0%. The plant's most commonly used feature is leaves 36.8%. The highest percentage of processing is depreciated at 26.4% and boiled at 23.2%, while the highest percentage of consumption is consumed at 44.8%. The source for medicinal plants at the highest percentage is in gardens at 29.6% and in courtyards of 21.6%.

Keywords: Degenerative diseases, Ethnomedicine, Kuta village, Plants

ANTI OSTEOPOROSIS POTENTIAL OF PACHYPOSTAUDIN B, A NEW COMPOUND OF *PEPEROMIA PELLUCIDA* : IN VITRO AND IN SILICO STUDIES

I Gusti Agung Ayu Kartika^{1,2}, Catur Riani³, Muhamad Insanu⁴, Jong Hwan Kwak⁵, Kyu Hyuck Chung⁶, Kittipong Paiboonsukwong⁷, Narattaphol Charoenphandhu⁷, Alisa Tubsuwan⁷, I Ketut Adnyana^{2*}

¹*Yoga and Health Study Program, Faculty of Brahma Widya, Universitas Hindu Negeri I Gusti Bagus Sugriwa, Kenyeri Gg Sekar Kemuda 2 Denpasar, 80237, Indonesia*

²*Pharmacology and Clinical Pharmacy Department, School of Pharmacy, Institut Teknologi Bandung, Ganesha 10 Bandung, 40132, Indonesia*

³*Pharmaceutics Department, School of Pharmacy, Institut Teknologi Bandung, Ganesha 10 Bandung, 40132, Indonesia*

⁴*Pharmaceutical Biology Department, School of Pharmacy, Institut Teknologi Bandung, Ganesha 10 Bandung, 40132, Indonesia*

⁵*Phytochemistry Laboratory, School of Pharmacy, Sungkyunkwan University, Suwon-Si, Gyeonggi-Do South Korea*

⁶*Prevent Pharm Laboratory, School of Pharmacy, Sungkyunkwan University, Suwon-Si, Gyeonggi-Do, South Korea*

⁷*Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, 73170, Thailand*

(Corresponding Author : I Ketut Adnyana; ketut@fa.itb.ac.id)

ABSTRACT

Osteoporosis can be described as brittle bone disease, manifested by loss of bone mass with an increased tendency to fracture. Nowadays, the finding of an effective and cost-efficient drug from natural medicines has been conducting. One of the strong candidates is *Peperomia pellucida*. The aims of this study are to observe the effect of Pachypostaudin B, a new chemical compound from *Peperomia pellucida* as antiosteoporotic agent on in vitro using bone-related cells and in silico molecular docking. Effect of the compound on the proliferation of osteoblast cells and inhibition to osteoclastogenesis were performed in UMR-106 and RAW 264.7 cells respectively, which is induced by receptor activator of NF-kappaB ligand then analyses with TRAP Staining Assay. Molecular docking were conducted with protein target cathepsin-K and MMP-9. The docking of ligands into the active site of the protein target was performed by using Autodock 4.2. No increase in osteoblast proliferation was observed. Meanwhile, the compound showed a different effect on osteoclastogenesis. The compound successfully inhibits osteoclast formation. The activity was 29% at a concentration of 10 µg/mL. The compound docking

interaction at CatK were showed pachypostaudin 3 hydrogen bond i.e. GLY66, TYR67, and LEU157 (predicted binding energy -10.75 kJ/mol) while the native ligand showed 5 hydrogen bond, i.e. TRP177, TRP26, GLN19, ASN158, and GLY66 (predicted binding energy -8.20 kJ/mol) and odanacatib, approved drug chosen, showed 5 hydrogen bond i.e. GLN19, CYS25, TRP177, GLY66, and TYR67 (predicted binding energy -7.07 kJ/mol). Meanwhile, in MMP-9 receptor, the compound showed pachypostaudin 1 hydrogen bond i.e. ALA189 (predicted binding energy -5.22 kJ/mol) while the native ligand showed 2 hydrogen bond, i.e. LEU188 and ALA189 (predicted binding energy -12.70 kJ/mol) and doxycycline hyclate, approved drug chosen, showed 6 hydrogen bond i.e. LEU188, GLU227, PRO246, GLY186, ALA189, and PRO246 (predicted binding energy -8.34 kJ/mol). Hence, pachypostaudin B was predicted has low direct contribution on osteoporotic activity of *P. pellucida*.

Keyword: Pachypostaudin B, Peperomia pellucida, osteoclast, cathepsin K, MMP-9

PRESENTATION RUNDOWN

Room 5 Pinogu

Moderator : Fitriah Ayu Magfira Yunus S.Farm

Jury : apt. Nangsih Sulastri Slamet, S.Si.,M.Si.

Day, Date : Thursday, October 07, 2021

Time : 1 PM – 3 PM

Name	Code	Title
Insyira Fadliana Basri	OP202151	Phytochemical Screening of Moringa Root (<i>Moringa oleifera</i> L.) Methanol Extract
Sonlimar Mangunsong	OP202152	Isolation and Determine of Caffeine Levels in Dempo Black Tea Leaves (<i>Camellia sinensis</i> L.) Using Spectrophotometry FT-IR and UV-Vis”
Dian Kartikasari	OP202153	Antioxidant Activity of Extract Leaf (<i>Polygonum minus</i> Huds.) from West Borneo in Some Solutions
Dr. apt. Eka Fitrianda, M.Farm	OP202154	Effect of Gotu Kola (<i>Centella asiatica</i> (L.) Urb on Total Cholesterol Level in Mice with Metabolic Syndrome
apt. Yulius baki Korassa.,S.Farm.,M.Si	OP202155	Ethnopharmacology of Plants with Effective Medicine for Post Born Mothers in Amarasi Timur District
Dra. Sarmalina Simamora, Apt.,M.Kes	PP202151	Narrative Review: Implementation of Pharmaceutical Care in Hypertension in Indonesia
Saskia Chairunnisa	PP202152	Analisis of COVID-19 Drug and Logistics Management at the Pharmacy and Health Installation, Bone Bolango Regency
Daria Danti	PP202153	Overview of Knowledge and Characteristics of Mothers About Exclusive Breast Milk at Midwife Independent Practice: Lisna Wirdaningsih, Kuala Kurun

Andriyanto Mustapa	PP202154	Stunting Alternative with Local Food "Nugget Nikelor"
Dr.apr.Ifmaily, S.Si, M.Kes	OP202146	Antidiabetic Effect of Arummanis Mango Fruit (<i>Mangifera indica</i> L) Peel Extract on Dexamethasone-Induced Diabetic Mice

PHYTOCHEMICAL SCREENING OF MORINGA ROOT (*MORINGA OLEIFERA* L.) METHANOL EXTRACT

Insyira Fadliana Basri^{1*}, Fihrina Mohamad¹, Nangsih Sulastris Slamet¹, Arlan K. Imran¹, Rizka Puji Astuti Daud¹, Fitriah Ayu Magfirah Yunus¹, Prisca Safriani Wicita¹, Rakhmadhana Fitraeni Basri²

¹Jurusan Farmasi Poltekkes Kemenkes Gorontalo, Indonesia

²Apotek Andika Farma Kota Gorontalo, Indonesia

Corresponding Author: **Insyira Fadliana Basri**; email: insyira27@poltekkesgorontalo.ac.id)

ABSTRACT

Moringa plants grow in the tropics and have been known by earlier people as a vegetable and efficacious as traditional medicine. Therefore, this study aimed to identify secondary metabolites contained in the roots of Moringa (*Moringa oleifera* L.) originating from Talulobutu Village, Bone Bolango Regency. This study aims to identify the bioactive compounds from the roots of Moringa (*Moringa oleifera* L.). This research method uses Mayer reagent and Dragendorff reagent to identify alkaloid compounds, 4% Lead Acetate reagent to identify flavonoid compounds, 10% NaOH reagent to identify tannin compounds, and foam test using distilled water to identify saponin compounds. The results showed that the methanol extract of Moringa root (*Moringa oleifera* L.) contains alkaloids, flavonoids, tannins, but does not contained saponins.

Keywords: Moringa Root, Phytochemical Screening, *Moringa oleifera* L.

ISOLATION AND DETERMINE OF CAFFEINE LEVELS IN DEMPO BLACK TEA LEAVES (*CAMELLIA SINENSIS* L.) USING SPECTROPHOTOMETRY FT-IR AND UV-VIS

Sonlimar Mangunsong¹ Sri Ismawati¹, Sarmalina Simamora¹, Muhamad Taswin¹

¹*Health of Polytechnic Palembang*

(Corresponding Author: **Sonlimar Mangunsong**; email: sonlimar@poltekkespalembang.ac.id)

ABSTRACT

Background : Black tea is one type of tea that has a higher caffeine content than other types of tea. One of the black tea producing areas in Indonesia namely South Sumatra precisely gunung Dempo black tea produced by PT Perkebunan Nusantara 7 (Persero) in, Pagaralam city. Black tea products with premium quality exported abroad while with standard quality or commonly sent to some other areas. Therefore, this study aims to separate caffeine compounds in both types of black tea using sublimation crystallization method and analyze it using FT-IR and Uv-Vis. **Methods**: This research is a descriptive non experimental research. Extraction on black tea Dempo is performed by grafting 300 grams of samples using 3 liters of aquadest solvent. Then the liquid-liquid extraction is carried out using ethyl acetate solvent as much as 45 ml. The fractionation result is compacted and then sublimated crystallization is carried out. Then, qualitative and quantitative analysis isolate caffeine using spectroscopy FTIR and Uv-Vis. **Results** : Qualitative analysis using FTIR spectroscopy showed that caffeine crystals obtained have function groups N-H, C-N, C=O. In quantitative analysis using Uv-Vis spectroscopy obtained caffeine levels in both black teas amounted to 130,767 mg / g and 117,747 mg / g. **Conclusion**: This study shows that the separation of caffeine compounds in black tea using sublimation crystallization method obtained pure caffeine and caffeine levels contained in tea affects the quality of black tea Dempo production ptpn 7 Persero.

Keywords : Black Tea (*Camellia Sinensis* L.), Caffeine, FTIR, Uv-Vis.

ANTIOXIDANT ACTIVITY OF EXTRACT LEAF (*POLYGONUM MINUS HUDS.*) FROM WEST BORNEO IN SOME SOLUTIONS

Dian Kartikasari^{1*}, Ika Ristia Rahman¹, Heni Puspa Sari¹, Dani Suryaningrat¹, Abduh Ridha²

¹*Academy Of Pharmacy Yarsi Pontianak*

²*Faculty of Health Sciences, University of Muhammadiyah Pontianak*

Corresponding Author: **Dian Kartikasari**; email: diankartikasari223@gmail.com)

ABSTRACT

Antioxidants are chemical compounds that can donate one or more electrons to free radicals to inhibit free radical reactions. One of the plants that has the potential as an antioxidant is the leaves (*Polygonum minus Huds.*). The purpose of this study was to determine the antioxidant activity of leaves (*Polygonum minus Huds.*) growing in West Borneo which were extracted using several different solvents. The antioxidant activity test was carried out using the DPPH method (2,2-diphenyl-1-picrylhydrazyl). Leaf simplicia (*Polygonum minus Huds.*) macerated with 50% ethanol as solvent; ethanol 70%; ethanol 96% and methanol. The thick leaf extract (*Polygonum minus Huds.*) was then tested for its antioxidant activity quantitatively to obtain the IC₅₀ value of the extract using UV spectrophotometry at max 516 nm. The results of the spectrophotometric measurements showed that the IC₅₀ of 50% ethanol extract, 70% ethanol, 96% ethanol and methanol were respectively, . 18.822 ± 0.189 ppm; 21.284 ± 0.194 ppm; 10.526 ± 0.075 ppm; and 11.164 ± 0.116 ppm. This shows that kesum leaves have a high category of antioxidant activity.

Keywords: antioxidant, leaf (*Polygonum minus Huds.*), solvent, DPPH

EFFECT OF GOTU KOLA (*CENTELLA ASIATICA* (L.) URB ON TOTAL CHOLESTEROL LEVEL IN MICE WITH METABOLIC SYNDROME

Eka Fitrianda^{1*}, Indah Fitri Wardani¹, Muthia Miranda Zaunit¹

¹Faculty of Pharmacy, Universitas Perintis Indonesia, Lubuk Buaya, Padang, Indonesia

(Corresponding author: **Eka Fitrianda**; email: purnawanpp@phar.sing.ac.id)

ABSTRACT

Metabolic syndrome is a group of risk factors that occur at the same time, characterized by obesity, hyperglycemia, and hypercholesterolemia. Gotu kola (*Centella asiatica* (L.) Urb.) contains polyphenols, flavonoids, tannins, vitamin C and triterpenoids which have antioxidant properties. This study was done to determine the effect gotu kola extract on total cholesterol levels in mice with metabolic syndrome. This study is a true experimental study using 96 male albino mice as experimental animals. Mice was divided into 6 groups, namely: normal (standard feed), standard (simvastatin), positive control (Na-CMC 0.5%), ethanolic extract of gotu kola leaf at dose of 125mg/kg, 250mg/kg and 500mg/kg. Metabolic syndrome was induced by feeding the mice with high-fat and fructose diet. Measurement of blood glucose levels was done using the Easy Touch GCU measuring instrument, meanwhile total cholesterol was measured using the CHOD-PAP Enzymatic Colorimeter Test method. This induction resulted in mice with metabolic syndrome with characteristics: obesity, hyperglycemia, and hypercholesterolemia. As results, administration of ethanolic extract of gotu kola at a dose of 500mg/kgBW for 14 days caused on higher reducing of total cholesterol levels compared to doses of 125mg/kgBW and 250mg/kgBW. Difference of dose and time administration of the extract resulted on difference level of reduction of total cholesterol. So it can be concluded that the ethanolic extract of gotu kola leaves had been shown to affect total cholesterol levels in metabolic syndrome mice, the most effective dose in reducing total cholesterol levels was a dose of 500mg/kgBB and time of administration affected cholesterol levels.

Keywords: Gotu Kola, *Centella asiatica* (L.) Urb, metabolic syndrome, cholesterol, obesity, blood level

ETNOFARMAKOLOGI TANAMAN BERKHASIAH OBAT UNTUK IBU PASCA MELAHIRKAN DIKECAMATAN AMARASI TIMUR

Yulius Baki Korassa^{1*}, Stefany SA Fernandez¹, Ni Nyoman Yuliani¹

¹*Program Studi Farmasi, Politeknik Kesehatan Kementerian Kesehatan Kupang, Jl. Piet A Tallo Kupang, Nusa Tenggara Timur, Indonesia*

(Correspondence author : **Yulius Baki Korassa**; email: yuliusbaki8@gmail.com)

ABSTRAK

The use of plants in postpartum mothers by the East Amarasi community of East Nusa Tenggara Province needs to be empirically inventoried and studied scientifically. The goal is to obtain accurate information regarding the dose, quality, safety and empirical efficacy. This study used a qualitative descriptive method related to the use of medicinal plants for postpartum mothers based on the name, amount, part, composition, method of concocting, treatment techniques and the efficacy of the plant. The results showed that the plant parts used by the community were types: bark, stem cambium, leaves, rhizomes, seeds, fruits and flowers. The number of plants taken is based on needs and is estimated by traditional healers themselves, namely one handheld and one thumb segment. Some of the potions used are: drinking potions to "cleanse dirty blood"; head wash potion to prevent "white blood rising in the head"; a concoction of rubbing oil to keep the body warm and aid in childbirth; chewable concoctions to assist in facilitating the birthing process and bath concoctions to facilitate blood flow and cleanse the body after childbirth. In conclusion, there are 38 types of plants used with 5 ingredients, namely drinking, chewing, head washing, rubbing oil, and bathing with doses that are still traditionally estimated.

Keywords: Ethnopharmacology, traditional medicine, post-partum ingredients, East Amarasi.

NARRATIVE REVIEW: IMPLEMENTATION OF PHARMACEUTICAL CARE IN HYPERTENSION IN INDONESIA

Sarmalina Simamora^{1*}, Sonlimar Mangunsong¹ Widyana Muchzadi Akbar¹

¹*Jurusan Farmasi, Poltekkes Kemenkes Palembang, Indonesia*

(Correspondence author: **Sarmalina Simamora**; email: sarmalina@poltekkespalembang.ac.id)

ABSTRACT

Background: In the past, patient care was not a pharmacy orientation. Several developed countries have applied Pharmaceutical Care in the treatment of hypertension for years. However, it is still there. In Indonesia, guidelines for pharmaceutical care for hypertension publish first by the government in 2006. The stages are that pharmacists carry out assessments, prepare pharmaceutical service plans, then implementation and monitoring. This study aims to examine the application of pharmaceutical care in hypertension in various articles published in Indonesia. **Methods:** This research is non-experimental research with a narrative review design. Articles were selected using the keywords Pharmaceutical Care, Pharmacy Care, Pharmaceutical Care and Hypertension. Articles in accredited national journals. The number of articles reviewed was 12 articles from 2014 to 2019. **Results:** The application of Pharmaceutical Care in hypertension in Indonesia has been carried out by pharmacists, especially in hospitals. The implementation stages are more focused on implementation and monitoring, and no one carried out the assessment and prepare pharmaceutical service plans. **Conclusion:** The application of pharmacy in hypertension has not fully complied with the guidelines. Pharmacists have not assessed when they will start pharmaceutical care. Intervention is carried out with various models, such as leaflets, short messages sent and counselling. Results were monitored on the patient's knowledge, compliance and blood pressure. The result is an improvement, although some are not.

Keywords: Hospital, Hypertension, Pharmaceutical services, Public health centre, Review

ANALYSIS OF COVID-19 DRUG AND LOGISTICS MANAGEMENT AT THE PHARMACY AND HEALTH SUPPLIES INSTALLATION, BONE BOLANGO REGENCY

Saskia Chairunnisa¹, Vyani Kamba¹, Ysrafil, Zulfiayu¹, Hartati¹

¹*Department of Pharmacy, Polteknik Kesehatan Kemenkes Gorontalo*

(Corresponding Author: **Vyani Kamba**; email: vyanikamba@poltekkesgorontalo.ac.id)

ABSTRACT

The Government Pharmacy and Health Supplies Installation is a means for storing and distributing pharmaceutical preparations and medical devices owned by the government, both central and local governments, in the context of providing health services. The purpose of this qualitative analysis study was to determine the management of Covid-19. Data analysis was carried out in a structured/narrative way describing the results of Covid-19 Drug and Logistics management at the Pharmacy Installation of Bone Bolango Regency. The results of the study revealed the management of Covid-19 drugs and logistics at the Pharmacy and Supplies Installation started from the planning stage carried out by the Covid-19 task force team and vaccines based on number of targets. Furthermore, the procurement team of the Bone Bolango Health Department and the admissions committee carried out the procurement and admission respectively. Meanwhile, the storing process is based on the type of drug and Medical Consumables, while the distribution was conducted every month on demand. , in addition, monitoring and evaluation used the System Monitoring and Electronic Logistics . In conclusion, there are three differences in the management of Covid-19 drugs and logistics at the Pharmacy and Health Supplies Installation for planning and monitoring and evaluation, namely planning by the Covid-19 Task Force Team, as well as monitoring and evaluation with the System Monitoring and Electronic Logistics.

Keyword: COVID-19, Logistic, Management, Pharmacy instalation.

OVERVIEW OF KNOWLEDGE AND CHARACTERISTICS OF MOTHERS ABOUT EXCLUSIVE BREAST MILK AT MIDWIFE INDEPENDENT PRACTICE: LISNA WIRDANINGSIH, KUALA KURUN

Daria Danti¹, Natalia¹, Sukmawati A Damiti¹, Titik Istiningsih¹, Etik Luhut Handayani²

¹*Department of Midwifery, Health Polytechnic of Palangka Raya, George Obos Street No. 30, 32, Menteng, Jekan Raya Distric, Palangka Raya City, Central Kalimantan Province*

²*Panarung Public Health Service, Keruing Street No. 25, Panarung, Pahandut Distric, Palangka Raya City, Center Kalimantan Province*

(Corresponding Author: **Vyani Kamba**; email: daria23danti@gmail.com)

ABSTRACT

How to reduce infant morbidity and mortality, UNICEF and WHO recommend that infants should only be breastfed with breast milk (ASI) for at least six months (WHO.2018). The highest percentage of exclusive breastfeeding coverage in Central Kalimantan, namely North Barito Regency 76.1%. The purpose of this research is to find out the overview of Mother's Knowledge and Characteristics of Exclusive Breastfeeding at MIP Lisna Wirdaningsih, Kuala Kurun. This type of research uses descriptive method analysis with a cross-sectional approach, this data collection has obtained an ethical license for primary data collection at PMB Lisna Wirdaningsih Kuala. The number of inclusion criteria samples amounted to 31 samples using a questionnaire to determine knowledge and characteristics of mothers who have babies aged 6-24 months the data is analyzed by SPSS method. The results of the study of 31 respondents are based on patient characteristics, is known that the majority of respondents are aged 20-35 years as many as 22 respondents as 71.0%, the majority of respondents' education is elementary-junior high school as many as 18 respondents 58.1%, the majority of respondents' work is not working as many as 25 respondents as 80.6%, the majority of respondents parity is multipara as many as 20 respondents as 64.5%. Description of the level of knowledge of respondents with good categories as many as 18 respondents as 58.1% and 13 respondents with sufficient category as 41.9%, and as many as 0 respondents as 0% with less category. It can be concluded that based on the characteristics of respondents having age 20-35 years old, the respondent's education is elementary-junior high school, the respondent's occupation that is not working, the parity of the respondents is multipara with a picture respondents' knowledge tends to be good towards exclusive breastfeeding.

Keywords: exclusive breastfeeding, Characteristic of mother, overview knowledge

STUNTING ALTERNATIVE WITH LOCAL FOOD “NUGGET NIKELOR”

Andriyanto Mustapa¹

Department of Nutrition, Poltekkes Kemenkes Gorontalo, Gorontalo, Indonesia

(Corresponding Author: **Andriyanto Mustapa**; email: andriyanto4201@gmail.com)

ABSTRACT

Stunting is a major nutritional problem that will have an impact on social and economic life in society. According to WHO, stunting is caused by poor parental behavior such as exclusive breastfeeding, giving complementary foods, preparing and serving food, seeking health services and poor environmental hygiene and sanitation behavior. Interventions for the prevention of nutritional problems in the form of supplementary food, especially those based on local food ingredients, have been shown to have equal effectiveness compared to supplementation. The use of food ingredients which are local wisdom is more easily accepted by the local community and has a higher sustainability. Nugget is a type of restructured processed meat, namely meat that is ground and seasoned, then covered with flour adhesive, coated with breadcrumbs, and fried half-cooked and then frozen to maintain its quality during storage. The potential of Nike and Moringa fish needs to be developed to support the improvement of family nutrition and economy. Nike fish preparations can be varied by adding Moringa leaves to the processed products. Nugget nikelor Moringa is one product that can be stored longer. These nikelor nuggets are made from local Gorontalo food ingredients, namely nikelor fish (*Awaous Melanocephalus*) and Moringa leaves (Familia Moringaceae). This product has an organoleptic quality, namely a savory and salty taste, a brownish yellow color on the outside and a dark green color on the inside. The aroma of this product is fishy, while the texture is chewy on the inside like nuggets in general and crunchy on the outside. Where nikelor fish has a high nutritional content, especially protein, calcium and magnesium, while Moringa leaves have a fairly high iron content, so they can be used as an alternative to stunting by utilizing local food. Product testing in organoleptic tests has also been carried out and the results can be accepted by the panelists because it has a good taste and texture similar to nuggets in general.

Keywords: Local food, Restructuring, Stunting,

ANTIDIABETIC EFFECT OF ARUMMANIS MANGO (*MANGIFERA INDICA L*) FRUIT PEEL EXTRACT ON DEXAMETHASONE-INDUCED DIABETIC MICE

Ifmaily^{1*}, Mursyida Wahyu Utammi¹, Putri Rizki Fitriani²

^{1*}Prodi S1 Farmasi, Fakultas Farmasi, Universitas Perintis Indonesia, Padang, Indonesia

²Prodi S1 Pendidikan Dokter, Fakultas Kedokteran, Universitas Kedokteran, Padang, Indonesia

(Corresponding Author: **Ifmaily**; email: ifmaily.72@gmail.com)

ABSTRACT

Background: The mango fruit peel extract in previous research has efficacy as antihypertensive, in this research as antidiabetic. **Objectives:** The objectives of research were to determine the effect of giving the arummanis mango fruit (*Mangifera indica L.*) peel extract on dexamethasone induced diabetic mice and to determine the effective dose of arummanis mango fruit peel extract which can decrease the blood glucose level in hyperglycemic mice. **Material and Methods:** Mango fruit peel (*Mangifera Indica L.*), 96% ethanol as a liquid filter, Mg powder, FeCl₃, Meyer reagent, chloroform, chloroform ammonia, HCl solution, standard food for mice, glibenclamide, Aquades, 10% glucose, cotton, 0.5% Na-CMC solution, and 5 mg/ml dexamethasone injection. This study used an experimental method that used 30 white male mice as experimental animals, divided into 6 groups and each group consisted of 5 mice consisting of negative control, positive control, dose variations of 25 mg/kg bw, 50 mg/kg bw and 100 mg/kg bw and the comparison group (Glibenclamide 0.65 mg/kg bw). The inducer was used dexamethasone 5mg/ml was injected subcutaneously for 7 days. Mice's blood was taken through the tail lateral vein using an *Easy Touch* glucometer on 14th day. **Results:** Based on the results of the measurement of blood glucose levels in mice on 14th day, the average of blood glucose levels were negative control; 78 mg/dl, positive control; 170 mg/dl, dose 25 mg/kg bw; 111,5 mg/dl, dose 50 mg/kg bw; 94,5 mg/dl, dose 100 mg/kg bw; 79,5 mg/dl, glibenclamide 0.65 mg/kg bw; 77,5 mg/dl). Based on the results of statistical data analysis, one-way ANOVA showed significantly different results ($p < 0.05$). **Conclusions:** The conclusion is that the mango fruit var arummanis (*Mangifera indica L.*) peel extract has an effect on decreasing blood glucose levels in mice with an effective dose of 100 mg/kg bw.

Keywords: Type 2 antidiabetic; Arummanis Mango Fruit Peel; Extract; Dexamethasone.