

# PROGRAM BOOK



## ICAMS 2020



## The 1<sup>st</sup> International Conference on Agromedicine and Medical Sciences (ICAMS) 2020

In the 18<sup>th</sup> Dies Natalis of Faculty of Medicine University of Lampung

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# PROGRAM BOOK



## **THE 1<sup>ST</sup> INTERNATIONAL CONFERENCE ON AGROMEDICINE AND MEDICAL SCIENCES (ICAMS) 2020**

**"Agromedicine: in the Spot Light of Advancement of Medical Science and Technology"**

**Bandar Lampung, Indonesia**

**October 22<sup>nd</sup>-23<sup>rd</sup>, 2020**

**Hosted by:**

**Faculty of Medicine,  
University of Lampung**

**Supported by:**

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**The Dean of Faculty of Medicine, University of Lampung**



Dr. Dyah Wulan SRW, S.K.M., M. Kes.

Alhamdulillah, praise the Lord because even in this COVID-19 pandemic, We can still hold this International Conference on Agromedicine and Medical Sciences (ICAMS) online. As the first series, the ICAMS is organized in order to celebrate the 8<sup>th</sup> Dies Natatalis of Faculty of Medicine, University of Lampung. This conference is a perfect medium for researchers, academicians, and practitioners to share and present their theoretical and practical ideas or research findings which are expected to be valuable for people.

We are excited and honored to have a chance to work with all the committees and parties involved in preparing this agromedicine and medical conference. Besides, I would like to say thanks and welcome to all participants of the International Conference on Agromedicine and Health Sciences. With the main theme “Agromedicine: in the Spot Light of Advancement of Medical Science and Technology”, I hope that this international online conference will provide our participants with a great experience through a variety of knowledge and perspectives to innovate and advance in the field of health.





## Conference Schedule

### Webinar International Day 1 Schedule

<b>Time (GMT+7)</b>	<b>Activity</b>
08.00 - 08.10	Opening by MC and Sing the National Anthem
08.10 - 08.20	Reporting Speech by Chief Executive
08.20 - 08.30	Welcoming Speech by Dean of FK Unila
08.30 - 08.45	Welcoming Speech and symbolic opening by Rector of Unila
08.45 - 08.55	Prayers
08.55 - 09.05	Traditional Dance Video by Students
09.05 - 09.15	Profile Video of FK Unila
09.15 - 09.20	Closing of the Opening Ceremony and Photo Session with Dean of FK Unila
09.20 - 09.25	Opening and keynote speaker's CV presentation by Moderator
09.25 - 09.55	Seminar by Kholis Abdurachim Audah, Ph.D. (keynote speaker)
09.55 - 10.05	Questions and Answer Session
10.05 - 10.10	Closing by Moderator
10.10 - 10.15	Transition by MC
10.15 - 10.20	Opening by Moderator
10.20 - 10.25	1st Invited Speaker's CV presentation by moderator
10.25 - 10.55	Seminar by Associate Prof. Dr. Waseem Haider (1st invited speaker)
10.55 - 11.00	2nd Invited Speaker's CV presentation by moderator
11.00 - 11.30	Seminar by Associate Dr. Ruzaidi Azli Mohd Mokhtar (2nd invited speaker)
11.30 - 11.35	3rd Invited Speaker's CV presentation by moderator
11.35 - 12.05	Seminar by Associate Prof. Dr. Intan Safinar Binti Ismail (3rd invited speaker)
12.05 - 12.15	Questions and Answer Session
12.15 - 12.20	Closing by Moderator
12.20 - 12.30	photo session with all participant and Closing by MC
12.30 - 13.00	<b>BREAK</b>
13.00 - 13.10	Instruction to join Break out room
13.10 - 13.15	Opening by Moderators on each break out room
13.15 - 15.00	Oral presentation
15.00 - 15.30	<b>BREAK</b>
15.30 - 16.55	Oral presentation
16.55 - 17.00	Closing by Moderators on each break out room



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## Webinar International Day 2 Schedule

<b>Time (GMT+7)</b>	<b>Activity</b>
08.00 - 08.05	Opening by MC
08.05 - 08.10	Opening by Moderator
08.10 - 08.40	Seminar by Dr. dr. Asep Sukohar, S.Ked., M.Kes. (keynote speaker)
08.40 - 08.50	Questions and Answer Session
08.50 - 08.55	Closing by Moderator
08.55 - 09.00	Transition by MC
09.00 - 09.05	Opening and keynote speaker's CV presentation by Moderator
09.05 - 09.10	1st Invited Speaker's CV presentation by moderator
09.10 - 09.40	Seminar by Prof. Dr. Zeily Nurachman MS. (1st invited speaker)
09.40 - 09.45	2nd Invited Speaker's CV presentation by moderator
09.45 - 10.15	Seminar by Dr. Taweeporn Gedarram (2nd invited speaker)
10.15 - 10.20	3rd Invited Speaker's CV presentation by moderator
10.20 - 10.50	Seminar by Dr. Miroslava Rysová (3rd invited speaker)
10.50 - 11.00	Questions and Answer Session
11.00 - 11.05	Closing by Moderator
11.05 - 11.15	Closing ceremony by Dean FK Unila
11.15 - 11.20	Photo session with all participant and Closing by MC



## Parallel Session

### ROOM 1

**Moderator : Dr. Susianti**

**Date : 22 Oktober 2020**

**Operator : Aditya Hartawan**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Shrawan Kumar	Vinoba Bhawe University	“APOPTOSIS INDUCING ACTIVITY OF BARK EXTRACT OF SPATHODEA CAMPANULATA ON HUMAN LEUKEMIA CELL LINES U937, K562 & HL60 CELL LINES VIA CASPASE CASCADE”
2	Nasser Mohamed Ghassan Shaikho	Swiss German University	PROTEIN-PROTEIN INTERACTIONS OF ACUTE RESPIRATORY DISTRESS SYNDROME, A COVID-19 COMORBID DISEASE
3	Muhammad Sobri Maulana	Universitas Indonesia	EFFECTIVENESS OF KNEE BRACES IN THE TREATMENT OF KNEE OSTEOARTHRITIS : AN EVIDENCE BASED CASE REPORT
4	Muhammad Nurkholish Basyir	Universitas Sebelas Maret	Moringa Oleifera Extract Decrease Anti-dsDNA Antibody and Repair Kidney Damage in Lupus Nephritis Mice Model
5	Yuliana	Universitas Udayana	OPPORTUNITIES AND CHALLENGES OF TELEMEDICINE IMPLEMENTATION IN THE COVID-19 PANDEMIC
6	Muhammad fitra wardhana sayoeti	Universitas Lampung	Determinants of Behavior in Antibiotic Medicine in the Community of Umbul Natar Village, Jatimulyo, Jati Agung District, South of Lampung
7	Dewi Nur Fiana	Universitas Lampung	THE EFFECT OF JOGGING EXERCISES ON STUDENTS MUSCLE MASS USING BIOELECTRICAL IMPEDANCE ANALYSIS
8	Susianti	Universitas Lampung	THE EFFECT OF PURPLE NUTSEDEGE (Cyperus rotundus L.) EXTRACT FROM THE ECOLOGICAL ZONE IN LAMPUNG PROVINCE TO EXPRESSION OF BAX PROTEIN ON THE HELA CERVICAL CANCER CELL LINE
9	Refa Rahmaddiansyah	Universitas Andalas	KUSEHAT: IMMUNOMODULATORY COOKIES



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**ROOM 2**

**Moderator : Dr. TA Laras**

**Date : 22 Oktober 2020**

**Operator : Fathia Radinda Salsabila**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Fenita Purnama Sari Indah	STIKes Kharisma Persada	ANALYSIS DETERMINANT THE PREVENTION ATTITUDE OF OPPORTUNISTIC INFECTIONS IN PEOPLE LIVING WITH HIV AIDS (PLWHA)
2	Kholis A. Audah	Swiss German University	Mangroves and Their Medicinal Benefit: A Mini Review
3	Nita Pujianti	Universitas Lambung Mangkurat	MEDIA EXPOSURE RELATIONSHIP WITH COVID-19 PREVENTION BEHAVIOR
4	Septina Hestiningrum	Universitas Sebelas Maret	Mesenchymal Stem Cell Secretome's Decrease Anti-dsDNA Antibody, Pulmonary Vascular Inflammation, Kidney Damage, and Increase C3 Complement in Lupus Mice Model
5	Ida Ayu Dewi Wiryanthini	Universitas Udayana	RELATIONSHIP OF CD44 PROTEIN EXPRESSION WITH CLINICOPATHOLOGICAL ASPECT OF BREAST CANCER PATIENT IN BALI
6	Sofyan Musyabiq Wijaya	Universitas Lampung	Social Determinants of Body Image in Young Women In Metro Barat :A Qualitative Study
7	Intanri Kurniati	Universitas Lampung	CORRELATION BETWEEN NEUTROPHIL LYMPHOCYTE RATIO AND CYCLING THRESHOLD VALUE OF RT PCR IN PATIENTS CONFIRMED COVID-19 IN LAMPUNG
8	Ta Larasati	Universitas Lampung	RISK FACTORS FOR CHILDHOOD OBESITY IN A RURAL AREA OF INDONESIA
9	Mukhamad Fathoni	Universitas Brawijaya	THE INFLUENCING SOCIAL CAPITAL TO STRENGTHENING FAMILY ACTION PLAN AS PREPAREDNESS IN FACING PANDEMIC COVID-19 IN MALANG CITY



### ROOM 3

**Moderator : dr. Helmi**

**Date : 22 Oktober 2020**

**Operator : Muhammad Yazid Daradjat**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Ayu Asmarani	Akbid pondok pesantren assanadiyah	THE EFFECT OF ALKALINE WATER ON GLUCOSE LEVELS OF WHITE RATS SPRAGUE DAWLEY LINE GIVEN DIET HIGH SUGAR
2	Sayid Ridho	Syarif Hidayatullah Islamic State University	THE RELATIONS BETWEEN MONDAY-THURSDAY FASTING TOWARD SPIRITUAL INTELLIGENCE (SI): A PRELIMINARY REPORT
3	Nashrul Wathan	Universitas Lambung Mangkurat	SIMPLICIA CHARACTERIZATION AND TOTAL FLAVONOIDS DETERMINATION ON METHANOL EXTRACT OF KAREHO LEAVES ( <i>Callicarpa longifolia</i> Lam.)
4	Nuswil Bernolian	Universitas Sriwijaya	CURRENT UPDATE ON CONGENITAL HEART DISEASES IN PREGNANCY
5	Dian Permatasari	Universitas wiraraja	ANALYSIS OF COUNSEL SUPPORT WITH THE TIME OF DISCLOSURE OF PERSONAL STATUS OF ODHA AGAINST HIS PARTNERS IN SUMENEP DISTRICT
6	Sutarto	Universitas Lampung	MORBIDITY ANALYSIS BASED ON AREA
7	Syazili Mustofa	Universitas Lampung	SUBACUTE TOXICITY TEST OF RHIZOPHORA APICULATA BARK EXTRACT ON LIVER AND PANCREAS HISTOPATHOLOGY OF RATS
8	dr. Helmi Ismunandar, Sp.OT	Universitas Lampung	THE EFFECT OF CHITOSAN AND ALOE VERA EXTRACT COMBINATION AS BONE GRAFT ON RAT FEMUR FRACTURE



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## ROOM 4

**Moderator : dr. Tri Umi**

**Date : 22 Oktober 2020**

**Operator : Hisbul Waton**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	HARRY NUGROHO EKO SURNIYANTORO	BADAN TENAGA NUKLIR NASIONAL	ASSESSMENT OF hOGG1 GENETIC POLYMORPHISM (rs1052133) AND DNA DAMAGE IN RADIATION-EXPOSED WORKERS
2	Siti Nurjanah	Tulang Bawang University	CREAM FORMULATION OF EXTRACT OF BERENUK LEAVES ( <i>Crescentia cujete</i> ) AS AN ANTIMICROBIAL AGAINST <i>Staphylococcus aureus</i>
3	FATHIYAH SAFITHRI	Universitas Muhammadiyah Malang	The effect of Ambon banana diet ( <i>Musa acuminata colla</i> ) on Resting Metabolic Rate (RMR) in young adult
4	Andra Kurnianto	Universitas Sriwijaya	CURRENT PERSPECTIVES AND PREVENTION STRATEGIES OF HYPERTENSION AMONG ADOLESCENTS AND ADULTS
5	Dian Widiyanti	Universitas YARSI	DETECTION OF LEPTOSURIA IN SANITARY WORKERS (a pilot study)
6	Selvi Rahmawati	Universitas Lampung	PRELIMINARY STUDY : THE POTENCY OF VEGETABLE COOKING OIL AS ALTERNATIVE CLEARING AGENT FOR HISTOLOGICAL PREPARATION
7	Ade Yonata	Universitas Lampung	Case Report: Chronic Thopaceus Gout with Chronic Kidney Disease
8	Tri Umiana Soleha	Universitas Lampung	PLASMID DNA PROFILE CONTAINING VANCOMYCIN RESISTANT GENES IN <i>Staphylococcus aureus</i> FROM DIABETICUM ULCER ISOLATE



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**ROOM 5**

**Moderator : dr. Rizki Hanriko**

**Date : 22 Oktober 2020**

**Operator : Haikal Nirfandi**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Ronal Surya Aditya	STIKes Kepanjen	The Effect of The Android Application “MH Mobile” on The Attitude Of Lepers
2	Dr. Anggraini Barlian, M.Sc	Institut Teknologi Bandung	SERUM FREE MEDIUM FOR THE PRODUCTION OF EXOSOME DERIVED FROM HUMAN WHARTON JELLY’S STEM CELL
3	Samsu Udayana Nurdin	Universitas Lampung	NEW DETERMINANT OF STUNTING IN UNDER FIVE YEAR OLD CHILDREN IN BANDAR LAMPUNG
4	Dewi Karita	Universitas Muhammadiyah Purwokerto	RELATIONSHIP BETWEEN THE DURATION OF BEING AN ATHLETE AND THE DURATION OF SMOKING WITH HBCO LEVELS ATHLETES IN BANYUMAS, INDONESIA
5	H. Abarham Martadiansyah	Universitas Sriwijaya	Multiparous Post Cesarean Section on Indication Placenta Previa and Transverse Lie with Placenta Left In Situ
6	Dyah Wulan Sumekar Rengganis Wardani	Universitas Lampung	THE EFFECT OF SOCIO-ECONOMIC POSITION ON CHILDHOOD TUBERCULOSIS
7	Rani Himayani	Universitas Lampung	COMPARISON OF BEHAVIOR IN TABLET COMPUTER USING ON CELL PHONE ELBOW INCIDENT IN FACULTY OF MEDICINE STUDENT OF LAMPUNG UNIVERSITY
8	Risal Wintoko	Universitas Lampung	COMPARISON OF ACCURACY OF THE USE OF CARCINOMA EMBRYONIC ANTIGEN (CEA) AND LACTATE DEHYDROGENASE LEVEL TO PREDICT COLORECTAL CARCINOMA RECURRENCE IN ABDUL MOELOEK HOSPITAL BANDAR LAMPUNG





## ROOM 6

**Moderator : dr. Winda**

**Date : 22 Oktober 2020**

**Operator : Putu Ika Widyasari**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Akhmad Endang Zainal Hasan	IPB University	AKTIVITAS ANTIKANKER EKSTRAK ETIL ASETAT DARI KAPANG ENDOFIT DAUN SIRSAK ( <i>Annona muricata</i> L.) SKALA PRODUKSI
2	Santi Widyasari	Universitas Abdurrah	THE EFFECT OF ETHANOL EXTRACT 96% OF MAHOGANY SEEDS ( <i>SWIETENIA MAHAGONI</i> L.) IN REDUCING BLOOD GLUCOSE LEVELS IN MICE INDUCED BY ALLOXAN
3	Muhammad Fadhol Romdhoni	Universitas Muhammadiyah Purwokerto	THE EFFECT OF ETHANOL EXTRACT OF STARFRUIT ( <i>Averrhoa bilimbi</i> ) TO LEVEL OF MALONDIALDEHYDE (MDA) AND HAEMOGLOBIN (Hb) in WHITE RAT ( <i>Rattus norvegicus</i> ) STRAIN WISTAR exposed by CIGARETTE
4	Sake Juli Martina	Universitas Sumatera Utara	The Effect of Gayo Arabica Coffee Leaf Extract on Blood Sugar Levels in Rat with Type-2 Diabetes Mellitus
5	Nurul Utami	Universitas Lampung	THE POTENCY OF NUTGRASS RHIZOMES ( <i>Cyperus rotundus</i> L.) EXTRACT AS ANTIOXIDANT AGENT
6	Zeni Okta Wiyanti	Universitas Lampung	THE EFFECT OF ETHANOL EXTRACT OF PEARL GRASS ON LIVER HISTOPATHOLOGY OF MALE WHITE RATS INDUCED BY RIFAMPICIN AND ISONIAZID
7	Syahrul Hamidi Nasution	Universitas Lampung	Stage 5 Chronic Renal Failure Disease Based on Determinants of Age, Gender, and Diagnosis of Etiology in Indonesia in 2018
8	Dina Amalia Kuswardika	Universitas Lampung	Premature Rupture of Membrane (PROM) with Gastroschisis: A Case Report



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**ROOM 7**

**Moderator : dr. Ari**

**Date : 22 Oktober 2020**

**Operator : Dzakwan Cedri**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Muhammad Fikri Haikal	IPB University	ALANINE AMINOTRANSFERASE BASED BIOSENSORS AS A DETECTOR FOR LIVER FUNCTION: NARRATIVE REVIEW
2	Nur Ahmad Rudin	Universitas Gadjah Mada	Cytotoxic Activity and Induction of DNA Fragmentation by Chloroform Extract of Agarwood Leaves ( <i>Gyrinops versteegii</i> (gilg.) domke and <i>Aquilaria malaccensis</i> lamk.) on Breast Cancer T47D Cell Lines
3	Ratna Indriawati	Universitas Muhammadiyah Yogyakarta	Antioxidant Potential of Kersen Leaves Steeping ( <i>Muntingia calabura</i> L.) Against Endogenous Enzyme Superoxide Dismutase (SOD) Levels in Diabetes Mellitus Rats
4	Sake Juli Martina	Universitas Sumatera Utara	Comparison of Phenol, Flavonoid and Antioxidant Levels between Young and Old Gayo Arabica Coffee Leaf Extracts and the Relation with Type -2 Diabetes Mellitus
5	Putu Ristyning Ayu Sangging	Universitas Lampung	CORRELATION OF NORMAL GESTATIONAL AGE WITH FIBRIN MONOMER LEVELS
6	Roro Rukmi Windi Perdani	Universitas Lampung	ANTIRETROVIRAL THERAPY DAN LABORATORIUM PROFILE OF CHILDREN WITH HIV-AIDS AT ABDUL MOELOEK HOSPITAL LAMPUNG
7	Alvira Balqis Soraya	Universitas Lampung	Incomplete Abortion Treatment in 15 th Weeks Gestation: A Case Report
8	Agung Rizka Pratama	Universitas Andalas	Fibrinolytic Therapy For St-Segment Elevation Myocardial Infarction During The Covid-19 Pandemic: A Single-Center Experience



**ROOM 8**

**Moderator : dr. Nisa Karima**

**Date : 22 Oktober 2020**

**Operator : Nadhira Yasmin**

**Time : 13.00 – selesai**

No	Name	Affiliation	Title
1	Galuh Rizal Prayoga	IPB University	SENGGANI LEAF ( <i>Melastoma malabathricum</i> L) POTENTIAL IN REGENERATION OF PANCREATIC BETA CELLS IN PEOPLE WITH DIABETES MELITUS
2	Savitri Citra Budi	Universitas Gadjah Mada	Variations in Incidence Reports on Drug Services to Improve Service Quality
3	Ersalina Nidianti	Universitas Nahdlatul Ulama Surabaya	ANALYSIS OF THE TOXICITY OF BOVINE SERUM ALBUMIN NANOPARTICLE BASED CANCER DRUGS
4	Sake Juli Martina	Universitas Sumatera Utara	The Effect of Brewed Coffee Arabica Gayo ( <i>Coffea Arabica</i> ) Leaves on Differences of Blood Sugar Levels in Type 2 Diabetes Mellitus Patients
5	Iswandi Darwis	Universitas Lampung	CLINICAL AND LABORATORY PROFILE OF DENGUE FEVER PATIENTS IN A HOSPITAL SERVING AGROINDUSTRIAL COMMUNITIES
6	Evi Kurniawaty	Universitas Lampung	1. DIFFERENCE BETWEEN EPITHELIAL AND COLLAGEN IN SECOND DEGREE BURNS BETWEEN HUMAN CORD MESENCHYMAL STEM CELL EXTRACT AND SILVER SULFADIAZINE IN THE MALE WHITE RAT ( <i>RATTUS NORVEGICUS</i> )
7	Evi Kurniawaty	Universitas Lampung	2. EFFECT OF GIVING ETHANOL JENGKOL SEEDS ( <i>Pithecellobium lobatum</i> Benth.) ON THE IMPROVEMENT OF UREUM AND CREATININE LEVELS OF WHITE RAT
8	Agustyas Tjiptaningrum	Universitas Lampung	CORRELATION BETWEEN A RT-PCR OF NASOPHARYNX SWAB, A NEUTROPHIL LYMPHOCYTE RATIO AND AN ABSOLUTE LYMPHOCYTE COUNT IN A SUSPECTED COVID -19 PATIENT



## ROOM 9

Moderator : dr. M. Galih

Date : 22 Oktober 2020

Operator : Farhan Ridho

Time : 13.00 – selesai

No	Name	Affiliation	Title
1	Muhammad Awaluddin Fikry	IPB University	VIRTUAL SCREENING OF NATURAL COMPOUNDS AGAINST SIX PROTEIN RECEPTORS CODED BY THE SARS-COV-2 GENOME
2	Tri Rini Nuringtyas	Universitas Gadjah Mada	In vitro and in silico antidiabetic potential of agarwood <i>Aquilaria malaccensis</i> Lamk. leaves extract
3	MUHAMMAD FADHLILLAH	Universitas Padjadjaran	Homology Modeling of NS5-RdRp and Expression of Recombinant NS5-RdRp based on Indonesia Local-Strain Dengue Virus for Antidengue Drug Development
4	Zulham Yamamoto	Universitas Sumatera Utara	CEFTRIAXON-RESISTANCE OF NEISSERIA GONORRHEAE STRAINS IN MEDAN, INDONESIA
5	Agus Wantoro	Universitas Lampung	APPLICATION-BASED ON FUZZY TSUKAMOTO AND PROFILE MATCHING FOR COMBINATION DRUGS RECOMMENDATIONS IN PATIENTS HYPERTENSION WITH COMPLICATIONS
6	Ratna Dewi P. Sari	Universitas Lampung	1. Food Security and Household Expenditure Impact on Nutritional Status on Pregnancy: A Cross Sectional Study in Rural Area
7	Ratna Dewi P. Sari	Universitas Lampung	2. Maternal Health Study In Province Lampung Based On Prediction Model Structural Equation Modeling-Partial Least Square
8	Reni Zuraida	Universitas Lampung	SURVEY OF THE SCHOOL CANTEEN, OPPORTUNITIES FOR ANEMIA REDUCTION TO YOUNG WOMEN SCHOOL –BASED IN THE CITY OF BANDAR LAMPUNG



## ROOM 9

**Moderator** : dr. Rasmi Zakiah Oktarlina      **Date** : 22 Oktober 2020

**Operator** : Muhammad Labib MY Bima      **Time** : 13.00 – selesai

No	Name	Affiliation	Title
1	Nihayatul Munaa	Kepanjen School of Health Sciences	ACHIEVING EFFICIENCY THROUGH LEAN IN HOSPITAL: HOW IS THE EMPLOYEE'S ACCEPTANCE?
2	<i>Reqqi First Trasia</i>	<i>Universitas Indonesia</i>	<i>POLYMERASE CHAIN REACTION AS DIAGNOSTIC TOOLS FOR SCABIES</i>
3	Rizka Amelia Putdayani	Universitas Pendidikan Indonesia	REVIEW: POTENTIAL OF TUBER AND LEAVES EXTRACT OF Manihot esculenta AS A BURNER HEALING AGENCY
4	SAMSUAR	UNIVERSITAS TULANG BAWANG	IN VITRO ANTIBACTERIAL ACTIVITY OF SOME OF DIBUTYLTIN(IV) CHLOROBENZOATE DERIVATIVES AGAINST Staphylococcus aureus AND Escherichia coli
5	Muhartono	Universitas Lampung	GREEN TEA BENEFITS FOR REPAIRING HIPPOCAMPUS
6	Exsa Hadibrata	Universitas Lampung	Evaluation of Silodosin versus Tamsulosin in Benign Prostatic Hyperplasia Treatment : A cross sectional study
7	Rasmi Zakiah Oktarlina	Universitas Lampung	THE EVALUATION OF THE ELECTRONIC PRESCRIBING SYSTEM AT BANDAR LAMPUNG HOSPITAL
8	Evi Nurhayatun	Universitas sebelas maret	1. Predictor of Mortality in COVID 19 Patients
9	Evi Nurhayatun	Universitas sebelas maret	2. Weil's disease with Pneumonia : a Case Report



## **ABSTRACT**



## POLYMERASE CHAIN REACTION AS DIAGNOSTIC TOOLS FOR SCABIES

Reggi First Trasia<sup>1</sup>

<sup>1</sup>Biomedical Science Master Program, Faculty of Medicine, Universitas Indonesia

*reggi.first@ui.ac.id*

### Abstract

**Purpose:** The aim of this study is to review the implementation of Polymerase Chain Reaction (PCR) as diagnostic tools for scabies.

**Research Methodology:** Browse 268 articles and found 5 relevant articles by using eligible criteria.

**Results:** Write only main results in few words. No discussion or explanation.

**Limitations:** The limitation of this study is it only reviews the application of PCR in diagnosing *Sarcoptes scabiei* in human. It must be better if there is a research about comparison of PCR with other diagnostic tools in Indonesia.

**Contribution:** This study can be useful in diagnosing people suffered of scabies in Islamic boarding school, prisons, orphanages, and densely populated neighborhoods in tropical country, especially in Indonesia.

**Keywords:** *scabies, PCR, diagnosis, sarcoptes scabiei*





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## EFFECTIVENESS OF KNEE BRACES IN THE TREATMENT OF KNEE OSTEOARTHRITIS : AN EVIDENCE BASED CASE REPORT

**Muhammad Sobri Maulana<sup>1\*</sup>**

Faculty Medicine of Universitas Indonesia<sup>1</sup>

*Muhammadsobrimaulana31@gmail.com*

### Abstract

**Introduction:** Osteoarthritis is a degenerative joint disease characterized by bony inflammation. The treatment goals are to reduce physical symptoms and to improve quality of life through exercises, biomechanical interventions, and pharmacological management.

**Objectives:** To find out the effectiveness of knee braces compared to no treatment or other conservative treatment for improving the quality of life in patients with knee osteoarthritis.

**Methods:** Literatures were taken from OVIDMedline®, EBMreviews®, and Cochrane®. Three systematic reviews were selected and critically appraised using standard criteria for intervention research.

**Results:** Two systematic reviews had acceptable validity, while another systematic review needed further improvement for the methodological quality. High heterogeneity was shown from all reviews. Knee braces is considered as applicable based on the appraisal. One systematic review did not recommend the use of knee braces for patients without any specific conditions.

**Discussion:** All results stated that knee braces could improve clinical symptoms and quality of life without any serious adverse events. The superiority of knee braces compared to other conservative treatment and/or no treatment still remained as a question due to inconclusive evidences. Different types of knee braces showed different effectiveness to different types of osteoarthritis, which may also contributed to high heterogeneity.

**Conclusion:** 1) In patients with knee osteoarthritis, the use of knee braces can improve the quality of life. 2) It is inconclusive whether knee braces are more effective to improve the quality of life of patients with knee osteoarthritis compared to other conservative treatment.

**Keywords:** *knee osteoarthritis; knee braces; quality of life*



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## IN VITRO ANTIBACTERIAL ACTIVITY OF SOME OF DIBUTYLTIN(IV) CHLOROBENZOATE DERIVATIVES AGAINST

### *Staphylococcus aureus* AND *Escherichia coli*

Samsuar<sup>1,3</sup>, Hardoko I. Qudus<sup>2</sup>, Wasinton Simanjuntak<sup>2</sup> and Sutopo Hadi<sup>2,\*</sup>

<sup>1</sup>Ph.D. Student, Doctoral Program in Mathematics and Natural Sciences, Universitas Lampung, Bandar Lampung 35145, Indonesia

<sup>2</sup>Department of Chemistry, Universitas Lampung, Bandar Lampung 35145, Indonesia

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\*Email: sutopo.hadi@fmipa.unila.ac.id

#### Abstract

The antibacterial activity test of some organotin(IV) benzoate derivative compounds, namely dibutyltin(IV) di-*o*-, *m*-, *p*-chlorobenzoate (**2-4**) against *Staphylococcus aureus* and *Escherichia coli* has been performed. These compounds were synthesized from dibutyltin(IV) oxide (**1**) with *o*-, *m*-, *p*-chlorobenzoic acid. The antibacterial activity tests were conducted by diffusion and dilution method and compared their activity with chloramphenicol as positive control and methanol as negative control. The results of the diffusion test showed that the inhibition zone observed for dibutyltin(IV) oxide was 0 mm indicating that this compound did not have antibacterial activity. The dibutyltin(IV) *m*-dichlorobenzoate with a concentration of 100 ppm was observed to have the biggest inhibition zone against the two bacteria, indicating that compound **3** was the most effective as antibacterial compared to the other series. The results of dilution test showed that the minimum inhibitory concentration (MIC) of dibutyltin(IV) *o*-dichlorobenzoate against *S. aureus* and *E. coli* was 100 ppm while the MIC for dibutyltin(IV) di-*m*-chlorobenzoate was 40 ppm. The dibutyltin(IV) di-*p*-chlorobenzoate was only observed against *S. aureus* with MIC value of 60 ppm. Based on the MIC values obtained in the antibacterial activity of these dibutyltin(IV) di- *o*-, *m*-, *p*-chlorobenzoate indicated that these compounds are potential to be developed as antibacterial drug.

**Keywords:** antibacterial, in vitro, dibutyltin(IV) dichlorobenzoate, *E. coli*, MIC, *S. aureus*



## OPPORTUNITIES AND CHALLENGES OF TELEMEDICINE IMPLEMENTATION IN THE COVID-19 PANDEMIC

**Yuliana**

Anatomy Department, Faculty of Medicine, Universitas Udayana

*yuliana@unud.ac.id*

### **Abstract**

**Purpose:** Aim of this paper is to describe opportunities and challenges in implementing telemedicine from patient and health worker sides in the COVID-19 pandemic.

**Methodology:** This paper is a literature review. Literature was identified from the archives from PubMed, Scopus, and Elsevier. All the literature was published in 2020. The inclusion criteria were the literature should be peer-reviewed and related to the topic of the paper. Keywords were telemedicine, COVID-19, challenges, and opportunities.

**Results:** Challenges in telemedicine implementation are reimbursement, legal aspects, infrastructure, confidentiality, and unfamiliarity in using telemedicine technology. Opportunities in using telemedicine are some advantages from the patient and doctor's point of view. These advantages are low cost, efficient, time-saving, minimizing transmission risk to COVID-19 infection, and practical. Telemedicine can be done from any part of the world as long as the internet connectivity is good. It is feasible for a patient with disabilities and travel limitations.

**Limitations:** This paper is not a meta-analysis review. Opportunities and challenges in implementing telemedicine may vary among countries, patients, and doctors from different cultural and characteristic conditions.

**Contribution:** Triage via telemedicine is an opportunity to overcome patient flow. It can reduce health care workers' stress. On the other side, telemedicine can minimize the health worker's exposure to suspected COVID-19 patients. The risk of transmission will be diminished. Stable and non-critical patients can be assessed by telemedicine. Patients' satisfaction is well maintained depend on telemedicine technology, infrastructure, and health care workers' capability in operating telemedicine technology. Telemedicine has a potency to be used in the era post-COVID-19 pandemic also.

**Keywords:** *Telemedicine, challenges, opportunities, COVID-19 pandemic*



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## THE EVALUATION OF THE ELECTRONIC PRESCRIBING SYSTEM AT BANDAR LAMPUNG HOSPITAL

**Rasmi Zakiah Oktarlina<sup>1\*</sup>, Sutarto<sup>2</sup>, Rani Himayani<sup>3</sup>**

Department of Pharmacology and Pharmacy, Medical Faculty of Lampung University<sup>1</sup>

Department of Community Medicine, Medical Faculty of Lampung University<sup>2</sup>

Department of Ophthalmology, Medical Faculty of Lampung University<sup>3</sup>

*rasmi.zakiah@fk.unila.ac.id<sup>1\*</sup>*,

### Abstract

**Purpose:** To evaluate the implementation of electronic prescriptions in hospital.

**Research Methodology:** This study used a qualitative method that produced descriptive data in the form of written or spoken words from people and observable behavior using in-depth interviews and observation to find out how to implement electronic prescribing in the hospital. The sources of information from this research were obtained from eight informants consisting of three pharmacists and five doctors who used electronic prescription. Then, the informants were divided into two groups, key informants and source informants.

**Results:** Most of the informants said that the performance of electronic prescribing was good. Most of the informants said that the implementation of electronic prescribing was based on good information. Most of the informants said that the implementation of electronic prescribing based on economic that electronic prescribing was included in the economic calculation. Most of the informants said that the implementation of electronic prescribing based on the control that electronic prescribing was under good control, and most of the informants said that the implementation of electronic prescribing based on efficiency that electronic prescribing took a long time to adjust.

**Limitations:** Although most of the informants who participated in this study were found to be satisfied with electronic prescribing implementation and feel the positive effects on their work, electronic prescribing system still requires training and gradual socialization.

**Contribution:** This study can be useful for pharmacology and pharmacy fields.

**Keywords:** *evaluation, electronic prescribing system, hospital*



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## PLASMID DNA PROFILE CONTAINING VANCOMYCIN RESISTANT GENES IN *STAPHYLOCOCCUS AUREUS* FROM DIABETIC ULCER ISOLATE

Tri Umiana Soleha<sup>1\*</sup>, Sutyarso<sup>2</sup>, Asep Sukohar<sup>3</sup>, Sumardi<sup>4</sup>, Oktafany<sup>5</sup>

1 Doctoral Education Program, Faculty of Mathematics and Natural Sciences, University of Lampung

2,4 Department of Biology, Faculty of Mathematics and Natural Sciences, University of Lampung

3 Department of Pharmacology, Faculty of Medicine, University of Lampung

5 Department of Medical Education, Faculty of Medicine, University of Lampung

Corresponding dr.triumiana.unila@gmail.com<sup>1\*</sup>, sutyarso@yahoo.co.id<sup>2</sup>, asepsukohar@gmail.com<sup>3</sup>

### Abstract

**Purpose:** analyze the plasmid DNA profile containing vancomycin resistant genes in *Staphylococcus aureus* from diabetic ulcer isolates at Bandar Lampung Hospital.

**Research Methodology:** this study used an experimental method with a cross sectional approach, namely by collecting data at one time with the aim of obtaining a swab sample, then identifying the colony of *Staphylococcus aureus* bacteria taken from diabetic ulcers of patients treated at the General Hospital in Bandar Lampung to determine the presence of Vancomycin Resistant *Staphylococcus aureus* (VRSA). Then proceed with the examination of the plasmid profile of *Staphylococcus aureus* DNA that is resistant to Vancomycin using electrophoresis techniques and DNA isolated by QIAamp DNA Mini Kit procedure.

**Results:** 6 out of 19 samples of *Staphylococcus aureus* isolates were VRSA. After electrophoretic examination, the results showed that there was no difference in the plasmid DNA image of *Staphylococcus aureus* isolates and VRSA isolates.

**Limitations:** electrophoresis was only able to detect the genome and could not detect plasmids from bacteria so there was no difference in the plasmid profile between *S. aureus* and VRSA.

**Contribution:** can provide knowledge for other researchers to continue similar research using more specific techniques such as PCR

**Keywords:** plasmid, *Staphylococcus aureus*, VRS



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## DIFFERENCE BETWEEN EPITHELIAL AND COLLAGEN IN SECOND DEGREE BURNS BETWEEN HUMAN CORD MESENCHYMAL STEM CELL EXTRACT AND SILVER SULFADIAZINE IN THE MALE WHITE RAT (*RATTUS NORVEGICUS*)

Evi Kurniawaty<sup>1\*</sup>, Efrida Warganegara<sup>2</sup>, Ni Made Ariyuliami Savitri<sup>3</sup>

Universitas Lampung<sup>1,2,3</sup>

Corresponding author [evikurniawatyherlambang@yahoo.com](mailto:evikurniawatyherlambang@yahoo.com)<sup>1\*</sup> [Evikurniawaty@fk.unila.ac.id](mailto:Evikurniawaty@fk.unila.ac.id)

### Abstract

**Purpose:** Silver sulfadiazine is the gold standard in topical therapy for burn healing. Currently, other therapies have been developed to help the wound healing process, including using human umbilical cord mesenchymal stem cell extract because stem cells can accelerate the formation of epithelium and collagen, thereby accelerating the wound healing process.

**Research Methodology:** This study used 27 male white rats *Sprague Dawley* divided into 9 treatment groups, groups K4, K14, and K28 were control groups, groups SC4, SC14, and SC28 were groups that were given stem cell extract therapy, and groups SSD4, SSD14, and SSD28 were groups that were given silver sulfadiazine therapy. On days 4, 14, and 28 the rats were euthanized to take their skins and made preparations by staining *hematoxylin-eosin* and observed the epithelial and collagen formation at 40x magnification..

**Results:** Mean epithelialization score on day 28 K28: 5.33, SC: 7.67, SSD28: 8. Mean collagen score on day 14 K14: 6.67, SC14: 8.67, SSD14: 8. Mean collagen score on day 28 K28: 5, SC28: 4, SSD28: 3.67. There was a significant difference in epithelial thickness on day 28 and the amount of collagen on days 14 and 28

**Keywords:** burns, silver sulfadiazine, mesenchymal stem cells, epithelium, collagen



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## EFFECT OF GIVING ETHANOL JENKOL SEEDS (*PITHECELLOBIUM LOBATUM* BENTH.) ON THE IMPROVEMENT OF UREUM AND CREATININE LEVELS OF WHITE RAT

Evi Kurniawaty<sup>1</sup>, Frisca Febe Lumban Gaol<sup>2</sup>, Intanri Kurniati<sup>3</sup>, Silvia Andriani<sup>4</sup>

Soraya Rahmanisa<sup>4</sup>, Silvia Andriani<sup>5</sup>

*University of Lampung, Lampung Indonesia*<sup>1,2,3,4,5</sup>

*Corresponding author evikurniawatyherlambang@yahoo.com* 1 \*, *co-authors*  
*silviaandriani12@gmail.com ( evikurniawaty@fk.unila.ac.id )* **Abstract**

**Purpose:** Diabetes Mellitus is a degenerative disease which is a chronic disease caused by the failure of the pancreas to produce insulin. Diabetes Mellitus is characterized by polyuria, polydipsia, and polyphagia, accompanied by an increase in blood glucose. Diabetes mellitus triggers many complications, one of which is kidney problems. Jengkol is a type of plant that can lower blood sugar levels, but it can also cause acute kidney failure due to the jengkolic acid content in it. To diagnose acute renal failure, it is necessary to examine kidney function by measuring levels of urea and creatinine.

**Research Methodology:** This research is an experimental study with a Post Test Only Control Group Design. The sample in this study were male white rats (*Rattus norvegicus*) Sparague Dawley strain with a body weight of 200-250 grams, aged 3-4 months, totaling 25 animals, which were divided into 5 groups.

**Results:** Based on the results of the oneway ANOVA test, it was found that the p value > 0.05 jengkol seed extract had no effect on the increase in urea and creatinine levels of sparague dawley rats induced by alloxan. However, when viewed from the mean creatine level at a dose of 1200 mg / kgbb, the ethanol extract of jengkol seeds can cause an increase in creatinine levels with a group mean value of 0.08mg / dl.

**Limitations:** This research is expected to be the basis for further researchers regarding jengkol extract as a therapy for kidney failure

**Contribution:** Bandar lampung, Biologi Molekuler

**Keywords:** Alloxan, Glucose, creatinine, and polyura.





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## STAGE 5 CHRONIC RENAL FAILURE DISEASE BASED ON DETERMINANTS OF AGE, GENDER, AND DIAGNOSIS OF ETIOLOGY IN INDONESIA IN 2018.

Syahrul Hamidi Nasution<sup>1,2</sup>, Syahrizal Syarif<sup>3</sup>, Sofyan Musyabiq<sup>2</sup>

Master of Epidemiology Program, Faculty of Public Health, University of Indonesia<sup>1</sup>

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### Abstract

Chronic renal failure has become a very important issue in recent years due to its increasing frequency and the high costs associated with it is increasingly being seen as a major public health problem associated with premature death with important social and economic implications. In addition to early diagnosis and detection, knowledge related to chronic kidney failure (CRF) based on the determinants of age, sex, and etiological diagnosis in Indonesia in 2018 can be used as material / scientific evidence in planning, program implementation, program evaluation, and determining priority scales the prevention and treatment program for chronic kidney disease in Indonesia which is the objective of this research. This type of research is the research literature review. The target population is all stage 5 chronic kidney failure patients in Indonesia. The affordable population in this study were all stage 5 chronic kidney failure patients recorded in the 2018 Indonesian Renal Registry (IRR) data set. The sample of this study was all (total sampling) stage 5 chronic kidney failure patients recorded in the Indonesian Renal Registry data set. This research was conducted in March-June 2020 using IRR data for 2018. Based on IRR 2018 data, male gender is the largest number of CRF patients with 57% (36,976) and female at 43% (27,608). The determinant of age, the age group  $\leq 44$  years was 26.04% and the age group  $\geq 45$  years was the largest at 73.96%. Based on the etiological diagnosis, hypertension is the most and ranks first at 36%, followed by diabetic nephropathy 28%, unknown 12%, primary glomerulopathy 10%, other 5%, chronic pyelonephritis 3%, obstructive nephropathy 3%, acid nephropathy veins, polycystic kidneys, and lupus nephropathy account for 1% each. The conclusion is that the age group  $\geq 45$  years, male, and have hypertension are the most determinants of CRF patients in Indonesia in 2018.

**Keywords:** *age, chronic renal failure, etiological diagnosis, gender.*



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## SUBACUTE TOXICITY TEST OF *RHIZOPHORA APICULATA* BARK EXTRACT ON LIVER AND PANCREAS HISTOPATHOLOGY OF RATS

Syazili Mustofa<sup>1,2\*</sup>, Sutyarso<sup>3</sup>, Muhartono<sup>2</sup>, Yandri AS<sup>3</sup>, Isnamurti Ciptaningrum<sup>4</sup>, Caesaria Sinta Zuya<sup>4</sup>

Doctoral Program, Faculty of Mathematics and Natural Science, University of Lampung<sup>1</sup>

Faculty of Medicine, University of Lampung<sup>2</sup>

Faculty of Mathematics and Natural Science, University of Lampung<sup>3</sup>

Medical Profession Program, Faculty of Medicine, University of Lampung<sup>4</sup>

*syazili.mustofa@fk.unila.ac.id*<sup>1\*</sup>

### Abstract

**Purpose:** The purpose of this research was to evaluate the toxic effects of an ethanolic *Rhizophora apiculata* bark extract on histopathological changes in liver and pancreas of rats.

**Research Methodology:** Subacute toxicity study of the ethanol extract from bark of *Rhizophora apiculata* was performed in healthy male rats. It was conducted by daily oral administration of the extract at doses of 57, 114, 228, 456 and 918 mg/kg of body weight for 28 days in rats. The subacute toxicity in rats was determined by histological analyses

**Results:** The result showed that there was no significant adverse effect of the extract at dose 57 mg/kg. Moreover at dose 114 mg/Kg and more than it, the extract exhibited toxicities to the rats' liver. On other hand, the toxic effect appeared in rats' pancreas at dose 228 mg/Kg and more than it. It can be concluded that the safe dose for use of *Rhizophora apiculata* bark extract was 57 mg/kg of body weight or lower than it. The ethanol extract from bark of *Rhizophora apiculata* showed toxicity at 114 mg/kg by sub chronic toxicity

**Limitations:** Write a brief limitation of the study

**Contribution:** Where this study can be useful? Give the name of area, disciplines, the results of this test provide an indication of relative toxicity of *Rhizophora apiculata* bark extract and it can be useful in implementation of natural product in drug discovery.

**Keywords:** Rat liver histopathology, Rat pancreas histopathology, *Rhizophora apiculata* bark extract, subchronic toxicity



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## COMPARISON OF BEHAVIOR IN TABLET COMPUTER USING ON CELL PHONE ELBOW INCIDENT IN FACULTY OF MEDICINE STUDENT OF LAMPUNG UNIVERSITY

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### Abstract

**Background:** The Smart device utilization continues to increase exponentially. Nowadays, people spend more time with their smart phone. Length of usage time and bad posture increase the risk of cellphone elbow (cubital tunnel syndrome) incident.

**Method:** This is an observational study with cross-sectional design. Primary data were obtained by distributing the questionnaires.

**Result:** There were 175 respondents; 80(46%) male and 90(54%) female. Respondents who own a tablet computer (tablets) as much as 99(56%) while 76(44%) of respondents don't have. In respondents who have tablet, 36(20.57%) respondents experienced the cellphone elbow symptoms. While the respondents who do not have tablets only 8(4.57%) who have complaints. From this study we know that respondents who have tablet are more at risk of having cellphone elbow symptoms compared with respondents who don't have ( $p:0,0001$ ). There was a significant difference of cellphone elbow incidence ( $p:0,005$ ) in respondents who using tablet  $> 5.25$  hours per day compare to the less one. Respondents who using a tablet with lying down position and flexion elbow  $>1,4$  hours per day also had more at risk to suffer cellphone elbow symptoms ( $p:<0,05$ ). There were no significant differences between gender ( $p:0,469$ ), screen size ( $p: 0,563$ ), and weight ( $p: 0,92$ ) on cellphone elbow complaints.

**Conclusion:** There is a relationship between ownership of tablet computers, length of use, and posture against the occurrence of cellphone elbow. There is no relationship between gender, screen size, and weight to the cellphone elbow incidence.

**Keywords:** cell phone elbow, cubital tunnel syndrome, tablet computer



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## THE EFFECT OF CHITOSAN AND ALOE VERA EXTRACT COMBINATION AS BONE GRAFT ON RAT FEMUR FRACTURE

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### Abstract

The problem of regeneration in bone defects remains a challenge. How the fracture is handled will affect its mechanics and biology. Treatment of fractures affects the quality and quantity of the osteogenic response. Chitosan has played an important role in bone tissue engineering in the last two decades. Cellulose is the main substance found in plant walls to keep it rigid and strong. Cellulose is a form of natural polymer. This material can be injected into the bone cavity and support the growth of new bone.

This is a experimental comparative laboratory research. There were 2 treatment groups, group I was without bone graft, group II was given bone graft combination of citosan and aloe vera extract. Histologic examination of the rat's femur at week 5 was performed and assessed by the Salkeld score.

In group I, the mean Salkeld histology score was  $0.8 \pm 0.6$ . In group II, the mean Salkeld histology score was  $1.5 \pm 0.7$ . The Kalseld histology score in group II was higher than the first group. Based on the results of data testing with the Mann-Whitney test, it can be concluded that there is a significant difference ( $p < 0.043$ ) in the bone healing process between group I and group II.



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## THE EFFECT OF GAYO ARABICA COFFEE LEAF EXTRACT ON BLOOD SUGAR LEVELS IN RAT WITH TYPE-2 DIABETES MELLITUS

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### Abstract

**Purpose:** To understand the effect of ethanol extract of gayo Arabica coffee leaves (*Coffea Arabica*) on changes in blood glucose levels in type-2 diabetes mellitus rats (*Rattus norvegicus*).

**Research Methodology:** To understand the effect of ethanol extract of gayo Arabica coffee leaves (*Coffea Arabica*) on changes in blood glucose levels in type-2 diabetes mellitus rats (*Rattus norvegicus*).

**Results:** : the study showed a decrease in blood glucose levels which is significant with a value of  $P = 0.035$  after giving arabica gayo extract 150 mg / KgBW to rats for 13 days .

**Limitations:** less processing time to get more significant results

**Contribution:** Gayo arabica coffee leaves show the accumulated content of chlorogenic acid which can stimulate glucose uptake in skeletal muscles with AMPK activity, which leads to a decrease in glucose levels in the blood. This supports gayo arabica coffee leaves as a good antidiabetic for type 2 diabetes mellitus.

**Keywords:** Diabetes Mellitus, Metformin, Gayo Arabica Coffee Leaf Extract



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## COMPARISON OF PHENOL, FLAVONOID AND ANTIOXIDANT LEVELS BETWEEN YOUNG AND OLD GAYO ARABICA COFFEE LEAF EXTRACTS AND THE RELATION WITH TYPE -2 DIABETES MELLITUS

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### Abstract

**Aim:** To determine differences in phenol, flavonoid and antioxidant levels of Gayo Arabica coffee leaves extract and its relation with type 2 Diabetes Mellitus.

**Method:** Experimental research using laboratory facilities to manufacture ethanol extract on old and young Gayo Arabica coffee leaves to determine levels of phenol, flavonoids and antioxidants and the results were associated with results of decreasing BGL in type 2 DM mice of researcher's previous research.

**Results:** P value for phenol <0.019, flavonoid, p <0.05 and antioxidant, p <0.001, were significant and showed minimal differences. Very strong antioxidant levels are <50.

**Limitations:** The process requires a long and meticulous process to get accurate results

**Contribution:** To determine content of phenols, flavonoids and antioxidants associated with their function as a treatment for type 2 DM.

**Keywords:** coffee leaf extract, fenol, flavonoid, antioksidan



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## ANTIRETROVIRAL THERAPY AND LABORATORY PROFILE OF CHILDREN WITH HIV-AIDS AT ABDUL MOELOEK GENERAL HOSPITAL

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### Abstract

**Purpose:** This research to determine the characteristics, antiretroviral therapy, and laboratory profile, to analyse the correlation between antiretroviral therapy and laboratory profile in children with HIV-AIDS.

**Methods:** The design of this study was quantitative observational with a cross sectional approached 38 children with HIV-AIDS who underwent routine therapy at the VCT polyclinic in March-August 2020 with consecutive sampling technique. Data comes from medical records. Data analysis was performed using the chi-square test.

**Results:** Most of the respondents were male (65.8%), aged more than 5—10 years (63.2%), age when starting ARV therapy was more than 1—5 years (60.5%), and duration of therapy of 1—3 years (39.5%). Furthermore, most of the respondents had anaemia (57.9%), but most of them had normal platelet, TLC, SGOT, SGPT, ureum and creatinine, respectively 71.1%, 71.1%, 84.2 %, 84.2% and 71.1% and 100%. There were 89.5% of respondents receiving 1st-line ARV therapy and 63.2% were at clinical stage 3. There was a significant correlation between type of ARV therapy and platelet levels ( $p = 0.01$ )

**Limitations:** Not all of patients with HIV did complete laboratory examination

**Contribution:** this study explained that there was relationship between the type of antiretroviral therapy and the platelet count

**Key words:** ARV, HIV-AIDS, characteristics, laboratory





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## CORRELATION BETWEEN A RT-PCR OF NASOPHARYNX SWAB, A NEUTROPHIL LYMPHOCYTE RATIO AND AN ABSOLUTE LYMPHOCYTE COUNT IN A SUSPECTED COVID -19 PATIENT

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### Abstract

#### Purpose:

The aim of our study is to analyze the correlation between a RT-PCR of nasopharynx swab and a neutrophil lymphocyte ratio (NLR), and between a RT-PCR and an absolute lymphocyte count (ALC) in a suspected Covid-19 patient.

#### Research Methodology:

This study is an analytical research with cross-sectional method. Sampling method was consecutive sampling. Subjects with suspected Covid 19 were taken from Sariasih Hospital, Karawaci, Tangerang from May-September 2020. Subsequently, we took nasopharynx swab and whole blood sample. The swab was examined with RT-PCR for SARS-CoV-2 and we ran complete blood count for whole blood sample. The number of subject was 29 subjects. NLR was divided into 2 groups,  $\geq 3.13$  and  $< 3.13$ . ALC was also divided into 2 groups,  $\geq 1500$  cells/mm<sup>3</sup> and  $< 1500$  cells/mm<sup>3</sup>. A RT-PCR was divided into 2 groups, positive and negative. We performed Chi-Square test for correlation analysis between a RT-PCR and NLR, and also between a RT-PCR and ALC.

#### Results

There was no correlation between the RT-PCR result and a NLR, and also between the RT-PCR result and a ALC.

#### Limitations

We didn't do analysis of other factors that could affected a NLR and a ALC.

#### Contribution:

We hope our study could contribute for diagnosis of a suspected Covid 19 patient in health service center.

**Keywords:** *suspected Covid 19, NLR, RT-PCR*



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## DETERMINANTS OF BEHAVIOR IN ANTIBIOTIC MEDICINE IN THE COMMUNITY OF UMBUL NATAR VILLAGE, JATIMULYO VILLAGE, JATI AGUNG DISTRICT, SOUTH OF LAMPUNG

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### Abstract

Antibiotic resistance is a global health problem concern. Self-medicating with antibiotics without a prescription is very common in developed countries. Antibiotic self-medication or the use of antibiotics without prescription is one of the causes of antibiotic resistance. The purpose of this study was to determine the factors that influence the behavior of antibiotic self-medication. This research is a cross-sectional survey study in the community of Umbul Natar Village, Jatiagung District, South Lampung. Data collection was carried out in June-August 2020 using a questionnaire, which contains questions about sociodemographic, knowledge, attitudes and attitude in the use of antibiotics. A total of 292 total respondents 149 (51%) were male, and 143 (49%) were female. Most of the respondents had poor knowledge about antibiotics (93.49%) and (6.50%) had good knowledge. Respondents with positive attitudes were 24% and respondents with negative attitudes were 86%. As many as 49.31% of respondents used antibiotics in the last one month and 37.67% used antibiotics in the last 3 months. Respondents' actions were dominated by poor (97.60%) and (2.37%) of them were classified as good. Total respondents who did antibiotic self-medication were 264 people (90.42%) and 28 other respondents who did not self-medicate antibiotics (9.58%). Based on the chi-square test, the knowledge factor ( $p = 0.00$ ), attitude ( $p = 0.00$ ) and action ( $p = 0.00$ ) had a significant influenced on self-medicated behavior ( $p < 0.05$ ), while sociodemographic and exposure Information factors did not significantly influence the antibiotic self-medication behavior ( $p > 0.05$ ). The reasons for the respondents for self-medicating on antibiotics were among others that the price was cheaper (41.44%) and the medicine from a doctor was considered ineffective (86.86%). Overall, the level of knowledge, attitudes and actions of respondents towards the use of antibiotics is still low.

**Keyword** : Antibiotic Resistance, Antibiotik Self Medication, Antibiotik Self Medication factors



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## CORRELATION OF NORMAL GESTATIONAL AGE WITH FIBRIN MONOMER LEVELS

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### Abstract

**Purpose:** This study was purpose to analyze correlation of fibrin monomer levels in first, second, and third trimesters of pregnancies

**Research Methodology:** The research was conducted in the Hospital dr. Wahidin Sudirohusodo and Fatimah Mother and Child Hospital in Makassar. This was a cross sectional study, conducted during four months.

**Results:** Total subjects were 120 pregnant women consisting of 40 first trimester pregnant women (33,3%), 40 second trimester (33,3%), and 40 third trimester pregnant women (33,3%). Most of subjects were 21-30 years old (57,7%). The study result showed correlation of gestational age with fibrin monomer levels  $r = -0,23$  ( $p=0,004$ ) and obtained the mean of fibrin monomer (35,85  $\mu\text{g}/\text{mL}$ ) in first trimester was higher than second trimester (29,14  $\mu\text{g}/\text{mL}$ ), and third trimester (11,01  $\mu\text{g}/\text{mL}$ ). Fibrin monomer levels in normal pregnancy is higher than the levels of fibrin monomer in healthy individuals according to reference values ( $\leq 6 \text{ mg} / \text{mL}$ ), indicating a hypercoagulable process in pregnancy. Levels of fibrin monomer in the first trimester of pregnancy increased than second trimester pregnancy and third trimester due to the hypercoagulable process. Third trimester of pregnancy are tends to decrease nearly normal haemostasis considered in determining the occurrence of pregnancy complications.

**Limitation:** Limitations of this study include the abnormal distribution of results and the determination of the cut off point value in this study cannot be determined because there is no control sample.

**Contribution:** This study can be used in the Dr. Wahidin Sudirohusodo Teaching Hospital and hospitals with complete facilities and many patients Obstetric & Gynecology.

**Keywords:** fibrin monomer, pregnant of first trimester, second trimester, third trimester.



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## SOCIAL DETERMINANTS OF BODY IMAGE IN YOUNG WOMEN IN METRO BARAT : A QUALITATIVE STUDY

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### Abstract

Nutrients affect growth and development during infancy, under five to adolescence, with nutritional needs in adolescents greater than in the previous period. There are 13 provinces with a prevalence of obesity above the national level, namely East Java, Riau Islands, DKI, South Sumatra, West Kalimantan, Bangka Belitung, Bali, East Kalimantan, Lampung, North Sulawesi and Papua. This study uses a qualitative exploratory method. The population in this study were all young women in Metro City. In qualitative research, using descriptive phenomenology method, the researcher tries to explore the meaning and tries to explore the phenomenon of social determinants of Body Image in young women. Several respondents explained that body image is the perception of body shape compared to other. All respondents assume that the ideal body is the result of a comparison of body size with height or body shape. Some respondents can assess their body shape by comparing themselves to other people, either through the media or the environment. All respondents stated that friends are very influential on the perspective of an ideal body. Body image can have an impact on eating patterns such as extreme diets. Efforts are needed to promote health among young women, especially regarding nutrition in young women.

**Keywords :** Body image, Social Determination, Young Women

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## THE EFFECT OF PURPLE NUTSEGE (*CYPERUS ROTUNDUS L.*) EXTRACT FROM THE ECOLOGICAL ZONE IN LAMPUNG PROVINCE TO EXPRESSION OF BAX PROTEIN ON THE HELA CERVICAL CANCER CELL LINE

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### Abstract

Cancer treatment is currently carried out in various ways including operative, radiotherapy, chemotherapy as well as hormone and biological therapy. Several studies have been conducted to explore natural ingredients in order to find new anticancer agents with higher efficacy, less side effects, and more economical because they can be found easily. One of the natural medicinal plants which is potential to be developed as an anticancer is purple nutsedge (*Cyperus rotundus L.*). Purple nutsedge has been shown to have a cytotoxic effect on hela cell apoptosis. But it needs to be proven whether the apoptotic pathway involved is through increased bax protein.

This research is a pure experimental study with a post test model with control group design. The methanol and chloroform extracts of purple nutsedge tubers which had a smaller IC<sub>50</sub> in HeLa cells were called active extracts of purple nutsedge tubers. This active extract is used to test the bax protein expression in HeLa cells. Testing with the immunocytochemical method was carried out by culturing cells on 24 wells microplates. Each well was filled with  $1 \times 10^5$  cells / well in 500  $\mu$ l media (FBS 0.5%). Then the media in the microculture was removed by pipette and filled with 500  $\mu$ l of media (10% FBS) and purple nutsedge tuber extract. Microcultures were incubated again for 24 hours in an incubator. After 24 hours, the coverslip was removed for preparation and observed by microscopic.

From this research, it can be seen that ethanol extract of purple nutsedge tubers has no effect on bax protein expression, while the chloroform extract graphically showed an increase in bax protein expression, but it was not statistically significant.

**Keywords:** *Cyperus rotundus L.*, Purple Nutsedge, Cervical Cancer, Bax, immunocytochemistry



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## CURRENT PERSPECTIVES AND PREVENTION STRATEGIES OF HYPERTENSION AMONG ADOLESCENTS AND ADULTS

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### Abstract

**Purpose:** In this review, we compared hypertension between adolescents and adults and evaluated distinctive prevention programs.

**Research Methodology:** Systematic Review

**Results:** At present, the definition of hypertension used in adolescents, especially those aged  $\geq 13$  years, is the same as that in adults so that blood pressure monitoring can be easily performed. Despite the aforementioned programs for preventing hypertension, unsatisfactory results are observed in adults; adults find it difficult to follow the program because it is difficult to change unhealthy lifestyle habits, such as low physical activities, bad food habit, poor sleeping pattern, stress, and smoking habits, which have developed in adolescence. Thus, it is important to start preventing hypertension during adolescence to prevent hypertension in adulthood.

**Contribution:** This review could contribute positively in decreasing the incidence of hypertension worldwide.

**Keywords:** *Hypertension; Blood Pressure; Adolescence; Adulthood; Prevention*



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## CLINICAL AND LABORATORY PROFILE OF DENGUE FEVER PATIENTS IN A HOSPITAL SERVING RURAL AGROINDUSTRIAL COMMUNITIES

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### Abstract

**Purpose:** This study aims to determine the clinical and laboratory profile of dengue fever (DF) patients in Mesuji Regency, an area of predominantly rural agroindustrial communities, compared to that of urban communities.

**Research Methodology:** A descriptive observational study was conducted for 5 months, from January to June 2019. Patients with a working diagnosis of DF were enrolled in this study. Clinical and laboratory examinations were carried out and the data obtained were analyzed.

**Results:** During the 5 months period, 33 patients with a mean age of  $35.63 \pm 12.81$  years were diagnosed with DF. Serology testing for IgG and IgM dengue virus-specific antibodies were found positive in 51.51% and 63.63% patients, respectively. The mean platelet count was  $62,750 \pm 31,993/\text{mm}^3$  on the 5th day,  $37,250 \pm 10,404/\text{mm}^3$  on the 6th day,  $54,000 \pm 21,150/\text{mm}^3$  on 7th day, and  $101,000 \pm 32,357/\text{mm}^3$  on the 8th day of fever. The mortality rate was 0% and no dengue shock complication was observed. The clinical and laboratory profile of DF patients in rural agroindustrial communities has no difference from that of urban communities.

**Limitations:** The main limitation of this study is the limited sample size.

**Contribution:** Our results contribute to current internal medicine literature on dengue infection.

**Keywords:** *Dengue fever, Agroindustrial communities*



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## SURVEY OF THE SCHOOL CANTEEN, OPPORTUNITIES FOR ANEMIA REDUCTION TO YOUNG WOMEN SCHOOL –BASED IN THE CITY OF BANDAR LAMPUNG

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### Abstract

**The Purpose** of this research is to know the profile of the foods that are sold in the school canteen, profiles food sources of iron sold in the canteen at high school in the city of Bandar Lampung.

**Research Methodology:** This research is descriptive research approach with cross sectional analysis conducted at 30 high schools in the city of Bandar Lampung, Lampung Province in 2018.

**Results:** Source of iron is most widely available is derived from vegetable proteins, namely tempe/tofu/oncom (18.2%), followed by the next new animal food in a row is a chicken, egg and fish as much as 16.1%, 13.3% and 8.4% of traders. The availability of vegetables and fruits a little (31.8%). Availability of tea and coffee drinks as a barrier of iron absorption is more than milk as a source of iron

**Conclusions:** The availability of food in the canteen in high school is not yet appropriate to the fulfillment of the message of balanced and nutritional adequacy of iron daily fulfillment of girls.

**Limitations:** This study is based on the availability of types of food in the school canteen. It can change according to teen food trends.

**Keywords:** Availability of Food, Iron Source, Adolescent, Canteen; School





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## APOPTOSIS INDUCING ACTIVITY OF BARK EXTRACT OF *SPATHODEA CAMPANULATA* ON HUMAN LEUKEMIA CELL LINES U937, K562 & HL60 CELL LINES VIA CASPASE CASCADE

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### Abstract

**Purpose:** Evaluation the anti-leukemic activity of bark extract of *Spathodea campanulata* (BESC) against U937 (human leukemic monocytes lymphoma cell line), K562 (human myelogenous leukemia cell line) and HL60 (acute promyelocytic leukemia) cell line.

**Research Methodology:** Detection of Cytotoxicity by MTT assay (MTT [3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazoliumbromide], Reader type: Model 680XR Bio-Rad Laboratories Inc.); Light Microscopy (Leica DMI 4000 B); Fluorescence Microscopy; Confocal Microscopy (Leica TCS-SP2 system, Leica Microsystem, Heidelberg, Germany); Agarose gel electrophoresis study; Mitochondrial membrane potential ( $\Delta\psi_m$ ); Apoptosis Assay; Cell Cycle Arrest Study (Becton-Dickinson FACS LSR Fortessa 4 laser Cytometry by BD FACS Diva software program); Caspase Assay

**Results:** The present investigations confirmed that methanolic extract of bark extract of *Spathodea campanulata* (BESC) shows significant effect on leukemic cells (monocytes lymphoma, myelogenous leukemia and, acute promyelocytic leukemia cells) by triggering programmed cell death but it shows insignificant and non- apoptotic activity against normal murine macrophage cells (RAW264.7).

**Limitations:** More studies should be done and identify the active compound as well as to identify the signal transduction pathways in *Spathodea campanulata* for the treatment of various types of chronic diseases that will be beneficial for the human society.

**Contribution:** It will help to develop a novel anti-cancer drug that solves the problem of side effect, toxicity and reappearance of symptoms after discontinuation.

**Keywords:** *Spathodea campanulata* Bark, Leukemia, Apoptosis, Caspase



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## CURRENT UPDATE ON CONGENITAL HEART DISEASES IN PREGNANCY

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### Abstract

**Purpose:** This research aims to shed light into congenital heart diseases, the pathophysiology, and the ultrasonographic findings of congenital heart diseases.

**Research methodology:** This is literature review of latest literatures in congenital heart diseases. The authors use search engine from PubMed and Google Scholar to gather latest papers in the field.

**Results:** Congenital heart diseases are a major health concern, affecting 1.35 million children born every year. Ventricular septal defect, atrial septal defect, and atrioventricular septal defect are found in 57.9% cases of congenital heart diseases. The risk factors include consanguineous marriage, family history of congenital heart diseases, old maternal and paternal age, and exposure to teratogens, and genetic factors. Missteps in cardiac development are the main pathophysiology of congenital heart diseases. Ultrasonography screening in 18–22 weeks gestational age is utilized to screen. Follow-up screening can increase detection rate to 80%.

**Limitations:** This study has limitation of only discussing most common congenital heart diseases and did not delve into rarer types of congenital heart diseases and did not discuss impacts or burden of congenital heart diseases in adulthood and health comorbidities associated.

**Contribution:** This literature review is beneficial for general practitioners and obstetricians focusing in fetal maternal medicine.

**Keywords:** *Congenital heart disease, Ultrasonography, Embryology*



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## COMPARISON OF PHENOL, FLAVONOID, AND ANTIOXIDANT LEVELS BETWEEN YOUNG AND OLD GAYO ARABICA COFFEE LEAF EXTRACTS AND THE RELATION WITH TYPE -2 DIABETES MELLITUS

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### Abstract

**Purpose:** To determine differences in phenol, flavonoid and antioxidant levels of Gayo Arabica coffee leaves extract and its relation with type 2 Diabetes Mellitus.

**Research Methodology:** Experimental research using laboratory facilities to manufacture ethanol extract on old and young Gayo Arabica coffee leaves to determine levels of phenol, flavonoids and antioxidants and the results were associated with results of decreasing BGL in type 2 DM mice of researcher's previous research.

**Results:** P value for phenol <0.019, flavonoid, p <0.05 and antioxidant, p <0.001, were significant and showed minimal differences. Very strong antioxidant levels are <50.

**Limitations:** The process requires a long and meticulous process to get accurate results.

**Contribution:** To determine content of phenols, flavonoids and antioxidants associated with their function as a treatment for type 2 DM.

**Keywords:** coffee leaf extract, fenol, flavonoid, antioxidant



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## THE EFFECT OF BREWED COFFEE ARABICA GAYO (COFFEA ARABICA) LEAVES ON DIFFERENCES OF BLOOD SUGAR LEVELS IN TYPE 2 DIABETES MELLITUS PATIENTS

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### Abstract

**Introduction:** The incidence of DM which continues to increase not only in old age but also in productive age and the low rate of patient adherence to taking antidiabetic drugs and the high interest of Indonesian people in consuming traditional ingredients encourages researchers to examine the effect of Arabica Gayo coffee leaves on the reduction of BGL in patients with Type 2 diabetes.

**Aim:** To see the effect of brewed Arabica Gayo coffee leaves on reducing blood sugar levels in people with type 2 diabetes

**Methodology:** This study is a clinical trial using subjects with Type 2 diabetes whom voluntarily willing to consume Arabica Gayo coffee leaves every morning for 14 days and assessed BGL before and after brewing Arabika Gayo coffee leaves.

**Result:** P value obtained is  $p = 0.12$  through statistical test T-paired test to determine the pre and post significance value of coffee leaf administration. There was a significant difference before and after treatment because the p value is  $<0.05$ .

**Complication:** Brewed Arabica Gayo coffee leaves can reduce blood sugar levels in people with Type 2 diabetes.

**Keywords:** brewed coffee leaves, Arabica Gayo coffee leaves, Diabetes Mellitus (DM)



## CORRELATION BETWEEN NEUTROPHIL LYMPHOCYTE RATIO AND CYCLING THRESHOLD VALUE OF RT PCR IN PATIENTS CONFIRMED COVID-19 IN LAMPUNG

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### Abstract

**Purpose:** The purpose of this study was to see a correlation between the Neutrophil Lymphocyte Ratio (NLR) and the Cycle Threshold (Ct) value of the Reverse-Transcriptase Polymerase Chain Reaction in patients who were confirmed positive for COVID-19 in laboratory of Dr. H Abdul Moeleok Hospital in Lampung Province.

**Research Methodology:** This research is an analytical study of the cross-sectional method using secondary data where all data were taken from July-September in the hematology and biomolecular laboratory of Dr. H Abdul Moeloek Hospital. The total number data for patients who have NLR is 59. The NLR value is obtained by dividing the absolute neutrophil count by the absolute lymphocyte count using Mindray's BC 6200 automatic hematology tool. Primers used by the PCR tool Abbot M2000sp detected 2 of 3 genes (ORF 1a, N, and E). A Ct value is considered positive for COVID-19 if it is less than the threshold of 40.

The number of samples that had NLR and Ct gene ORF 1a was 38. The number of samples that had NLR and Ct gene N values was 56. The number of samples that had NLR and Ct gene E was 28.

The correlation test between the NLR and the Ct value used the Spearman correlation test.

**Results:** The results of the Spearman correlation test between the NLR and the Ct value of the ORF 1a gene were  $(r) = -0.231$  with a significance value  $(\alpha)$  of 0.163. The results of the Spearman correlation test between NLR and the Ct value of the N gene were  $-0.173$  with a significance value of  $(\alpha) = 0.201$ . The result of the Spearman correlation test between the NLR and the Ct gene E value was  $-0.023$  with a significance value of  $(\alpha) = 0.908$ .

These results can be concluded that there is a weak and insignificant negative correlation between NLR and the Ct value of the three specific SARSCoV-2 genes that cause COVID-19.

**Limitations:** The limitations of this study are that it does not analyze comorbid risk factors that can affect the patient's NLR other than SarsCoV-2 infection and do not analyze the swab sampling method for RT PCR.

**Contribution:** The results of this study are expected to provide an initial contribution to further research in the form of hematological examination results, namely NLR, which is relatively simpler as a prediction of monitoring the course of COVID-19.

**Keywords:** *Confirmed COVID-19, Cycling Threshold value, Neutrophil Lymphocyte Ratio*



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## CREAM FORMULATION OF EXTRACT OF BERENUK LEAVES (*CRESCENTIA CUJETE*) AS AN ANTIMICROBIAL AGAINST *STAPHYLOCOCCUS AUREUS*

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### Abstract

Berenuk (*Crescentia cujete* L.) is a tropical shrub that has medicinal properties for various diseases. Leaves of Berenuk contain some compounds such as alkaloids, saponins, tannins, and polyphenols which are thought to have the potential to be antibacterial. The purpose of this study was to determine the potential of berenuk leaf extract in cream dosage form and to prove the presence of Antibacterial activity against *Staphylococcus aureus*. Cream formulations separated into several formulations; 5%, 10%, and 15% as well as base cream as a negative control and gentamicin sulfate 1% as a positive control. Results showed that the cream of berenuk leaves extracts provided a weak inhibition zone at the highest concentration of 15% with an average 11.53 mm against *S.aureus*. Cream formulations were evaluated physically including organoleptic observation resulting F1 in brownish-green, F2 in brown, and F3 in dark brown. Homogeneity tests show that all formulations were homogeneous, marked by no appearance of coarse grains. The pH value of all formulations following the cosmetic standard was about 4.5–6.5. The standard viscosity value of all formulations was between 2000–4000 cps. The stability test of cream preparations shows no changes in the form of low-temperature storage (4° C), room temperature, and high temperature (40°C).

**Keywords:** *Cream, Crescentia cujete, Staphylococcus aureus, Formulation*



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## THE EFFECT OF AMBON BANANA (*MUSA ACUMINATA COLLA*) ON RESTING METABOLIC RATE IN YOUNG ADULTS

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### Abstract

**Purpose:** To prove that the Ambon Banana (*Musa acuminata colla*) dietary can reduce the Resting Metabolic Rate (RMR) in young adults

**Research Methodology:** This research is experimental with pretest-posttest design on The subject were 80 medical students of Muhammadiyah Malang university with normal BMI and overweight. RMR measured using indirect calorimeter. The data analysis used the Kolmogorov-Smirnov normality test, unpaired t-test and paired t-test.

**Results:** Ambon bananas (*Musa acuminata colla*) dietary reduces resting metabolic rate (RMR) of young adults

**Limitations:** The research subject did not involve subjects with obese, so it could not be known the effect of Ambon banana diet on samples with various body compositions on RMR.

**Contribution:** Food and bioscience.

**Keywords:** *Resting metabolic rate, Ambon banana, young adults*



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## THE EFFECT OF ALKALINE WATER ON GLUCOSE LEVELS OF WHITE RATS SPRAGUE DAWLEY LINE GIVEN DIET HIGH SUGAR

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### **Abstract**

**Purpose:** This study aims to determine the effect of alkaline water on glucose levels in Sprague Dawley rats (*Rattus norvegicus*) fed a high-sugar diet.

**Research Methodology:** This study is an experimental study using a pre test and post test control group design. The data obtained were analyzed with the Wilcoxon Sign Rank test, Paired sample t-test and Independent sample t-test with the IBM SPSS 18 for windows program.

**Results:** The results showed an increase in glucose levels in each group after being given a high sugar diet and the results of the analysis using the Independent sample t-test showed that the value of  $p = 0.001$ .

**Limitations:** This study only discusses the effect of alkaline water on glucose levels in Sprague Dawley rats (*Rattus norvegicus*) fed a high-sugar diet.

**Contribution:** This research is beneficial for health prevention of hyperglycemia by consuming alkaline water.

**Keywords:** Alkaline water, glucose levels, high sugar diet.





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## FOOD SECURITY AND HOUSEHOLD EXPENDITURE IMPACT ON NUTRITIONAL STATUS ON PREGNANCY: A CROSS SECTIONAL STUDY IN RURAL AREA

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### Abstract

**Purpose:** This study was aimed to analyze the correlation of food security status and household food expenditure to nutritional status on pregnant women.

**Research Methodology:** This study was an observational study with crosssectional design, conducted in Puskesmas Wonosobo, Lampung Province, Indonesia on May 2020 - Augustus 2020. All of pregnant women who get Antenatal Care (ANC) on Puskesmas were carried out as samples. Food security status and household food expenditure data were measure by anamnesis and questionnaire. Nutritional status was asses by mid-upper arm circumference (MUAC) of pregnant women. Data was collected and then analyzed using SPSS 21 application.

**Results:** A total of 53 pregnant women, with age distribution on range of <18 years & >35 years (20 women) and 20-35 years (33 women) were analyzed in this study. Statistical analysis (Chi-Square) show the pregnant womens in malnutrition status with food insecurity were 3 women (75%) while pregnant women in good nutrition status with food insecurity only 3 women (6.1%) ( $p = 0.003$ ). Correlation between house hold expenditure to nutritional status was analyzed by chi-square test, the result show all of pregnant women in malnutrition status (4 women) have lower house hold expenditure ( $p = 0.001$ ).

**Conclusion:** This study clearly shows that more food security and level of household food expenditure will affect on nutritional status of pregnant women.

**Keywords:** *food security, household expenditure, nutritional status, pregnancy, socioeconomic determinant*



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## MATERNAL HEALTH STUDY IN PROVINCE LAMPUNG BASED ON PREDICTION MODEL *STRUCTURAL EQUATION MODELING- PARTIAL LEAST SQUARE*

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### Abstract

**Purpose:** This study was aimed to analyze the correlation of food security status and household food expenditure to nutritional status on pregnant women. This study was aimed to identify the significant effect of the determinants factor of maternal health and incidence of maternal death.

**Research Methodology:** This study was an observational study with crosssectional design, This study was conducted in Province Lampung, Indonesia, in 2020. Population of this research consisted of situation maternal health in province Lampung. Sampel in this study are report of basic health and SDGs series: districts/city readiness from 13 districts and 2 cities in Province Lampung. The studied indicators either were evaluated of environment, health behavior, and health service for each districts/city. Data was collected and then analyzed using SmartPLS application.

**Results:** The environment determinant in this study was determined to water quality and sanitation. Health behaviour determinant indicator was assessed by ANC adherence and labor operator while indicator of health service determinants were access of health service, care of maternal complication, health insurance. All of determinants have significant correlation to maternal health by T- value and p value were (T= 2.201 ; p= 0.028), (T= 2.467 ; p= 0.012), (T=2.737 ; p=0.006), respectively for environment, health behaviour, and health service determinants. Refer to the result above which are schematized in **Figure 1**, it can be learned that environment, health behavior and health services present strong effects to maternal health.

**Conclusion:** This study results show clearly there are correlation of variable determinants; environment, health behavior, and health service to affect maternal health by the pathways.

**Keywords:** food security, household expenditure, nutritional status, pregnancy, socioeconomic determinants



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## THE RELATIONS BETWEEN MONDAY-THURSDAY FASTING TOWARD SPIRITUAL INTELLIGENCE (SI): A PRELIMINARY REPORT

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### Abstract

**Purpose:** Aims of this study was to know the relationship between Monday and Thursday fasting and the level of spiritual intelligence (SI) of preclinical students of the UIN Syarif Hidayatullah Jakarta medical school

**Research Methodology:** Design of this study was analytic observational with cross sectional comparison design. Samples amounted to 50 with 25 respondents in the Monday and Thursday fasting groups and 25 respondents in the nonfasting group. Simple random sampling was used to choose the subject and data collected by SI questionnaire. Data analysis used by chi-square test at p value 0.05.

**Results:** 35 subjects with high SI level (70.0%), 8 with medium SI level (16.0%), 4 with very high (8%), and 3 subjects with low SI level (8%). There was a significant difference in the level of SI between the Monday and Thursday fasting group and the nonfasting group (P-value 0.001).

**Limitations:** Our study was unable to measure other factors that influence the level of SI such as religious activities and psychological personality

**Contribution:** As Early finding, this study can be providing knowledge to the students (and in advance later for the community) about the effect of Monday and Thursday fasting on SI, and as a reference material for the academic community of the Faculty of Medicine, UIN Syarif Hidayatullah Jakarta

**Keywords:** *Monday-Thursday fasting, spiritual intelligence, preclinical students*



## MULTIPAROUS POST CESAREAN SECTION ON INDICATION PLACENTA PREVIA AND TRANSVERSE LIE WITH PLACENTA LEFT IN SITU

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### Abstract

**Purpose:** To report a case of multiparous post cesarean section for indication of placenta previa and transverse lie with placenta left in situ.

**Research Methodology:** A case report.

**Case report:** A 25-year-old multigravida was referred to dr. Mohammad Hoesin General Hospital Palembang due to after cesarean section day-43 and the placenta was not delivered yet. During the obstetric examination, the fundal height was at two fingers below the umbilicus and no active vaginal bleeding. On ultrasound examination, it was found that the placenta was left in situ, there was a placental mass and blood clot in the uterine cavity without active vascularization at the placental implantation site, the smallest myometrial thickness was 3 mm and there was clear zone. The patient was treated with curettage to evacuate the placental mass. Post-curettage ultrasound examination revealed a reduction in placental mass in the uterine cavity.

**Conclusion:** Conservative management of invasive placenta aimed to avoid peripartum hysterectomy. The residual villous tissue in the uterine wall may require up to 6 months to be completely absorbed. The next follow-up was to evaluate the size of the placental mass post curettage.

**Limitations:** This study is only a case report. Another further study such as case series is needed.

**Contribution:** This study is an useful study to know how to treat invasive placenta and its outcome.

**Keywords:** caesarean section, placenta left in situ, curettage.



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## REVIEW: POTENTIAL OF TUBER AND LEAVES EXTRACT OF *Manihot esculenta* AS A BURNER HEALING AGENCY

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### Abstract

**Purpose:** the aim of this review study was to determine the potential of tuber and leaf extract *m. Esculenta* as a burn healing agent.

**Research methodology:** the method used was collection and *screening* data which had inclusion and exclusion criteria.

**Results:** there is various information regarding the phytochemical content in *m. Esculenta*, such as flavonoids, alkaloids, saponins, and tannins. Each of these compounds has molecular-cellular activity in the burn healing process, namely through preventing inflammation and increasing skin re-epithelialization. The tuber and leaf extracts of *m. Esculenta* have been applied to several mammals in burn healing experiments. Based on these data, it appears that *m. Esculenta* has the potential in the treatment of burns.

**Limitations:** studies related to the content of each compound in *m. Esculenta* tubers and leaves regarding its bioactivity and its application in healing burns are still minimal. Further research is needed to validate the burn healing potential of *m. Esculenta*.

**Contribution:** this study can be useful for educators, students, and the general public in facilitating research and understanding of information related to the phytochemical content of *m. Esculenta* and its role in healing burns. It also can be used as a reference for further research, both in other uses of the phytochemical content of *m. Esculenta* tubers and leaves, its application in natural burn medicinal products, as well as phytochemical research and the potential for healing burns in this plant in indonesia.

**Keywords:** *manihot esculenta*, antioxidants, flavonoids, wound healing, phytochemicals



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## PENGARUH PEMBERIAN EKSTRAK ETANOL 96% BIJI MAHONI (*SWIETENIA MAHAGONI L.*) DALAM MENURUNKAN KADAR GLUKOSA DARAH PADA MENCIT (*MUS MUSCULUS*) YANG DIINDUKSI ALOKSAN

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### Abstract

**Background:** Diabetes mellitus is a chronic disease that occurs because the body cannot produce enough hormone insulin or ineffective use of insulin which will cause an increase in blood calcium levels (hyperglycemia). One of the plants in Indonesia that can be utilized is mahogany seeds (*Swietenia mahagoni L.*). Mahogany seeds (*Swietenia mahagoni L.*) reported by the researchers have a pharmacological effect on anti-diabetic. From mahogany seeds, there are flavonoid compounds called swietenin. Swietenin function as an anti-oxidant in repairing pancreatic tissue cells and can increase the amount of insulin in the body.

**Purpose:** The purpose of study is investigate the effect of mahogany seeds (*Swietenia mahagony L.*) ethanol 96% extract to reduce blood glucose level of alloxan reduced mice (*Mus musculus*)

**Objective:** This study was an experimental study with a "pre and post test control group design". The sample used was 36 male white. Mice were divided into 6 treatment groups consisting of normal groups, distilled water solution as negative control, metformin 500mg / kg as positive control and ethanol extract 96% mahogany seeds (*Swietenia mahagony L.*) with various doses of 70 mg/kg/day, 140 mg/kg/day, 280 mg/kg/day for 14 days. Then on day 14, the measurement of blood glucose in mice using Blood Glucose Test Meter.

**Research method:** The results of statistical test, mice given ethanol extract 96% mahogany seeds (*Swietenia mahagoni L.*) various doses showed a significant decrease in blood sugar levels ( $p < 0.05$ ). A dose of 280 mg / kg shows the best result in a decrease in blood sugar levels from various doses.

**Result:** Ethanol extract 96% of mahogany seeds (*Swietenia mahagoni L.*) can reduce blood glucose levels in mice induced by alloxan.

**Keywords:** *diabetes mellitus, mahogany seed extract, hyperglycemic, swietenin.*



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## ASSESSMENT OF *hOGG1* GENETIC POLYMORPHISM (rs1052133) AND DNA DAMAGE IN RADIATION-EXPOSED WORKERS

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### Abstract

**Purpose:** The purpose of this study was to assess the effect of radiation exposure, human 8-oxoguanine DNA N-glycosylase-1 (*hOGG1*) exon 7 genetic polymorphism, and confounding factors on DNA damage response.

**Research Methodology:** Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) and alkaline Comet assay.

**Results:** The results indicated that the DNA damage response was not significantly higher in the exposed workers than in controls ( $22.55 \pm 6.02$  versus  $21.72 \pm 7.14$ ;  $P=0.58$ ). The time of exposure has a significantly negative correlation with comet tail length value among radiation workers. Besides, it was found that the DNA damage response was strongly associated with age and time of exposure with a decrease of 0.6 percent and 0.58 percent, respectively. The single-nucleotide polymorphism of *hOGG1* exon 7 demonstrated no association with the extent of DNA damage in radiation-exposed workers.

**Limitations:** The relatively small sample size must be considered as a limitation of the study. The data may be influenced by the population background and radiotherapy treatments.

**Contribution:** This study could be useful in biomedical sciences and radiation safety fields, particularly in hospitals and work areas where nuclear technology-based applications are used.

**Keywords:** DNA damage, Radiation-exposed workers, Genetic polymorphism, *hOGG1* exon 7, Alkaline comet assay



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## MORBIDITY ANALYSIS BASED ON AREA

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### Abstract

**Purpose:** The purpose of this study was to determine the distribution pattern of morbidity and its determinants.

**Research Methodology:** The method used in this study is spatial analysis, the data can be updated through enumerators of health workers.

**Result:** The distribution pattern of morbidity in Pringsewu District is almost evenly distributed in each sub-district, the pattern occurs in the area with number of densely populated settlements and in areas that have rice fields. Then the pattern of distribution of the relationship between cases and determinants is the same as the pattern of morbidity, the location of health facilities organized by the local government, this condition is very reasonable because the surrounding community is currently more comfortable to be treated in the main and auxiliary health center services.

**Limitation:** Coordinate data using applications found on Android

**Contribution:** Where this study can be useful for Pringsewu Regency in the field of public health sciences.

**Keywords:** *spatial, morbidity, sub-district*





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## RELATIONSHIP OF CD44 PROTEIN EXPRESSION WITH CLINICOPATHOLOGICAL ASPECT OF BREAST CANCER PATIENT IN BALI

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### Abstract

**Purpose:** This study aims to determine the expression of CD44 in breast cancer and its relationship with clinicopathological aspect of breast cancer patients in Bali.

**Research Methodology:** This study was conducted in the Biochemistry Laboratory, Medical Faculty of Udayana University with 46 samples. ELISA examination using blood serum to determine the expression of CD44. All variables will be analyzed univariately and bivariate using SPSS version 25.0, with p value <0.05 was considered significant.

**Results:** The study showed that the age of breast cancer patients was 38-86 years, with the majority of the parity being less than three. The mean CD44 expression in all samples was  $1177.83 \pm 268.47$  ng / mL, with a median value of 81.42 ng / mL. There was a significant relationship between CD44 expression and tumor size ( $p = 0.012$ ), stage ( $p = 0.026$ ), menstrual status ( $p = 0.037$ ), and primary tumor quadrant ( $p = 0.002$ ) in breast cancer patients.

**Limitations:** the sample size is relatively small, which may lead to bias, but this sample size has been adjusted to the sample calculation

**Contribution:** This research will be useful in Bali as an examination that may be used as a prognostic factor in breast cancer patients

**Keywords:** Bali, breast cancer, CD44, stage, tumor size



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## ANALYSIS OF THE TOXICITY OF BOVINE SERUM ALBUMIN NANOPARTICLE BASED CANCER DRUGS

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### Abstract

Cancer is a non-communicable disease that causes morbidity and mortality in all regions of the world. Basic Health Research Data on the prevalence of cancer in Indonesia shows an increase from 1.4 per 1,000 population in 2013 to 1.79 per 1,000 population in 2018. Cancer treatment is important in reducing the number of deaths (mortality) due to cancer sufferers. One of the cancer treatments is using the chemotherapy drug cisplatin. Cisplatin given intravenously as a short-term infusion in a saline solution for the treatment of malignant cancer. The administration of cisplatin in clinical cancer treatment is due to its toxic side effects which depend on the drug dose.

**Purpose:** The purpose of this study was to determine the level of toxicity of herbal cancer drugs and cisplatin-based chemotherapy drugs combined with Bovine Serum Albumin (BSA) nanoparticles

**Research Methodology:** This research is an experimental research. Toxicity test was carried out using the Brine Shrimp Lethality Test (BSLT) method with various concentrations of 1 ppm, 10 ppm and 100 ppm, while the controls used ethanol and DMSO

**Results:** Toxicity test used *Artemia salina* shrimp larvae. The toxic effect was identified by the percentage of mortality of shrimp larvae using probit analysis ( $LC_{50}$ ). There are three categories, namely toxic, highly toxic, and non-toxic. The toxicity level of the NP-BSA with the  $LC_{50}$  value was 69.23 ppm. The higher the concentration, the higher the resulting toxicity.

**Limitations:** Write a brief limitation of the study

**Contribution:** Where this study can be useful? Give the name of area, disciplines, etc.

**Keywords:** *Drug toxicity, Cisplatin, BSA Nanoparticles*



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## PRELIMINARY STUDY : THE POTENCY OF VEGETABLE COOKING OIL AS ALTERNATIVE CLEARING AGENT FOR HISTOLOGICAL PREPARATION

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### Abstract

**Purpose:** This study aims to explore the potency of vegetable cooking oil as alternative clearing agent for histological preparation.

**Research Methodology:** Two different kind of formaline fixed tissue was taken from 3 rats. Each sample of tissue was cut into approximately 1 cm which were subjected for dehydration in differential alcohol gradients. Later, each cutted tissue was kept in 4 different solution; xylene as original clearing agent, palm oil, corn oil, and coconut oil. Further routine steps of processing, sectioning and staining were done. Those were assessed for gross tissue specimen assessment, staining quality and cellular architecture. Comparison was done among them.

**Results:** This study shows a good overall staining results. Those also shows a good and clear distinct nuclear-cytoplasm and good staining quality which almost equally compared to xylene. The staining intensity also shows a really good result both in nucleus and cytoplasm. Hence, it concludes that all three vegetable cooking oils can be used as alternative clearing agents in histological preparations

**Limitations:** This study is lack of evaluation of stability and longevity of staining after some periods.

**Contribution:** This study is potential to be used in the field of anatomy, histology, anatomical pathology and other fields related to histological preparation

**Keywords:** xylene, cooking oil, clearing agent, histological preparation



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## SOURSOP LEAF ENDOPHYTIC FUNGI (PHOMOPSIS SP.): ACUTE TOXICITY TEST FROM ETHYL ACETATE EXTRACT OF IN RATS

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### Abstract

**Purpose:** This research aims to determine the acute toxicity of ethyl acetate extract from soursop leaf endophytic fungi (*Phomopsis sp*) so that it can be referred for future research.

**Research Methodology:** The research used 30 Sprague Dawley rats divided into 6 groups. Each group was administered with 0, 5, 50, 300, 2000, and 5000 mg/kg bodyweight (bw) of extract in water, respectively.

**Results:** Lethal dose 50% was obtained at 4198.564 mg/kg bw. Blood creatinine level, SGPT, and SGOT value were all within normal concentration in rats, those were 0.443-0.408, 59.4-83.4, and 161.0-222.8, respectively.

**Limitations:** This study only knows the harmless dose at the acute level, so it needs further research if it is to be used in patients.

**Contribution:** Can be used in all places for those who suffer from breast cancer.

**Keywords:** *LD50, soursop leaf endophytic fungus, Phomopsis sp., acute toxicity.*



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## COMPARISON OF ACCURACY OF THE USE OF CARCINOMA EMBRYONIC ANTIGEN (CEA) AND LACTATE DEHYDROGENASE LEVEL TO PREDICT COLORECTAL CARCINOMA RECURRENCY IN ABDUL MOELOEK HOSPITAL BANDAR LAMPUNG

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### Abstract

**Background :** Colorectal cancer is a malignancy that originates from the colon tissue, which consists of the colon and rectum. The incidence of colorectal cancer worldwide is the third largest and is the fourth leading cause of death, accounting for 11% of all cancers in human. In general, the development of colorectal cancer is an interaction between environmental factors and genetic factors. Environmental factors are divided into modifiable factors and non-modifiable factors. The recurrence rate of colorectal cancer is still very high, so it requires a precise and accurate early detection of the recurrency.

**Method :** Comparing the accuracy of the carcinoma embryonic antigen (CEA) tumor marker examination with Lactate Dehydrogenase (LDH) levels to detect colorectal cancer recurrency by using Spearman correlation analysis between two variables at Abdul Moeloek Hospital Bandar Lampung during the study period of October 2019 to September 2020.

**Results :** Of the 21 samples obtained, 11 samples did not experience any recurrency and the other 10 samples had colorectal cancer recurrence. The mean CEA level was 139.64 U / mL and the mean LDH level was 353.10 U / L. The relationship between CEA levels and colorectal cancer recurrence was significant with a correlation coefficient of 0.663, while the relationship between LDH levels and colorectal cancer recurrence was insignificant with a correlation coefficient of 0.213.

**Conclusion :** CEA is more accurate than LDH to predict the recurrency of colorectal cancer, so that in clinical practice CEA is better used to predict colorectal cancer recurrence.

**Keywords :** CEA, Colorectal cancer recurrency, LDH

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## CASE REPORT: CHRONIC THOPACEUS GOUT WITH CHRONIC KIDNEY DISEASEFIRST

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### Abstract

Gout arthritis is a group of diseases that result from deposits of monosodium urate in the tissues. These deposits come from extracellular fluids that have been supersaturated from the end product of purine metabolism, namely uric acid. Increased levels of uric acid in serum will form uric acid crystals in the kidneys and can settle in the medullary of the kidneys, tubules, or collecting system which will eventually lead to acute or chronic renal failure. An 80 yrs old male came to the hospitals with a complaint of pain in a lump on the right knee as big as a baseball since a month ago. Physical examination revealed tophi in both the elbow and knee joints and all of the fingers. Investigation showed an increase in blood urea and creatinine. Hyperuricemia should be treated early to prevent chronic gout arthritis and uric acid nephropathy.

**Keywords:** *gout arthritis, chronic kidney disease, hyperuricemia*



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# ANTIOXIDANT POTENTIAL OF KERSEN LEAVES STEEPING (MUNTINGIA CALABURA L.) AGAINST ENDOGENOUS ENZYME SUPEROXIDE DISMUTASE (SOD) LEVELS IN DIABETES MELLITUS RATS

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## Abstract

**Purpose:** This study was investigated the effectiveness of steeping cherry leaves (*Muntingia calabura* L.) in increasing levels of the enzyme SOD in Diabetes Mellitus Rats.

**Research Methodology:** The subjects of this study were 36 Sprague Dawley rats divided into 6 groups, namely group 1 (normal), group 2 (negative control), group 3 (positive control), group 4 (steeping cherry leaves 250 mg/200 gr BW), group 5 (steeping kersen leaves 500 mg / 200 gr BW), and group 6 (steeping cherry leaves 750 mg/200 gr BW). Groups 2-6 were induced with streptozotocin at a dose of 65 mg/kg BW and nicotinamide 230 mg / Kg BW for 5 days until the rats became Diabetes Mellitus (Fasting Blood Sugar > 135 mg/dl) and then treated for 14 days. The level of GDP was collected using the enzymatic GOD-PAP method, while SOD used the BioVision Kit. Data were analyzed using a paired t-test and One Way Anova test.

**Results:** Statistical test results with paired t-tests showed significant differences in levels of GDP before and after treatment ( $p = 0.0001$ ). In the One Way Anova test, there was a different mean of SOD levels in each group ( $p = 0.0001$ ). The most effective infusion to increase SOD levels is a dose of 750 mg / 200 gr BW.

**Limitations:** This study was not investigated which type of antioxidant in kersen leaves had the most effect on SOD

**Contribution:** The development of science is expected to provide a scientific reference for further research on the effectiveness of steeping kersen leaves (*Muntingia calabura* L.) in increasing the SOD enzyme in DM rats.

**Keywords:** oxidative stress, kersen, diabetes, superoxide dismutase



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## FIBRINOLYTIC THERAPY FOR ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION DURING THE COVID-19 PANDEMIC: A SINGLE-CENTER EXPERIENCE

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### Abstract

**Purpose:** Coronavirus Disease 2019 (COVID-19) is a rapidly expanding global pandemic and dramatically altered the delivery of reperfusion therapy for patients with ST-segment–elevation myocardial infarction (STEMI). The aim of this study is to analysis role of fibrinolytic therapy in STEMI patients during COVID-19 Pandemic.

**Research Methodology:** This is a single-centre with prospective study in Dr. M. Djamil General Hospital (Padang, Indonesia), included all patients presenting with suspected COVID 19 with STEMI followed fibrinolytic therapy between 1 April to 30 may 2020 (during COVID-19 pandemic) and compare same periode in 2019. The primary outcome will be in- hospital major adverse cardiovascular events (MACE) defined as as composite of all-cause mortality, stroke, recurrent MI, unstable angina, heart failure, cardiogenic shock and or cardiac arrest. Secondary outcomes were MACE within 3 months follow-up.

**Results:** A total of 20 patients were included in the final analysis. Mean age was  $56.70 \pm 8.74$  years. Male were 75%, hypertensive 60%, smoker 55%, diabetes mellitus 45%. During the pandemic period from April to May 2020, there was an approximately 64% drop STEMI cases compared to the same period in 2019. There were 15 patients (75%) who had failed. In primary outcome, there is no incidence of in-hospital MACE. Secondary outcome were reported 2 patient with MACE incidence within 3 months follow-up.

**Limitations:** our study was a retrospective study with small sample

**Contribution:** Cardiology and vascular medicine

**Keywords:** Fibrinolytic, STEMI, covid-19, MACE





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## KUSEHAT: IMMUNOMODULATORY COOKIES

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### Abstract

**Purpose:** The research objective was to make a product in the form of a synbiotic cookie from local ingredients and to analyze its content and level of preferences.

**Research Methodology:** This study used a completely randomized design with ginger levels respectively 5%, 2.5%, 5%, 7.5%, 10% and tempeh levels of 5%, 10%, 15% and 20% in each treatment. From the results of the organoleptic-hedonic test using general linear analysis of the multivariates model, it showed that there was a significant difference ( $p < 0.05$ ) in terms of the aroma and color of synbiotic cookies.

**Results:** The level of community preference shows the 4th most popular treatment with the highest nutritional content. The interaction of the microbiota in product with immune cells can train naïve T cells to increase immunity.

**Limitations:** Test the nutritional content of KUSEHAT products in the laboratory to determine the accuracy of nutrition.

**Contribution:** Consumption of product innovation is expected to be a step to optimize the use of local resources as a preventive effort in dealing with the Covid-19 pandemic in the new normal era through its mechanism as an immunomodulator.

**Keywords:** *immunomodulators, ginger, cookies, synbiotics, tempeh.*



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## THE EFFECT OF SOCIO-ECONOMIC POSITION ON CHILDHOOD TUBERCULOSIS

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### Abstract

**Purpose:** This research aims to study effect of socio-economic positions to childhood tuberculosis.

**Research Methodology:** This research is a case control study carried out in six primary health centers which have the highest cases of childhood tuberculosis in Bandar Lampung, Indonesia. Samples of this research consisted of case sample and control sample. The case samples were all children with tuberculosis in the research study, which were 73 children and the control samples were 73 children who did not suffer from tuberculosis. Data collection was carried out by interview based on questionnaires, which then analyzed using chi square.

**Results:** The results show that low socio-economic positions increase the risk of childhood tuberculosis in children. Furthermore, the mechanism included the presence of household contacts as well as low tuberculosis transmission knowledge.

**Limitations:** The study site are areas with high childhood tuberculosis incidence, therefore generalization only appropriate for areas with similar condition

**Contribution:** Tuberculosis control program

**Keywords:** *childhood tuberculosis, socio-economic positions, effect*



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## THE INFLUENCING SOCIAL CAPITAL TO STRENGTHENING FAMILY ACTION PLAN AS PREPAREDNESS IN FACING PANDEMIC COVID-19 IN MALANG CITY

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### Abstract

The disaster arises when threats meet vulnerable people who have low ability or do not have the ability to respond to the threat. Preparedness is the most critical phase in the range of disaster management, the inadequacy of disaster preparedness planning has created a critical situation, increasing the suffering of survivors and loss of life. The purpose of this study is to analyse social capital factors that most influence the family preparedness to face the impact of pandemic covid-19 as disaster in Malang City. This research uses descriptive analytic design with Cross sectional study approach. Respondent in this research is 112 Head of Family (KK) by using systematic random sampling. This research was conducted in two sub-districts namely Sukun and Dinoyo. Chi-square test results show that there is a social capital relationship ( $p = 0.000$ ) towards family preparedness to face the impact of disaster in Malang city. Logistic regression test results show that social capital has the strongest strength of relationship ( $p = 0.024$ , OR = 2.75) than other factors. This result shows there is a positive relationship between family social capital in facing pandemic covid-19 disaster impact in Malang City. This means that good social capital will increase the family preparedness in the face of disaster impact. The results of this study are expected to be the basis and reference materials for disaster nursing services as well as the basis for the local government of Malang to encourage the positive attitude of the family towards preparedness by utilizing social capital as an important component and utilize social cohesion and social network in disaster planning and management, will prepare for disaster. Eliminate the obstacles of disaster preparedness such as negative attitudes toward preparedness, lack of participation, unrealistic risk assessment with disaster preparedness training and campaigns during pandemic Covid-19.

**Keywords :** *pandemic covid-19, social capital, family preparedness, disaster*



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## EVALUATION OF SILODOSIN VERSUS TAMSULOSIN IN BENIGN PROSTATIC HYPERPLASIA TREATMENT : A CROSS SECTIONAL STUDY

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### Abstract

#### Objectives :

Benign prostatic hyperplasia (BPH)-associated lower urinary tract symptoms (LUTS) are highly prevalent in older men. Medical therapy is the first-line treatment for LUTS due to BPH. Selective  $\alpha_1$ -adrenergic antagonists are now first-line drugs in the medical management of BPH. We conducted a cross sectional study with consecutive sampling to compare the effectiveness and safety of the new  $\alpha_1$ -blocker silodosin versus the established drug tamsulosin in symptomatic BPH.

#### Materials and Methods :

Fifty subjects, male BPH patients, were divided into two unpaired groups on the basis of International Prostate Symptom Score (IPSS). Subjects were selected in 1:1 ratio to receive either tamsulosin 0.4 mg controlled release or silodosin 8 mg once daily after dinner for 3 months. Primary outcome measure was reduction in IPSS mean value.

#### Results :

Data of 50 subjects – 25 on silodosin and 25 on tamsulosin were analyzed. Final IPSS at 3 months was significantly less than baseline for both groups. However, groups remained comparable in terms of IPSS at all visits. Final IPSS results using the Mann Whitney U test showed p value 0.061, there was no significant difference in silodosin compared with tamsulosin, but there was a difference in the mean value of IPSS before and after taking the drug for 3 months, 2.32 decreased in the silodosin group and 2.04 decreased in the tamsulosin group. 3 subjects in the silodosin group had a side effect ejaculation retrograd. 4 subjects from the tamsulosin group had a side effects postural hypotension.

#### Conclusions :

Silodosin is comparable to tamsulosin in the treatment of BPH. Sexual satisfaction was significantly influenced by drug selection.

**Keywords :** Benign prostatic hyperplasia, silodosin, tamsulosin



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## SENGGANI LEAF (*MELASTOMA MALABATHRICUM* L) POTENTIAL IN REGENERATION OF PANCREATIC BETA CELLS IN PEOPLE WITH DIABETES MELITUS

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### **Abstract**

The aim of article is to review the potential of senggani leafs as an antidiabetic by analyzing the reduction in blood glucose levels and the ability to repair pancreatic beta cells. This research was conducted online through library studies and database-based in silico methods. The literature that used are come from several websites of well-known journals on the internet (Science Direct, Google scholar, NCBI, and so on). Furthermore, a simulation of molecular docking of active compounds of senggani leaves on the target receptor enzyme DPP-4 using autodock vina, Ligplot++, and discovery studio visualizer. analysis of the toxicity of active compounds of senggani leaves on the website admetsar. Studies from literatures show that senggani leaves have the ability to reduce blood glucose levels and regenerate pancreatic beta cells through the DPP-4 enzyme inhibition mechanism supported by molecular docking simulation data. There are 13 active compounds that have a binding site similarity above 50% with the vildagliptin as a control compound. Among them, Rutin has the highest binding site similarity (100%). Based on in vivo research and toxicity analysis on the admetsar database, senggani leaf extract and active substances of senggani leaves have low toxicity, making it safe to be used as antidiabetic herbal preparations.

**Keywords:** *DPP-4, Senggani, Molecular docking, toxicity*



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## GREEN TEA BENEFITS FOR REPAIRING HIPPOCAMPUS

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### Abstract

**Background:** Chronic alcohol consumption over a period of years and consumption of more than 2,5 liter/day cause damage to hippocampus and excess neuroexcitation. Many research say, green tea (*Camellia sinensis*) contains antioxidant compounds can be giving that effect protective to organ's damage induced by ethanol. This research aims to determine the effect of green tea extract on histopathology of white rat hippocampus *Sprague dawley* strain induced by ethanol. **Method:** This research used a purely experimental methods with a *post-test only control group design*, with a sample of 30 rats divided into 5 groups, as follow negative control group (K1) given aquadest, positive control group (K2) given 20% ethanol 2 mL/day peroral, treatment group (P1, P2 and P3) given 20% ethanol 2 mL/day peroral followed by green tea extract with doses 0.216 gr/day, 0.432 gr/day and 0,864 gr/day peroral for 14 days. Then, hippocampus of the rat is taken for microscopic examination. **Result:** The result showed, there is an effect of giving green tea extract to treatment group (P1, P2 and P3), but treatment group 1 (P1) not significant mean differences compared treatment group 2 and 3 (P2 and P3). **Conclusion:** There is an effect of giving green tea extract (*Camellia sinensis*) to the histopathology of white rat hippocampus induced by ethanol.

Keywords: ethanol, green tea extract, antioxidants, hippocampus

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## HOMOLOGY MODELING OF NS5-RDRP AND EXPRESSION OF RECOMBINANT NS5-RDRP BASED ON INDONESIA LOCAL-STRAIN DENGUE VIRUS FOR ANTIDENGUE DRUG DEVELOPMENT

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### Abstract

**Purpose:** The objective of this study is to isolate the RdRp gene from Indonesia local dengue virus RNA sample, to determine the serotype of the local DENV strain by homology modelling with protein database, and to express recombinant RdRp protein based on isolated RdRp gene sequence that further optimized with *E. coli* BL21 (DE3) preference codon.

**Research Methodology:** RT-PCR, nested PCR, homology modelling, and recombinant protein expression in *E. coli*

**Results:** RdRp gene that belong to NS5 protein part of DENV was successfully isolated and sequenced from DENV RNA samples obtained from Hasan Sadikin Hospital, Bandung. Based on serotyping result and homology modelling, the serotype of DENV from samples was serotype-3. RdRp synthetic gene was synthesized based on the sequence of isolated RdRp gene then was inserted into pET28a(+) plasmid and successfully inserted into *E. coli* BL21 (DE3) as host cell. Recombinant RdRp was expressed after induction with IPTG mostly in the insoluble fraction with molecular weight 72 kDa.

**Limitations:** RdRp gene was isolated from samples that were provided by Hasan Sadikin Hospital, Bandung.

**Contribution:** Development of universal antidengue drug

**Keywords:** Homology Modeling, Dengue virus (DENV), Nonstructural Protein 5 (NS5), RNA dependent RNA polymerase (RdRp), recombinant protein



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## THE POTENCY OF NUTGRASS RHIZOMES (*CYPERUS ROTUNDUS L.*) EXTRACT AS ANTIOXIDANT AGENT

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### Abstract

**Purpose:** This study aims to identify the potency of antioxidant agent in nutgrass rhizomes (*Cyperus rotundus L.*) extract.

**Research Methodology:** Sample of nutgrass rhizomes were taken from Lampung Province and was extracted with ethanol and chloroform solvent. Later, those extracts were analyzed by Gas Chromatography Mass Spectrometry (GCMS) and the chemical compound identified was compared to literature to know the potency of the antioxidant agent.

**Results:** This study shows that in the nut grass root extract using ethanol solvent, there were 116 compounds with 6 main compounds, meanwhile in the nut grass rhizomes extract using chloroform solvent, of 142 compounds, there were 11 main compounds. Of the 6 main compounds of ethanol extract and 11 main compounds of chloroform extract of nut grass rhizomes, which is proven to have potential as an antioxidant agent is  $\alpha$ -Copaene.

**Limitations:** This study is limited to the identification of potential antioxidant activity of the main compound.

**Contribution:** This study is potential to be used in the field of herbal medicine and other fields related to traditional medicinal plants.

**Keywords:** antioxidant, nutgrass rhizomes extract, GCMS





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## ALANINE AMINOTRANSFERASE BASED BIOSENSORS AS A DETECTOR FOR LIVER FUNCTION: NARRATIVE REVIEW

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### Abstract

**Purpose:** Early detection of liver damage needs to be done considering that the liver is the center of metabolism in the body. Therefore, it is necessary to have an early detection method for liver damage that is effective and efficient.

**Research Methodology:** This literature study-based research was conducted from August 10, 2020, to September 30, 2020. Literature review and analysis took place in each house with a location in Cianjur, West Java; Depok, West Java; and Purworejo, Central Java. The discussion process was carried out via video conference using the Google Meet application also connected to the WhatsApp Group. Literature reviews are conducted through national and international journals on Google Scholar and PubMed websites.

**Results:** The invention of the biosensor method uses an SPCE electrode with the addition of a poly (4-aminophenol) membrane to form a cross-link in the pyruvate oxidase enzyme immobilization that is specific to pyruvate.

**Limitations:** The brief limits of this literature are on the electrodes and enzymes used in biosensors.

**Contribution:** This study is useful in the disciplines of medical technology, physics, biology, and biochemistry.

**Keywords:** *Alanine Aminotransferase (ALT), Biosensor, Electrode, Liver, Pyruvate Oxidase.*



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## CYTOTOXIC ACTIVITY AND INDUCTION OF DNA FRAGMENTATION BY CHLOROFORM EXTRACT OF AGARWOOD LEAVES (*GYRINOPS VERSTEEGII* (GILG.) DOMKE AND *AQUILARIA MALACCENSIS* LAMK.) ON BREAST CANCER T47D CELL LINES

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### Abstract

**Purpose:** This study aims to determine cytotoxic activity and the effectiveness chloroform extract of agarwood leaves in inducing DNA fragmentation on T47D cells.

**Research Methodology:** The research was carried out by preparation and extraction agarwood leaves of *A. malaccensis* and *G. verstegii* from Bogor and Mataram, cell culture, cytotoxic assay, extract formulation, extract treatment on T47D cells, DNA isolation, and DNA fragmentation analysis. The extract treatment in T47D cells was carried out with time variations for 6, 24, 48, and 72 hours. Data analysis was carried out quantitatively by measure IC50 and qualitatively by looking at DNA fragmentation based on gel electrophoresis.

**Results:** The results obtained from this study show that mixed extract of *A. malaccensis* and *G. verstegii* Bogor had highest cytotoxic activity with IC50 141.47 µg/mL. All types of agarwood leaves chloroform extract can induce DNA fragmentation starting at 6 hours treatment.

**Limitations:** Different research methods are needed to confirm apoptosis and validation the significance of results through the comet assay and qPCR.

**Contribution:** This research can contribute in the fields of molecular biology, cell biology, biotechnology, biochemistry, and oncology.

**Keywords:** *Aquilaria malaccensis*, *Gyrinops verstegii*, cytotoxic activity, DNA fragmentation, T47D cell lines.



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## PREMATURE RUPTURE OF MEMBRANE (PROM) WITH GASTROSCHISIS: A CASE REPORT

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### Abstract

**Introduction:** Gastroschisis is an abdominal wall defect in fetus. The incidence is about 1 per 2000 to 4000 pregnancies live births, with a male preponderance. A gastroschisis diagnosis can be achieved in the prenatal stage by means of an ultrasonography, which has high sensitivity and specificity for its detection. Detecting the disease is possible since week 12.

**Case Illustration:** Mrs. N, 27 years old, G1P0A0 first stage of labour with premature rupture of membranes (PROM) and breech presentation. Transabdominal ultrasound shows defects in the paraumbilical abdominal wall with the intestine floating freely in the amniotic fluid without a membrane that covers it. Delivered abdominal by caesarean section. A male baby with gastroschisis was delivered, the baby is not cried immediately the APGAR Score was 2/5, with 48 cm of body length and baby weight was 2,3 kg.

**Conclusion:** Gastroschisis is a congenital abnormality that can be detected since pregnancy. Obstetric delivery will consider from the maternal and fetal conditions. Good decision on the treatment encourage the patient's condition and prevent the complication. An appropriate treatment affects the morbidity and mortality rates for patients with gastroschisis.

**Keywords:** *gastroschisis, premature rupture of membrane (PROM)*



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## DETECTION OF LEPTOSURIA IN SANITARY WORKERS (A PILOT STUDY)

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### Abstract

**Purpose:** Leptospirosis is zoonotic disease, caused by spirochete-bacteria *Leptospira*, transmitted by excreted urine of rodent into the environment. Sanitary workers had high-risk of *Leptospira* infection due to frequent exposure to contaminated environment, which could cause asymptomatic long-term leptosuria and severe complications, such as chronic kidney disease. The aim of this study was to find long-term leptosuria in sanitary workers, using PCR method, targeting specific genes of *Leptospira*.

**Research Methodology:** Urine samples and questionnaires were obtained from fifteen sanitary workers. Samples were cultured in EMJH-broth with addition of 5-fluorouracil, incubated for 3 months and observed for growth of bacteria using dark-field microscope. Identification of bacteria was performed by PCR, targeting *lipL32*, *rfl*, *flaB*, *ompL1* genes, followed by sequencing using Sanger method, alignment using ClustalW and BLAST.

**Results:** The questionnaires result showed that all of sanitary workers had used personal protection during working, however they were still exposed to the environment. Culture result showed growth in four samples, and analysis by PCR only showed *rfl*-PCR had expected amplicon. However sequencing result showed that the amplicon had 96% homogeneity to *Pseudomonas stutzeri*.

**Limitations:** The samples was small due to the pilot study

**Contribution:** This study could be useful for *Leptospira* detection in community.

**Keywords:** *Leptospirosis*, *urine*, *workers*



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## CEFTRIAXON-RESISTANCE OF NEISSERIA GONORRHEAE STRAINS IN MEDAN, INDONESIA

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### Abstract

**Purpose:** *Neisseria gonorrhoeae* (*N. gonorrhoeae*) causes urogenital infection called as gonorrhea. The infection is often asymptomatic in women. High-risk populations such as sex workers and antimicrobial treatment, contribute to its spread. WHO has characterized 14 *N. gonorrhoeae* strains worldwide. This study aims to determine *N. gonorrhoeae* strains found among women commercial sex workers in Medan, Indonesia and their potential to antibiotic resistance.

**Research Methodology:** From 60 women commercial sex workers, it was identified 34 samples, using conventional PCR, positive for *N. gonorrhoeae*. To confirm that those samples were *N. gonorrhoeae*, 5 of them were examined for DNA sequencing and similarity to *N. gonorrhoeae* using blastx.

**Results:** Samples were identified as *N. gonorrhoeae* SS3160 strain (n=4) and WHO Y strain (n=1). The naturally occurring cryptic plasmid SS3160 of *N. gonorrhoeae* is 4,207 base pairs long and is found in about 91% of gonococcal strains while strain WHO Y is 4,153 bp long and is found in about 93%. *N. gonorrhoeae* strain SS3160 and WHO Y were present in Medan. WHO Y strain is found, and, therefore possible antibiotic resistance presents in Medan.

**Limitations:** This study has limited number of sample size.

**Contribution:** Gonorrhea as communicable disease may spread widely.

**Keywords:** *antibiotic resistance, Neisseria gonorrhoeae, sex workers, strain*



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## INCOMPLETE ABORTION TREATMENT IN 15<sup>TH</sup> WEEKS GESTATION: A CASE REPORT

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### Abstract

**Introduction:** An incomplete abortion is a subtype of spontaneous abortion along with inevitable and missed abortion. Globally, 303.000 maternal deaths occurred in 2015, with 11% of maternal deaths and a large number of morbidities attributable to consequences of unsafe abortion. Complications from unsafe abortions continue to be a major contributor to the global maternal mortality ratio. This article will focus on incomplete abortion and the way it treated, which is described as partial loss of products of conception before 20 weeks of pregnancy. Patients will present with vaginal bleeding with lower abdominal and/or pain and cramping.

**Case Illustration:** Patient Mrs. RO, 34 years old, 15 weeks gestation (G4P2A1) came to the referral hospital on October 4, 2020 with complaints of blackish red blood, clots, clots like chicken hearts from the birth canal since 2 hours before hospitalized.

**Conclusion:** *Incomplete abortion can cause hypovolemic shock due to active bleeding. So, it should be consider for general conditions and to treat hemodynamic disorders. In women with heavy bleeding, good decision on the treatment prepare immediately evacuate with curretage, uterine contractions can go well and bleeding can stop.*

**Keyword:** Curretage, Incomplete abortion, pregnancy.



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## VIRTUAL SCREENING OF NATURAL COMPOUNDS AGAINST SIX PROTEIN RECEPTORS CODED BY THE SARS-COV-2 GENOME

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### Abstract

**Purpose:** This study aims to obtain the potential active compounds from natural products as COVID-19 drugs candidate based on the lowest energy value generated from virtual screening.

**Research Methodology:** A study on the development of inhibitors for this virus is carried out using virtual screening and molecular docking simulation methods. Six essential proteins that play a role in virus development such as 3CL-Pro, PL-Pro, Helicase, N, E, and M protein were used as protein targets. Autodock Vina, Autodock 4.2, and PSOVina were used in this study.

**Result:** Based on the value of free binding energy and protein-ligand interactions, the candidate compounds with the best value are obtained for each target protein. Corilagin (-14,42 kcal/mol), Scutellarein 7-rutinoside (-13,2 kcal/mol), Genistein 7-O-glucuronide (-10,52 kcal/mol), Biflavonoid-flavone base + 3O (-11,88 and -9,61 kcal/mol), and Enoxolone (-6,96 kcal/mol) has the best free energy value at each protein target indicating that the compound has the potential as a viral protein inhibitor for further investigation.

**Limitation:** This research is limited to computer simulations where the results obtained are still a prediction. Further research is needed to test the activity of the selected ligand which has the lowest free energy value of the six target proteins.

**Contribution:** In the medical field, this study provides recommendations for active compounds from natural products that have the potential as a COVID-19 drug for further investigation

**Keywords:** *Virtual Screening, Molecular Docking, Sars-CoV-2, COVID-19, Natural Compound*



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## THE EFFECT OF JOGGING EXERCISES ON STUDENTS MUSCLE MASS USING BIOELECTRICAL IMPEDANCE ANALYSIS

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### Abstract

**Comparison of Hand-Held Strength Between Dominant and Non-Dominant Hands in the Elderly Population.** Background: Students have busy activities so often forget to do exercises that cause declining body health. Jogging exercises which are types of aerobic exercise are practical exercises that can improve muscle mass of the body. Objective: The purpose of this study is to determine differences in muscle mass of students who did jogging. Methods: RCT research with 24 students of the Faculty of Medicine, University of Lampung which was divided into a control group and an intervention group. The intervention group had a jogging exercise dose: frequency 2 times a week, intensity 40% -90% HRR, time 30 minutes, aerobic type. Results .

**Keywords:** Aerobics, Exercise, Jogging, Muscle Mass





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## VARIATIONS IN INCIDENCE REPORTS ON DRUG SERVICES TO IMPROVE SERVICE QUALITY

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### Abstract

**Purpose:** Monitoring the management of drug services, including incident reports as evidence of the application of patient safety culture. This study conducted a classification of variations in incident report on drug services as an effort to improve the quality and safety of patients in the hospital.

**Method:** A quantitative descriptive study with a case study tradition. Retrieval of data using documentation study techniques in the 2016 incident report.

**Results:** Reports of incidents in the drug services group to watch out for were 16.6% (n = 35) of the total that occurred in 2016. There were 11 variations of incident reports that occurred in the drug services group. Variations in reported incidents of drug incompatibility were found to dominate from the other variations, which were as many as 28.6% (n = 10). Ineffective communication between officers, unclear command writing, and lack of supervision are the causes of this incident.

**Limitations:** Discusses incident reports specific to drug service cases

**Contribution:** This study can be useful to provide an overview of the benefits of drug service reports in hospitals.

**Keywords:** Drug Services, Incidence Reports, Quality.



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## MEDIA EXPOSURE RELATIONSHIP WITH COVID-19 PREVENTION BEHAVIOR

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### Abstract

**Purpose:** *The purpose of this study is to explain how the exposure of the media in the community to COVID-19 prevention behavior*

**Research Methodology:** The research design used is quantitative research with cross sectional approach, which is to analyze the relationship of an effect and variables or characteristics that are found in the community at a certain time with a sampling method in the form of Simple Random Sampling. The population and sample in this study are communities consisting of adults and adolescents in several areas using instruments in the form of a Google Form questionnaire.

**Results:** The results showed that the p-value = 0.002, then Ho's decision was rejected ( $p < 0.05$ ) meaning there was a relationship between media exposure and Covid-19 preventive behavior. The presence of the media will greatly assist the community in increasing their knowledge about Covid-19 prevention.

**Limitations:** this study lasted for 3 months

**Contribution:** the results of this research can be useful for Indonesian people in general

**Keywords:** *Covid-19, Comedia exposure, prevention behavior*



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## SIMPLICIA CHARACTERIZATION AND TOTAL FLAVONOIDS DETERMINATION ON METHANOL EXTRACT OF KAREHO LEAVES (*CALLICARPA LONGIFOLIA* LAM.)

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### Abstract

**Purpose:** *Callicarpa longifolia* Lam. known as 'kareho' is one of the plants used by several Dayak tribes for traditional medicine such as antiacne, swelling, wounds, diarrhea, diabetes, and lowering cholesterol levels. This study aims to provide scientific data on the characteristics of simplisia and determine the flavonoids levels of methanol extract of *C. longifolia* leaves.

**Research Methodology:** Characterization includes both qualitative and quantitative examination of the simplisia of *C. longifolia* leaves, while the determination of total flavonoid content is determined by the aluminum chloride method and calculated as quercetin equivalent (EK).

**Results:** Microscopic test of leaves have an actinositic stomata type, ethanol soluble extract content of  $17.50 \pm 0.10\%$  and water soluble extract content of  $16.53 \pm 0.37\%$ . drying shrinkage  $8.16 \pm 0.25\%$ , total ash content of  $5.52 \pm 0.06\%$ , and acid insoluble ash content of  $0.07 \pm 0.01\%$ , the results of phytochemical screening confirm the presence of saponins, flavonoids, steroids, tannins, glycosides, and phenols, TLC results with sulfuric acid spotting and UV 254 nm light were obtained 6 spots of each, and total flavonoid levels were obtained at  $7.995 \pm 0.050\%$  b/bEK.

**Limitations:** This study was carried out within 3 months and served as *in vitro* study.

**Contribution:** This study can be useful in the biological pharmacy field and particularly in tracing drugs of natural origin.

**Keywords:** *Natural medicine, Pharmacognostic, Flavonoids level*



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## THE EFFECT OF THE ANDROID APPLICATION “MH MOBILE” ON THE ATTITUDE OF LEPERS

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### Abstract

**Introduction:** Most of the Indonesian people probably do not know leprosy. Leprosy has not disappeared; this old disease still exists today in our country. Human activities in modern times use technology. One of the technologies that everyone has is a smartphone.

**Method:** This research was conducted with a quasi-experimental design with a pre-post control group design with a sample size of 70 people. Interventions were carried out using educational media in the form of the android application “MH Mobile”. Changes in attitude and before and after intervention were measured using a validated questionnaire and tested using the Wilcoxon and Mann-Whitney tests.

**Result:** Statistical analysis shows that there is an effect of MH Mobile with attitude ( $p = 0.000$ ). There were significant changes in both groups between pre and post.

**Limitation:** The limitation in this research lies in the companion taking medication who is not yet committed to taking the drug partner.

**Contribution:** The contribution of this research is to help puskesmas nurses to control leprosy patients to take medication. as well as helping patients and their families to take medication on time.

**Keyword:** Leprae, MH Mobile, Android application, Attitude



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## ACHIEVING EFFICIENCY THROUGH LEAN IN HOSPITAL: HOW IS THE EMPLOYEE'S ACCEPTANCE?

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### Abstract

**Purpose:** Measure the lean acceptance implementation lean management in Panti Rapih Hospital Yogyakarta. Panti Rapih Hospital Yogyakarta has adopted lean healthcare since 2018. The main purpose of lean healthcare is to create the culture of putting the patient value first in healthcare services. The success and sustainability of lean healthcare implementation are determined by the acceptance of lean by the staff.

**Research Methodology:** this study used a single holistic case study method with unit analysis at the level of the lean team at the Yogyakarta Panti Rapih Hospital. The research subjects were employees in the team who were directly involved in lean management implementation. The selection of research subjects based on purposive sampling and total samples are 50 staff for the survey and 7 staff for in-depth interviews. Instrument of this research are the Lean in Healthcare Questionnaire and interview guideline.

**Results:** Lean acceptance Panti Rapih Hospital is still at the maturity level 3 with the most high maturity level on the indicator rewarding staff and the most low maturity level on the job evaluation indicator. Staff perceived that lean implementation makes work easier and appreciates work colleagues. However, job evaluation is still carried out by direct supervisors

**Limitations:** The limitation in this study is that the object of research is limited to private hospitals. This would be different if it was done in a public hospital

**Contribution:** This research makes a practical contribution to implementing lean hospital which is rarely applied in Indonesia

**Keywords:** *lean hospital, lean acceptance, human resources, efficiency*



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## THE EFFECT OF ETHANOL EXTRACT OF PEARL GRASS ON LIVER HISTOPATHOLOGY OF MALE WHITE RATS INDUCED BY RIFAMPICIN AND ISONIAZID

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### Abstract

**Objective** : to determine the effect of ethanol extract of pearl grass on liver histopathology in male white rats *Sprague dawley* strain induced by rifampicin and isoniazid.

**Method** : This research used 30 rats which are divided into 5 groups, there were control 1 (K1) which was given distilled water, control 2 (K2) without pearl grass, treatment groups 1, 2, and 3 which were given rifampicin and 200 mg/kgBB isoniazid orally followed by ethanol extract of pearl grass with successive doses of 200 mg/kgBB, 400 mg/kgBB, 800 mg/kgBB for 14 days.

**Results** : The mean scores of liver damage obtained were K1=198,16, K2: 501,44, P1=501,2, P2=417,6, and P3=394,4. The data was tested by *Shapiro-Wilk* followed by *post hoc Tamhane's* test and it was found that there were significant mean differences between the control group and the treatment group.

**Limitations** : The time of giving each day is different, limited to the liver.

**Contribution** : It can be used in patients with tuberculosis.

**Keywords** : antioxidants, liver histopathology, pearl grass, tuberculosis.

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## PREDICTOR OF MORTALITY IN COVID 19 PATIENTS

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### Abstract

**Purpose:** The aim of this study to analyse Neutrophil-to-Lymphocyte Ratio (NLR) and Hs-CRP to predicts mortality in COVID-19 patients

**Research Methodology:** This research was conducted at Moewardi Hospital in July 2020. The inclusion criteria were COVID-19 patients. NLR is neutrophil divided by lymphocytes using a haematology analyser. Examination of HsCRP by ELISA method. Statistical test with an independent T-test and cox proportional hazard analysis with  $p < 0.05$ .

**Results:** The results showed that HsCRP and NLR increased in COVID-19 patients who later died and obtained lower levels in survivors ( $p = 0.001$  and  $p = 0.11$ ). HsCRP increased the risk of death for COVID-19 patients ( $p = 0.18$ ; HR = 1.036) and NLR also increased the risk of death for COVID-19 patients ( $p = 0.08$ ; HR = 1.34)

**Limitations:** this study were not randomized controlled trial, but retrospective study, which is the only studies available during this pandemic. And because of lack of access to individual data, we were unable to perform multivariable regression analyses to adjust for potential confounders in the nonsurvival vs survival group.

**Contribution:** it will be an input for clinicians when there are high Hs-CRP and NLR to get more intensive care.

**Keywords:** Mortality, COVID 19



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## WEIL'S DISEASE WITH PNEUMONIA : A CASE REPORT

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### Abstract

#### Background:

Leptospirosis is zoonoticinfectious disease caused by the spirochete *Leptospira interrogans*. It can usually be transmitted indirectly, per contaminated water, rarely directly, and through contact with infected animals. *Leptospira* bacteria commonly enter the body through the damaged skin or mucous membranes. The clinical syndromes may vary from a subclinical infection and mild febrile condition to severe clinical symptoms with jaundice and renal failure.

#### Case report:

It is the case report from a woman 48 years old with Weil's disease with clinical manifestations included: jaundice, headache, pain in the calves, septic shock, pneumonia, renal failure, gastrointestinal bleeding and disturbances of consciousness. After the use of antibiotics, free-heparin hemodialysis, symptomatic and substitution therapy, all symptoms resolved.

#### Discussion:

Negative leptospirosis result that may caused due to antibody level have not been formed in the blood or antibody level still low because blood sample taken when disease onset less than 5 days while IgM level can be detected in the blood commonly after 5 days or will be better if more than 7 days. Patient has risk factors and clinical sign to severe leptospirosis with decreased consciousness, icteric, conjunctival suffusion, acute kidney failure that proved by kidney USG result not yet found chronic kidney disease and gastrointestinal bleeding

#### Conclusion:

Mortality rate in severe leptospirosis or weil disease averages approximately 80%, with proper antibiotics and supportive treatment, and hemodialysis in patients will help reduce mortality in weil's disease

**Keywords:** leptospirosis, Weil's disease, pneumonia





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## IN VITRO AND IN SILICO ANTIDIABETIC POTENTIAL OF AGARWOOD *AQUILARIA MALACCENSIS* LAMK. LEAVES EXTRACT

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### Abstract

Diabetes mellitus is a metabolic disorder characterized by high blood sugar level or hyperglycemic. One of the standard treatment is by oral hypoglycemic drugs such as acarbose. However, long term use of acarbose showed an adverse side effect. Thus, alternative therapies using herbal medicines are of interest to researchers. *Aquilaria malaccensis* leaves have been used as an herbal tea for its high antioxidant and antimicrobial activity. This research aimed to analyze the antidiabetic potential of *A. malaccensis* leaves extract by in vitro and in silico. The method for in vitro included the inhibition activity of  $\alpha$ -amylase and  $\alpha$ -glucosidase enzymes by spectrophotometry, inhibition of glucose diffusion in the dialysis bag, while in silico molecular docking for the compounds in the potent extract were conducted using PyMOL, PyRx, and Discovery Studio. The results showed that *A. malaccensis* leaves extract with chloroform solvent has the best results on each test parameter with an  $IC_{50}$  was 3,218 mg/mL for  $\alpha$ -amylase enzyme inhibition and 3.647 mg/mL for  $\alpha$ -glucosidase enzyme inhibition. The chloroform extract of *A. malaccensis* leaves is the best for inhibiting glucose diffusion in the first 30 minutes. The in silico molecular docking test results showed Palustrol has the lowest binding affinity value with -7.3 kcal/mol.

**Key words:** *Aquilaria malaccensis* Lamk., antidiabetic,  $\alpha$ -amylase,  $\alpha$ -glucosidase, molecular docking



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## ANALYSIS DETERMINANT THE PREVENTION ATTITUDE OF OPPORTUNISTIC INFECTIONS IN PEOPLE LIVING WITH HIV AIDS (PLWHA)

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### Abstract

The objective of this study is to determine what factors are associated with the attitude of preventing opportunistic infections in people with HIV AIDS (PLWHA). This research was an analytic study with a cross-sectional research design that aims to determine the relationship between independent variables with the dependent variable. The number of samples in this study were 71 PLWHA in the Depok City Peer Support Group Kuldesak. Samples were taken using a non random sampling technique with a type of purposive sampling. From the results of the study obtained a relationship of perceived threat (p-value= 0.012; r= 0.299), perceived susceptibility (p-value= 0.000; r= 0.413), perceived severity (p-value= 0.004; r= 0.337), perceived benefit (p-value= 0.001; r= 0.387), perceived barrier (p-value= 0,000; r= 0,789), perceived self-efficacy (p-value= 0,000; r= 0,669) with The prevention attitude of opportunistic infections. perceived barrier is a dominant factor related to the attitude of preventing OIs. Researchers can further develop this research and provide education so that the attitude of preventing OIs especially to PLWHA is better than before.

**Keywords:** *the prevention attitude of opportunistic infection, perceived threat, perceived benefit, Perceived, barrier, perceived, self-efficacy*



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## MESSENCHYMAL STEM CELL SECRETOME'S DECREASE ANTI- DSDNA ANTIBODY, PULMONARY VASCULAR INFLAMMATION, KIDNEY DAMAGE, AND INCREASE C3 COMPLEMENT IN LUPUS MICE MODEL

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### Abstract

**Purpose:** Our study aimed to identify the effect of mesenchymal stem cell (MSC) secretome on the levels of anti-dsDNA antibody, C3 complement, pulmonary vascular inflammation and kidney damage in lupus mice models.

**Research Methodology:** Research subjects were 21 male mice of *Mus musculus* Balb/C strain. The group divided into three groups. The control group received 0.5 ccs of 0.9% NaCl injection and 0.45 cc of 0.9% NaCl intraperitoneal injection. the lupus group was receiving 0.5 ccs of pristane injection and 0.45 cc of 0.9% NaCl intraperitoneal injection. The treatment group was receiving 0.5 cc pristane injection and 0.45 cc of MSC secretome's intraperitoneal injection. Statistical analysis performed using the ANOVA test followed by posthoc test. The p-value considered significant when the  $p < 0.05$ .

**Results:** The study showed that there was a difference in the levels of anti-dsDNA antibody, complement c3, pulmonary vascular inflammation and kidney damage in all group. MSC secretome's decrease anti-dsDNA antibody ( $p=0.043$ ), pulmonary vascular inflammation ( $p=0.002$ ), kidney damage ( $p=0.002$ ), and increase complement c3 ( $p=0.002$ ) in lupus mice models.

**Limitations:** Research on mice that needs further investigation in humans

**Contribution:** rheumatology, stem cell, and immunology.

**Keywords:** *MSC secretome's, anti-dsDNA antibody, pulmonary vascular inflammation, kidney damage, C3 complement.*



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## NEW DETERMINANT OF STUNTING IN UNDER FIVE YEAR OLD CHILDREN IN BANDAR LAMPUNG

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### Abstract

**Purpose:** This research aims to identify factors that determine stunting in under five year old children in Bandar Lampung.

**Research Methodology:** This study was conducted by a retrospective cohort study, located in five areas involving 126 babies. In each area, we collaborated with Community Health Center (Puskesmas) as a local center of health monitoring for under five year old children. To find out the determinant factors on stunting, a Principal Component Analysis (PCA) has been applied.

**Results:** Partial Component Analysis revealed that stunting significantly affected by the educational and social status of the mother and the health attitude of the family. The educational and social status of the mother is strongly correlated with education of the mother, job status before married, job status when having pregnancy and babysitter. The health attitude of the family is strongly correlated with source of cooking water and frequency of attending integrated health service post (Posyandu).

**Limitations:** Research with a bigger sample of babies involving wider area is urgently needed to improve the sensitivity and specificity of the results.

**Contribution:** Supporting education for women and focusing on mother worker during pregnancy is strategic issue for reducing stunting prevalence in Bandar Lampung

**Keywords:** Stunting, determinant, malnutrition



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## MORINGA OLEIFERA EXTRACT DECREASE ANTI-DSDNA ANTIBODY AND REPAIR KIDNEY DAMAGE IN LUPUS NEPHRITIS MICE MODEL

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### Abstract

**Purpose:** Our study aimed to identify the impact of moringa oliefera (MO) extract on the levels of anti-dsDNA antibody and kidney damage in the lupus nephritis (LN) mice model.

**Research Methodology:** A randomized, post-test only group design and experimental laboratory trial were conducted in January-July 2019. The subjects were 21 male mice of *Mus musculus* Balb/C strain, which divided into three groups, the control group gets 0.5 ccs of 0.9% NaCl injection and placebo, the LN group receive 0.5 ccs of pristane injection and placebo, and the treatment group received 0.5 cc pristane injection and MO 500 mg/kg BW/day. After five weeks, we take kidney and blood samples. Statistical analysis was performed using the ANOVA test followed by the LSD test. The p-value considered significant if  $p < 0.05$ .

**Results:** The study showed that there were difference on the levels of anti-dsDNA antibody level among the three groups ( $p=0.001$ ) and kidney histology (0.001). The group that received MO showed decreased levels of anti-dsDNA antibody (Control= $19.54 \pm 1.59$  pg/dL, LN=  $25.62 \pm 2.98$  pg/dL, MO= $20.57 \pm 1.54$  pg/dL; $p=0.001$ ) and improved kidney histological (Control= $1.43 \pm 0.53$ , LN =  $6.29 \pm 1.50$ , MO= $3.86 \pm 1.07$ ; $p=0.02$ ) compared with the LN group.

**Limitations:** Research on mice that needs further investigation in humans.

**Contribution:** rheumatology, immunology.

**Keywords:** *Moringa oleifera*, anti-dsDNA antibody, kidney damage, lupus nephritis.



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## RELATIONSHIP BETWEEN THE DURATION OF BEING AN ATHLETE AND THE DURATION OF SMOKING WITH HbCO LEVELS ATHLETES IN BANYUMAS, INDONESIA

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### Abstract

**Purpose:** To determine the relationship between the duration of being an athlete and the duration of smoking with HbCO levels athletes in Banyumas, Indonesia.

**Research Methodology:** This research is a quantitative study using a cross-sectional design. The study was conducted by the Faculty of Medicine, University of Muhammadiyah Purwokerto . 60 athletes who actively smoking in Banyumas, Indonesia were conducted as subjects. The data analysis technique used is the One Way Anova test and continued with Post Hoc.HbCO was examined using Hindsbers-Lang method.

**Results:** The results of Anova comparison test analysis showed duration of smoking and duration of being athletes with levels HbCO has  $P < 0.05$ . In the Post hoc test, the insignificant result was 0.928 in the comparison group of athletes less/equal to 2 years with smoked less/equal to 2 years againts groups of athletes more than 2 years with smoked less/equal to 2 years.

**Limitations:** The length of being an athlete and the duration of smoking based only from interview.

**Contribution:** Sport medicine

**Keywords:** *Duration of being an athlete, Duration of smoking, Athlete, Cigarette, HbCO*



## PROTEIN-PROTEIN INTERACTIONS OF ACUTE RESPIRATORY DISTRESS SYNDROME, A COVID-19 COMORBID DISEASE

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### Abstract

The purpose of this paper is to find the most significant proteins related to acute respiratory distress syndrome (ARDS). ARDS is a common condition where the lungs receive reduced levels of oxygen that may cause respiratory failure, as well as multiple organ failures. ARDS is a comorbid disease of COVID-19, and understanding what it is and how to combat it could be beneficial in combatting COVID-19. 158 related ARDS proteins are extracted from the OMIM database to be studied and compared to find which proteins are the most significant. The protein's significance were achieved through the use the STRING database, along with the use of the application Cytoscape, and the results were as follows; LCK, CDC42, ENO1, HDAC1, PARK7, and MTOR were seen to be the most significant in no particular order. The limitation of this paper is that it only pertains to the most significant proteins and should be used as a tool for targeted protein drugs. From the results of this study, it is possible to achieve a drug that can target the specific proteins that are the most significant to combat ARDS.

**Keywords:** ARDS, comorbid, COVID-19, proteins, OMIM, STRING, Cytoscape, drug.



## MANGROVES AND THEIR MEDICINAL BENEFIT: A MINI REVIEW

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### Abstract

Mangrove plants have been utilized by humankind for so long. It is widely suggested that there are still many benefits to these mangroves that are not yet discovered. This article examines the current researches in the usage of mangroves as medicine. Many of these researches revolve around the potential use of mangrove as anticancer, antitumor, anti-inflammatory, antifungal, antibacterial, antiviral, and antidiabetic. Studies have shown that mangroves indeed have numerous benefits and untapped potential in the medical field. This article will also review the current state of conservation and preservation of mangrove plants in the world.

**Keywords:** Mangroves, Medicinal Plants, Conservation and Preservation





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## THE EFFECT OF ETHANOL EXTRACT OF STARFRUIT (*AVERRHOA BILIMBI*) TO LEVEL OF MALONDIALDEHYDE (MDA) AND HAEMOGLOBIN (HB) IN WHITE RAT (*RATTUS NORVEGICUS*) STRAIN WISTAR EXPOSED BY CIGARETTE

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**Background:** Exposed by cigarette due to length of the activity of smoking would cause an imbalance free radicals and antioxidants in the body that can leads to lipid peroxidation that produces malondialdehyhe (MDA) and its effect on lisis of erythrocytes which affected the level of Haemoglobin (Hb). Antioxidant can be used to reduce lipid peroxidation. One source of exogenous antioxidant is Averrhoa bilimbi.

**Objective:** To determine the effect of giving starfruit extract ethanol on MDA and Hb levels in Rattus norvegicus strain Wistar exposed by cigarette.

**Method:** The type of this research used an experimental study using a posttest only with randomized controlled group design which consists of positive control group, negative control group, and treatment group. The results of the study compared the control group with the treatment group.

**Results:** Providing of ethanol extract Starfruit with dose of 70g/KgBB can increas Hb and decrease MDA. Data on Hb levels of experimental animals were analyzed using thetest One Way Anova and it was obtained  $p < 0.001$ . Data on MDA levels of experimental animals were analyzed using Kruskall Wallis value of  $p 0.008$  ( $p < 0,05$  Significant).

**Conclusion:** There is effect of Ethanol Extract of Starfruit (*Averrhoa bilimbi*) to level of Malondialdehida (MDA) and Hemoglobin (Hb) in Rattus novergicus strain wistar exosed by cigarette. That is decrease MDA and increase Hb.

**Keywords:** Malondialdehida, Hemoglobin, Ethanol Extract of Starfruit, Cigarette.



## ANALYSIS OF ATTITUDES AND PERCEPTIONS OF EFFECTIVENESS TOWARD THE DISCLOSURE OF A COUPLE 'S SELF-STATUS IN THE SEBAYA SUPPORT GROUP IN SUMENEP DISTRICT

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### Abstract

**Purpose:** *Human Immunodeficiency Virus and Acquired Immuno Deficiency Syndrome* (HIV and AIDS) have become epidemics that seriously threaten the health of the world community. The problem of HIV and AIDS is a health challenge in almost all over the world, including in Indonesia. East Java is one of the provinces with the highest number of HIV / AIDS sufferers in Indonesia. As of September 2018, the number of people living with HIV / AIDS was 47,396 people. Data obtained in the field shows that the number of PLWHA in East Java reached 47,396 patients as of September 2018..

**Research Methodology:** This research is a quantitative *research* design with *explanatory research* which aims at research conducted to explain the influence between independent and dependent variables through testing. *Cross sectional* design because the independent and dependent variables were measured at the same time. The sampling technique used total sampling. The instrument in this study was a questionnaire. Data were analyzed using *regression* test .

**Results:**Based on the results of the logistic regression test, it was obtained  $p\text{-value} = 0.021$  ( $p < \alpha$  or  $0.000 < 0.05$ ). So statistically it can be interpreted that there is a relationship between attitude and perception effectiveness to the time the respondent's self-status discloses to his partner.

Keywords: *HIV / AIDS, PLWHA, VCT , KDS*



## SERUM FREE MEDIUM FOR THE PRODUCTION OF EXOSOME DERIVED FROM HUMAN WHARTON JELLY'S STEM CELL

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### Abstract

**Purpose:** Exosomes are product of cells and have potential as cell free based therapy. Exosomes from stem cells have the same advantages as the stem cell. The study aimed to evaluate serum-free medium that supports the production of exosome derived from mesenchymal stem cells (MSC).

**Research Methodology:** Cells were obtained from Wharton jelly and characterized by flow cytometry and multipotent analysis. The cell growth in serum-free medium was analyzed with MTT assay. Exosomes were isolated and visualized with a Transmission Electron Microscope.

**Results:** The results of the flow cytometry analysis revealed that the cells expressed MSC's surface markers. The multipotent analysis showed that the cells can be differentiated into chondrocyte, osteocyte, and adipocyte. The cell growth in DMEM serum-free medium is higher than RPMI serum-free medium. The morphology of exosome is a cup-shaped observed with TEM.

**Limitations:** The study is preliminary research. It needs further characterization and identification data of exosomes.

**Contribution:** This study is useful to determine the culture condition to obtain a good quality of exosomes. From this research, the exosome isolated from stem cells can be applied in cell-free based therapy. The data will give benefit in the field of regenerative medicine, tissue engineering, and biomedical sciences.

**Keywords:** *hWJ MSC, Exosomes, TEM*



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## APPLICATION-BASED ON FUZZY TSUKAMOTO AND PROFILE MATCHING FOR COMBINATION DRUGS RECOMMENDATIONS IN PATIENTS HYPERTENSION WITH COMPLICATIONS

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### Abstract

Hypertension is still the number one killer disease in Indonesia, and hypertension sufferers have increased by 8.3% per year from 2013-2018. In 2018 the prevalence of hypertension in Indonesia reached 34.1% and affected about 20% of the world's population. Handling of hypertension sufferers can be done in two ways, namely modifying lifestyle and using drugs. Antihypertensive drugs that are given pay attention to age, history of the disease, smoking habits, obesity, and consider diseases such as diabetes, kidney, heart failure, and ischemic heart. Improper use of antihypertensive drugs often causes fever, diarrhea, diabetes, kidney failure, stress, breathing through the mouth, neurological disorders, radiation to the neck and head area, and localized disorders of the salivary glands. Doctors or medical personnel in providing antihypertensive drugs require good pharmacological knowledge. In general, not all hospitals have someone who is an expert in pharmacology. Therefore this study aims to develop a model based on Fuzzy Tsukamoto and Profile Matching for a recommendation of drug combinations, the suitability of dosage, and frequency in hypertensive patients. The results of the model evaluation show an accuracy of 97.5%

**Keywords:** *Hypertension, Profile Matching, Fuzzy Tsukamoto, Drugs*