PROCEEDING

The 2nd International Conference of Medical and Health Sciences (ICMHS) and The 2nd Life Sciences Conference (LSC) 2016

"Towards a Better Quality of Life through Interdisciplinary Research"

Yogyakarta, 9th-10th December 2016
The Alana Hotel and Convention Center
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Welcome to Jogja, sugeng rawuh!
For the second time, the Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta is going to conduct the 2nd International Conference of Medical and Health Sciences (ICMHS) this December in vibrant Yogyakarta, Indonesia. This year we are going to collaborate with the Life Sciences Society of Pakistan for their 2nd Life Sciences Conference (LSC) with Dr. Zahid Iqbal as the general secretary.
This year’s conference theme “Towards a better quality of life through interdisciplinary research” will be celebrating an era of seamless interdisciplinary integration and collaboration in scientific innovations with the involvement of more extensive topics and disciplines in the conference. We aim to exhibit the products of that kind of approach in solving challenges, improving the quality of life, and creating sustainable developments. We are happy to announce that our conference is filled with Invited speakers from Pakistan, United States of America, Uni Emirates Arab, Malaysia and Indonesia. Presentations will be conducted in oral as well as poster that covers topics from medicine, public health, dentistry, pharmacy, biomedical to agriculture. To put more credibility to the conference we are collaborating with Isra Medical Journal and the Asian Journal of Agriculture and Biology to publish selected papers from the event. Other paper will be published in the ISBN Proceeding book.
The last but not least, enjoy the conference, start networking and sharing ideas, and let immerse yourself to the heritage cultural ambient of Jogja, sumonggo!

Yogyakarta, 1st December 2016

dr. Iman Permana, M.Kes, Ph.D.
Assalamu’alaikum Wr. Wb.

Science, especially in the areas of health and life growing more rapidly. We need to work together in the research of various disciplines to the advancement of science and to provide benefits to human life.

After successfully organized international scientific meeting last year, the Faculty of Medical and Health Sciences Universitas Muhammadiyah Yogyakarta, held the second scientific meeting ICMHS along with “2nd Life Sciences Conference”. In this second scientific meeting, FKIK UMY collaborates with various researchers, among others from Pakistan, Malaysia, and the United States. Taking the theme “Towards a better quality of life through interdisciplinary research” we hope to establish cooperation with various parties to be able to contribute ideas to the civilization of human life.

Finally, we congratulate the scientific meeting in the city of Yogyakarta Indonesia. Enjoy the beautiful city of Yogyakarta with priceless historical relics. We hope that this meeting can run smoothly and provide benefits to the advancement of knowledge.

Wassalamu’alaikum Wr. Wb.

Yogyakarta, 1st December 2016

Assalaamu’alaikum Wr. Wb.

Ladies and Gentlemen,
Welcome to the 2nd International Conference on Medical and Health Science in conjunction with the 2nd Life Sciences Conference 2016
Welcome to Yogyakarta City of Tolerance
Our Faculty of Medicine and Health Sciences has been doing such international conference almost every year for the last ten years. This and other previous conferences are the things that supporting our vision as an excellence and Islamic university, a young and global university. We will always try to keep monitoring the development of science through sending more lecturers to do the sabbatical leave overseas, doing international research collaborations and also the international conference. Each department should do this strategy of internationalization so that each department has its own network. Faculty of medicine and health science is one of the most progressive units in implementing this strategy by inviting international experts on a regular basis. This program will certainly strengthen our vision.
International conference on medicine and health sciences is a smart choice to offer our lecturers access to the most recent development of the subjects. The participants will also gain the same knowledge and latest information on medicine and health sciences. As everyone knows that the development of science and technology are faster today compared to the previous period. Information technology, computer, and other development have fastened the transformation of medicine and health science into the different and more complex stage.
Cellular technology, for instance, can be used for several functions including those that directly impacts our daily life. There is no long distance call anymore today because cellular phone can do everything we need to contact other people far from where we stand anytime anywhere. People will finally innovate cellular phone for the sake of personal health services. We will in the future using our simple cellular phone to detect our body temperature, blood pressure, even how much fat we have in our body and how much it is supposed to be. We may also be able to check the health of our body without leaving our house and order medicine without going into the drug store. Everything is almost possible as long as we think hard for the better of people in the future. Enjoy the conference and don’t forget to visit our rich tourist destinations, mountains, beaches or caves (underground waterways).

Thank you
Wassalaamu’alaikum Wr. Wb.

Prof. Dr. Bambang Cipto, MA
Keynote Speech

by Head of Provincial Health Office Special Region of Yogyakarta
in International Conference
of Medical and Health Sciences and Life Sciences Conference

The Alana Hotel and Convention Center, Yogyakarta, December 9-10, 2016

The honorable:
- Rector of Muhammadiyah University of Yogyakarta,
- The Dean of Medical and Health Sciences Muhammadiyah University of Yogyakarta,
- The chairman of organizing committee of the international conference of medical and health,
- Distinguished guests and colleagues.

Assalamu’alaikum Warahmatullahi Wabarakatuh,
First of all, we thank God for His blessings that today we may attend the International Conference of Medical Health Towards a Better Quality of Life Through Interdisciplinary Research in Yogyakarta.

My distinguished colleagues,
In Indonesia National Long Term Development Plan (2005-2024), the Indonesian Ministry of Health have determined a paradigm shift that have governed health services in health development plan. There has been a shift from Curative Health Services to Preventive and Promotive Health Services.
Recently, Indonesia suffers from a triple burden of diseases as health development challenges. The triple burden of diseases are: 1) the backlog of common infections, undernutrition, and maternal mortality; 2) the emerging challenges of non-communicable diseases (NCDs), such as cancer, diabetes, heart disease; and 3) mental illness, and the problems directly related to globalization, like pandemics and the health consequences of climate change.

Dear colleagues,
Here are some data that show several health problems in Indonesia:
1. Maternal mortality rate in 2015 is 4,809 cases, infant mortality rate in 2015 is 22,267 cases;
2. Regarding to children under the age of five, the national stunting rate is 37.2% which consists of 18% for very short dan 19.2% for short (Riskesdas 2013);
3. HIV testing coverage is 14% dan antiretroviral (ARV) therapy coverage is 65.58% (Directorate General of Disease Control and Prevention Ministry of Health, 2015);

4. Tuberculosis (TB) notification rate in 2015 is 73.5% and tuberculosis treatment success rate is 72% (Directorate General of Disease Control and Prevention Ministry of Health, 2015).

Distinguished guests,

Indonesia Health Development Program in 2015-2019 strengths in improving human quality life through Health Indonesia Program with family approach. The Indonesian Ministry of Health issued The Minister of Health Regulation (Permenkes) No. 39 Year 2016 as a Guideline of Implementation of Health Indonesia Program with Family Approach. This program has 12 main indicators as markers of a family health status. Currently, many health programs have been implemented by Indonesian Ministry of Health, Provincial Health Offices, and District Health Offices. However, many health problems, some as mentioned above, still become health burdens. We may ask a question whether the programs that we conducted have answered the health problems we have in Indonesia.

It would be better if all health programs that we implement based on scientific health research, especially interdisciplinary research. The research should be related to detection, prevention, and treatment of diseases or problem solving for better health.

My dear colleagues,

Being a province with speciality, Special Region of Yogyakarta placed Traditional Medicine as one of the priority programs in Provincial Medium Term Development Plan (2017-2022). We still encounter many challenges in developing Traditional Medicine, especially in providing services which are based on scientific evidence.

Distinguished colleagues,

We look forward to results of interdisciplinary research which would support health problem solving, especially by developing traditional medicine in Yogyakarta. We believe that collaboration in interdisciplinary research would improve quality of human life.

Finally,

Thank you for your attention. We wish you a successful conference.

Wassalamu’alaikum Warahmatullahi Wabarakaatu,

Wassalamu’alaikum Warahmatullahi Wabarakaatu,

On behalf of
the Head of Provincial Health Office
Special Region of Yogyakarta

Drg. Pembajun Setyaningastutie, M.Kes
SPEAKER OF
INTERNATIONAL CONFERENCE

Zahid Iqbal
Al-Nafees Medical College Isra University Islamabad Campus Islamabad, Pakistan
“One Health Program for Public Health Benefit”

Prof. Dr. Abdul Khaliq
Professor, Department of Agronomy, University of Agriculture, Faisalabad
“Role of Agriculture in Poverty Alleviation of Rural Areas”

Fitri Arofati
Universitas Muhammadiyah Yogyakarta, Indonesia
“Continuing Professional Development of Practicing Nurses in Indonesia”

Tri Wahyuiliati
Universitas Muhammadiyah Yogyakarta, Indonesia
“Diabetic Neuropathy - A Chance Towards A Better Treatment”

Mohammad Khalid Ashfaq
University of Mississippi, USA
“Natural Products –Use or Misuse”

Muhammad Mukhtar
American University of Ras Al Khaimah, United Arab Emirates
“Emerging Biotechnologies and Genomic Medicines in Human Health and Well-Being”

Muhammad Sasmito Djati
Brawijaya University Malang, Indonesia
“Herbal Medicine a Holistic Approach: in case of food supplement formulation of Sauropusandrogynus and Elephantopusscaberto modulate immune and hormonal system in pregnant Salmonella typhi infected mice”
REVIEWER

1. Dr. Zahid Iqbal, Ph.D (Isra University, Islamabad, Pakistan)
2. Prof. Dr. Abdul Khaliq (University of Agriculture, Faisalabad)
3. Dr. Mohammad Khalid Ashfaq, DVM, DTVM, MS, Ph.D (University of Mississippi, USA)
4. Dr. Muhammad Mukhtar, Ph.D (American University of Ras Al Khaimah, United Arab Emirates)
5. Dr. Ir. Muhammad Sasmito Djati, MS. (Brawijaya University Malang, Indonesia)
6. Fitri Arofiati, S.KeP., Ns., MAN., Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
7. Dr. SN Nurul Makiyah, S.Si., M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
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12. Dr. Dra. Yoni Astuti, M.Kes, Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
13. Dr. drg. Tita Ratya Utari, Sp. Ort (Universitas Muhammadiyah Yogyakarta, Indonesia)
14. Dr. dr. Tri Wahyuliati, Sp.S, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
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16. Dr. dr. Titiek Hidayati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
18. Dr. dr. Sri Sundari, M.Ke (Universitas Muhammadiyah Yogyakarta, Indonesia)
19. Dra. Lilis Suryani, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
21. Dr. dr. Wiwik Kusumawati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
SPEAKER OF
INTERNATIONAL CONFERENCE
The Effect of Normal Dose Extract Gempur Batu Kejibeling 
*(Strobilanthus crispus BL)* to the Histological of Rat’s Digestive Tract

Yoni Astuti*, Ali Usodo Mulyo2, Harminani3
1Biochemistry Department, Faculty of Medicine and Health Sciences, UniversitasMuhammadiyah Yogyakarta
2, 3Animal Physiology Department, Faculty of Biology, Gadjah Mada University
*Email: yoni_astuti@yahoo.co.id

**Abstract**

Gempur batu kejibeling is a traditional medicine to cure the stone-renal very effective. Daily intake of infusa gempur batu kejibeling is suspected to induce the bleeding in intestinal for long term. This research was carried out to detect the influence of intake extract gempur batu kejibeling for 9 week to the histological of digestive tract on female rat. The twenty rats were divided into 2 groups: as Group I Control and Group II daily intake 10 mg/200 grBB of extract gempur batu kejibeling for 9 weeks. Decapitation of rat was conduct to take the oesophagus, stomach/gastri, intestinum of rat. All the organs were kept in the container with the formalin 12 %. Hematoxylin eosin was used to identify the cell and tissue. The histological of oesophagus, gastric and intestinum was compared between control group and treatment group. The cell and tissue construct of oesophagus showed the normal histological. There was not any defect. The cell and tissue construct of gastric also intestinum showed the normal histological. The intake of extract gempur batu kejibeling *(Strobilanthuscrispus,BL)* dose 10 mg/200 gr BB during 9 week was not damage the histological of oesophagus, gastric and intestinum of rat.

**Keywords:** stone-renal, *Strobilanthuscrispus,BL*, digestive tract
INTRODUCTION

Kidney stone diseases was caused by stone obstruction on calyx or pelvix renalis and also could induced nefritis diseases. Stone plugged urinary system that induced some bacteria in the urinary system. These bacteria infected the tissue. If this condition took longer urine could return to the inside of ren such as nephrone, then pressed the space as hidronephrosis. Currently more than three decades, the incidence of kidney stones increased very significant as a health problem.\textsuperscript{1,2} Kidney stone disease is a risk factor for CKD,\textsuperscript{3} cardiovascular disease,\textsuperscript{4,5} and bone fracture.\textsuperscript{6} Kidney stone was by some studies also suggested an increased risk of hypertension with kidney stones.\textsuperscript{7}

Strobilanthes crispus L Blemek, (Acanthaceae) or locally known as pecahbeling (pecahkaca) has gained great attention due to its high medicinal values. Another name is daun picah beling (Jakarta) enyohkelo, kecibeling, ngokilo in Java. Hei mian Jian jun: Chinese. The leaves of this plant were oblong-lanceolate, rather obtuse and shallowly creante-crispate. Many scientific reports, gempurbatu kejibeling possessed antioxidant, free radical scavenging, anticancer, antidiabetic, antimicrobial, wound healing and antiulcerogenic activities.\textsuperscript{8} Strobilanthes crispus contain of potassium, magnesium, sodium, iron, and phosphorous, vitamins (ascorbid acid, riboflavin, and thiamine), phenolic acids (p-hydroxybenzoic acid, p-coumaric acid, caffeic acid, vanillic acid, Ferulic acid and syringes acid), caffeine, tannin, alkaloid, catechin. S.crispus also contain of cystolith calcium carbonate in which the infuse was alkaline. Kecibeling was a traditional medicine to treat diabetes mellitus, diuretic and high blood pressure. Kejibeling infusa was used to destroy kidney stone. Potassium in kejibeling as a strong diuretic.\textsuperscript{9}

Indonesian Community used to cure the kidney stone using kejibeling leaf infusion. The infusion was mixed with other leaf such as tempuyung leaf, meniran, kumis kucing, and curcumin. It was not allow to use kejibeling leaf only due to the hazard possessse mainly to the urinary tractus and digestoria tractus. It was not allowed to consume 2 grams as powder kejibeling, because of its strong diuretic. It was not permit to use kejibeling infuse more than 2 months, because some people was had a bad experiences during consume kejibeling infuse, they found their faces were bloody. This research conduct to prove the effect of kejibeling leaf infuse on normal dose to the tractus digestivus tissue on rat for 9 weeks.
MATERIALS AND METHODS

Material: a set of histological tissue equipment, a set of Hematoxylin Eosin equipment, a set of Extraction equipment, simplicia of strobilanthus crispus, BL.

Animal preparation: Twenty male Sprague Dawley rats, ± 200 grams body weight, 2 m.o. divided into 2 groups: dose I (10 mg), control (aquadest). The aclimatitation for mice was a week. Group dose 1 treated with 10 mg infusa kejibeling for 9 weeks one times a day. Group control with aquadest ad libitum. After 9 week rats are decapitated and organ of tractus digestivus were collecting and kept in formalin chamber. The research was conducted at Animal Laboratoy of UPHP Gadjah Mada university.

Ethanol exraction: A hundred grams powder of simplisia kejibeling put in extraction column then watering with ethanol 70%. The eluat was transferred to rotary evaporator until concentrated. Then prepare for 10mg dose of extract for treatment group.

Coloring Hematoxylin Eosin: Step 1: Deparafinisasi (Xylol), Rehidration (alcohol, 90%), coloring 1 (nucleus and cytoplasma) using hematoxylin, Diffrentiation to reduce strong color for nucleus using HCL 0.6%, Blueing with Lithium carbonat 0.5 %. Step 2: second coloring with eosin to clear sitoplasma, dehidration with alcohol 90 %,Mounting with Canada balsam.

Data analysis: Descriptive analysis compare with normal histology.

RESULTS

Picture 1. Showed the histological of Tractus digestivus part of ventriculus both of control group and treatment group.

1a.Ventrikulus, HE, 400X, control ( aquadest )
1b.Ventriculus, HE, 400X, 10 mg/200g BB (extract kejibeling)

Figure 1. Histological of ventriculus after intake extract of S. crispus for 9 weeks (1a. Control ; 1b 10 mg/200g BB).
Using HE coloring whole of ventriculus looked normal, both on control and treatment group also columnar cells are consist as the common epithelial cell in ventriculus looked normal.

Picture 2 showed the histological of duodenum part of tractus digestivus both of control and treatment group.

Figure 2. Histological of duodenum after intake extract of S. crispus for 9 weeks (2a. Control ; 2b. 10 mg/200g BB).

Using HE coloring whole of duodenum looked normal, both on control and treatment groups columnar cell were consist as the common epithelial cell in duodenum looked normal.

DISCUSSION

The formation of Renal stone and the predominant chemical stone composition are age and gender dependent. The formation also due to genetic and environmental factors. The changes in 2 of the most important environmental factors-diet and climate-have the most significant impact on these trends. Although genetic factors influence stone risk, changes in the gene pool occur at a slow rate. The increased consumption of starchy foods derived from corn promoted obesity, currently a known risk factor for stone formation. There is strong evidence that diminished fluid and calcium consumption are risk factors. Increased oxalate consumption has also been demonstrated to promote stone formation. Epidemiologic studies have demonstrated that increased sodium and animal protein intake have an equivocal impact on stone risk. Most stones are formed in older patients. However, clinical observations have indicated not only a changing frequency and composition of urinary calculi but also a shift in gender and age-related
incidences. Urinary stone disease remains rare in children with a stable overall incidence in most series. As in adults, factors implicated in the metabolic syndrome complex such as obesity pose risks for urinary stone formation in children.

*Strobilantus crispus* has Lethal dose 50 for ethanol extract greater than 600mg/Kg BB. The toxic sign observed in the toxicity study was reflected indirectly to the some tissue of organ and systems due to effect of intake oral S. crispus. Low doses 600mg/KgBB have not LD50 effect. Wahyjoedi et al (2003), reported that subcronik toxicity of ethanol extrcat kejibeling wasnot harm for rats, it was safe to consume for 3 months on 12.5 mg/100 gBW and 125 mg/100 gBBW. This study used normal dose for human, during 9 weeks consumed daily showed that there were not affect to histological of tractus digestivus Event in community is rare to use single kind of strobilanthus crispus leaf to destroy kidney stone. Sari dewi (2009), reported that infuse of leaf able to solve the kidney stone especially calcium oxalate invitro. The water infusion more effective to solve the calcium oxalate than fraction of water.

Strobilantus crispus has some important minerals such as Sodium, potasiun and populer as an alkaline properties. May be because of high potassium and sodium the calcium oxalate solved. This mechanism as hypothetic to propose how kejibeling leaf able to solve the kidney stone.

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2K^+ + CaC_2O_4^{4-} \rightarrow K^2C^2O_4^{4-} + Ca^{2+}
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CONCLUSION

*Strobilantus crispus* Extract on various doses (10 mb/200 gBW) were not influence histological of rat's tractus digestivus.Dose 10 mg/200gBW is was lower than LD50 of *Strobilantus crispus*.

REFERENCES