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CONFERENCE PROCEEDINGS

BOOK OF ABSTRACTS ECBA-2020

International Conference on
“Engineering & Technology, Computer, Basic and Applied Sciences”
(ECBA-2020), Bali, Indonesia



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Book of Abstracts Proceeding

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(ECBA-2020)
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**International Conference on
“Engineering & Technology, Computer, Basic and
Applied Sciences”
Bali, Indonesia
Venue: Hotel Santika Seminyak Bali**

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CONFERENCE CHAIR MESSAGE

Dr. Malika Ait Nasser

International Conference on “Engineering & Technology, Computer, Basic & Applied Sciences” serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the challenges faced by our societies globally. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences.

I am really thankful to our honorable scientific and review committee for spending much of their time in reviewing the papers for this event. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let's break all the discriminating barriers and get free from all minor affiliations. Let's contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you.

Dr. Malika Ait Nasser

Conference Chair

Email: chair@academicfora.com

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Conference Program

Jan 21-22, 2020

Hotel Santika Seminyak Bali, Indonesia

Time: Registration & Kit Distribution (09:00– 09:10 am)

Venue: Room 1

09:10 am – 09: 20 am	Introduction of Participants
09: 20 am – 09: 30 am	Inauguration and Opening address
09: 30 am – 09:40 am	Networking Session

Tea/Coffee Break (09:40 am - 10:00 am)

DAY 01 (Jan 21, 2020)

1st Presentation Session (10:00 am – 12:30 pm)

Track A: Medical, Medicine and Health Sciences

Presenter Name	Manuscript Title	Paper ID
Syahmardani Ibnu	Comparison Of The Effectiveness Administration Of Erythromycin And Metoclopramide As Prokinetic After Operation Of Digestive Laparotomy In The Public Hospital Of Dr. Zainoel Abidin Banda Aceh	BAL-4120-101M
San Winata Badiri	The Effect of Putat Air Kernel's (<i>Barringtonia racemosa</i>) on the Quality of Sperm in Rat (<i>Rattus norvegicus</i>) that had been exposed to Cigarette Smoke	BAL-4120-102M
M. Ifani Syarkawi Rizal	Comparison of Platelet Rich Plasma Administration with Platelet Low Plasma for Healing Incision Wounds in Cruris of <i>Rattus norvegicus</i> Rats Viewed from Histology of Collagen Tissues	BAL-4120-103M

Track B: Engineering, Technology, Computer and Applied Sciences

Presenter Name	Manuscript Title	Paper ID
Oegik Soegihardjo	Performance of Mechanical Energy Harvesting Unit for Generating Electricity for Portal Gate System	BAL-4120-101E

Lunch Time & Ending Note (12:30 pm - 01:30 pm)

Participants Registered as Listener\Observer

The following Scholars/ practitioners who don't have any paper presentation, however they will be attending the conference as delegates & observers.

<i>Sr. No</i>	<i>Name</i>	<i>Affiliation Details</i>	<i>Country</i>	<i>Submission ID</i>
1.	Manoj Anandan	North West Regional Hospital, Burnie Tasmania	Australia	BAL-4120-104MA



DAY 02 Wednesday (Jan 22, 2020)

City Tour and Shopping Day

All respective guests are free to conduct their own sightseeing and tour. The second day of the event is reserved for this memorable purpose.



**TRACK A: ENGINEERING & TECHNOLOGY,
COMPUTER, BASIC & APPLIED SCIENCES**



Performance of Mechanical Energy Harvesting Unit for Generating Electricity for Portal Gate System

Joni Dewanto¹, Oegik Soegihardjo^{2*}

Abstract The portal gate systems for parking area need electricity for opening/closing the portal (barrier crossbar) and printing the parking ticket. The mechanical energy harvesting unit presented on this paper is designed for supplying electrical energy needed by the portal gate system for its operation. The mechanical energy harvesting unit converted linear movement of the slider into rotating movement of the fly wheel using rack and pinion. The energy stored in the fly wheel is used to turn a small electric generator attached to the energy harvesting unit that provided electricity for the portal gate system. This energy harvesting unit is designed as a breakthrough to produce electrical energy by utilizing the weight of the vehicle that enters the parking space. The linear movement of the slider is gained from the weight of the vehicle that passed on the mechanical energy harvesting unit. This system is appropriate for a stand alone portal gate systems. Three categories of passanger cars (small, medium and large) each with mass of 1300 kg, 1700 kg and 2000 kg respectively were used in the experiment. Considering the mechanical efficiency of the harvesting unit by 60%, three vehicles used were able to produce a maximum rotation of the electric generator of the harvesting units for 2585 rpm, 2964 rpm and 3210 rpm, respectively. Testing of the harvesting unit generator with a continuous rotation with an electrical load taken from LED lights with voltage of 24 Volt, 18 Volt and 12 Volt produces power of 19 Volt x 3.6 mAmp (4000 rpm), 17 Volt x 4.3 mAmp (3500 rpm) and 12 Volt x 11 mAmp (2400 rpm) respectively. Initial testing of the mechanical energy harvesting unit shows that this equipment is capable of producing the required electrical energy.

Keywords: Mechanical Energy Harvesting Unit (MEHU), Fly Wheel, Generator Performance, Electrical Load

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**TRCAK B: MEDICAL, MEDICINE AND HEALTH
SCIENCES**



Comparison Of The Effectiveness Administration Of Erythromycin And Metoclopramide As Prokinetic After Operation Of Digestive Laparotomy In The Public Hospital Of Dr. Zainoel Abidin Banda Aceh

Syahmardani Ibnu*

Abstract Introduction: Gastroparesis or postoperative ileus (IPO) is a normal condition, temporary, and a physiological response after abdominal surgery procedures. This condition can also cause other gastrointestinal symptoms such as abdominal pain, bloating, nausea, and vomiting. If prolonged, an IPO can increase morbidity and burden on health costs. The aim of this study was to assess the effectiveness of erythromycin and metoclopramide as prokinetics in patients undergoing laparotomy surgical procedures. Method: This research is a double-blind clinical trial research with parallel design. Subjects involved will be divided into two treatment groups will, namely by administering erythromycin 250 mg and administering metoclopramide 10 mg orally per 6 hours in 24 hours after surgery. Independent t test was used as the main analysis with a 95% confidence level. Results: A total of 38 subjects were involved in this study which were dominated by male sex with a mean age of 45.11 ± 15.38 and 53.84 ± 10.73 in the erythromycin and metoclopramide groups, respectively. The mean residual volume of gastric fluid in the erythromycin group (33.26 ± 15.33 ml / 24 hours) was more minimal than the metoclopramide group (49.95 ± 17.71 ml / 24 hours) with a significance value of $p = 0.004$. Discussion: Erythromycin belongs to the macrolide antibiotic class commonly known as motilin receptor agonist which stimulates motilin receptors on the gastrointestinal tract. This drug has the effect of speeding up the process of emptying the stomach which acts on the motilin receptors found in endocrine cells in the duodenum. Conclusion: The administration of erythromycin is more effective than metoclopramide as a prokinetic agent after digestive surgery.

Keywords: Prokinetics, Erythromycin, Metoclopramide, Digestive Surgery

Medical Faculty Syiah Kuala University Banda Aceh, Indonesia



The Effect of Putat Air Kernel's (*Barringtonia racemosa*) on the Quality of Sperm in Rat (*Rattus norvegicus*) that had been exposed to Cigarette Smoke

San Winata Badiri^{1*}, Dahril², Dasrul³

Abstract Introduction Cigarette smoke causes oxidative stress which result in reduces sperm concentration, motility, viability, and morphology. Putat air (*Barringtonia racemosa*) is a medicine plant belonging to the Lecythidaceae family. Extract of *Barringtonia Racemosa* kernel's contained anti-oxidant terpenoids, flavonoids, saponins, tannins and polyphenols. The aim of this study was to determine the effect of extract *Barringtonia Racemosa* kernel's on sperm quality of cigarette smoke exposed rats. Methodology This study used a post test only control group design among 30 male Wistar rats subject. The subject was randomly divided into 5 groups, K1: negative control, K2: cigarettes smoke exposed as positive control, P1: cigarettes smoke exposed and given 100 mg/gBW B. *Racemosa* extract peroral, P2: cigarettes smoke exposed and given 150 mg/gBW B. *Racemosa* extract peroral, and P3: cigarettes smoke exposed and given 200 mg/gBW B. *Racemosa* extract peroral. Analysis was done on day 30 using one-way ANOVA and post-hoc LSD for sperm concentration, motility, viability, and morphology. Result The highest sperm concentration was found in P2 (P1 40,60 million/mL, P2 59,80 million/mL, P3 50,80 million/mL; the highest normal sperm motility was found in P2 (P1 42,00 %, P2 61,80 %, P3 50,60 %); the highest normal sperm viability was found in P2 (P1 42,60 %, P2 61,00 %, P3 53,20 %); the highest normal sperm morphology was found in P1 (P1 41,20 %, P2 28,60, P3 37,60) Discussion & Conclusion Extract of *Barringtonia Racemosa* kernel's can improve sperm concentration, motility, viability, and morphology of cigarette smoke expose rats.

Keywords: Sperm Quality, *Barringtonia Racemosa*, Antioxidant Activities

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Comparison of Platelet Rich Plasma Administration with Platelet Low Plasma for Healing Incision Wounds in Cruris of *Rattus norvegicus* Rats Viewed from Histology of Collagen Tissues

M. Ifani Syarkawi Rizal*

Abstract Background;Wound healing is a complicated, multi-step process that can be divided into three major phases: inflammation, proliferation, and scar formation / remodeling. The compartmentalization of this process into discrete stages Gives the illusion of simplicity, but in reality it is much more complicated. For efficient healing to occur, complex interactions between multiple cell types, soluble factors and extracellular matrix components are required to re-build the tissue, PRP is produced from the blood by centrifugation, the which concentrates the platelets along with Several bioactive factors that have the ability to promote various aspects of tissue regeneration and protection The rationale for use and therapeutic potential of a high concentration of platelets is based on their capacity to supply and release supraphysiologic amounts of essential growth factors and cytokines from their alpha granules to provide a regenerative stimulus augments that promotes healing and repair in tissues. Unlike PRP, PPP does not have many platelets but PPP has its own unique healing properties. Methodology;This study was an experimental study using the design of the posttest only control group design in an experimental laboratory. The research subjects were divided into 3 groups: 10 rats with incision wound at the cruris and given injection of platelet-rich plasma, then 10 white rats with incision wound at the cruris and were given injection of platelet-poor plasma and 10 rats with incision wound at the cruris for control. The wound area was measured over 7 days, the wound was Harvested and histological analysis was performed Including finding counting of collagen, and will be Analyzed by ANOVA test. Result;The results Showed that the amount of collagen between platelet-rich plasma and platelet poor plasma with p value Differ Significantly 0.000 ($P < 0.05$). Conclusion;In this study there was difference in the amount of collagen between platelet-rich plasma and platelet poor plasma injection for incision wound at the cruris of *Rattus norvegicus*. The amount of collagen is much higher with the platelet-rich plasma injection.

Keywords: Platelet-Rich Plasma,Platelet Poor Plasma, Wound Incision

Medical Faculty Syiah Kuala University Banda Aceh, Indonesia

FUTURE EVENTS

You can find the Details regarding our future events by following below:

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Engineering & Technology, Computer, Basic & Applied Science

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