BOOK OF ABSTRACTS

International Conference
CARDIOVASCULAR DISEASES
CVD-IA
Integrated Approach From Basic, Clinical Science, Public Health and Bioethics

Yogyakarta, May 14-17, 2016

Abdul Kahar Muzakkir, Conference Hall
Universitas Islam Indonesia, Yogyakarta
UII Main Campus, Jl. Kaliurang KM 14.5 Sleman Yogyakarta
BOOK OF ABSTRACTS
INTERNATIONAL CONFERENCE
CARDIOVASCULAR DISEASES
Integrated Approach from Basic, Clinical Science, Public Health and Bioethics

Editor
Rahma Yuantari
Novyan Lusiana

Cover Design
Tri Suwarno

©2016 Faculty of Medicine, Islamic University of Indonesia

First edition, April 2016
All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher and Faculty of Medicine, Islamic University of Indonesia
# CONTENT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover page</td>
<td>i</td>
</tr>
<tr>
<td>Content</td>
<td>iii</td>
</tr>
<tr>
<td>Message from Conference</td>
<td>v</td>
</tr>
<tr>
<td>Dean Speech</td>
<td>vi</td>
</tr>
<tr>
<td>Rector Speech</td>
<td>vii</td>
</tr>
<tr>
<td>Conference Committee</td>
<td>ix</td>
</tr>
<tr>
<td>Scientific Programme</td>
<td>x</td>
</tr>
<tr>
<td>Abstract of Conference Speaker</td>
<td>xiii</td>
</tr>
<tr>
<td>Abstract of Free Paper - Oral Presentation</td>
<td>xiv</td>
</tr>
<tr>
<td>Abstract of Free Paper - Poster Presentation</td>
<td>xvii</td>
</tr>
</tbody>
</table>

*Abstract of Conference Speaker* ...........................................  1
*Abstract of Free Paper - Oral Presentation* ...........................................  19
*Abstract of Free Paper - Poster Presentation* ...........................................  51
CONFERENCE COMMITTEE

International Advisory Board

Prof. Dr. Abdul Rashid Abdul Rahman, PhD
CUMCS Malaysia, An Nur Hospital, Selangor, Darul Ehsan, Malaysia

Prof. Dr. Nadeem Afzal, MBBS, MSc., Ph.D UHS
Department Of Immunology University Of Health Sciences, Lahore, Pakistan

Prof. Dr. Med. rer. H. J. Freisleben
DIGM (Deutsch-Indonesische Gesellschaft für Medizin), Germany

Steering Committee
Linda Rosita, M.D, M.Kes., Sp.PK
Syaefudin Ali Akhmad, M.D, M.Sc
Erlina Marfianti, M.D, M.Sc., Sp.PD
Utami Mulyaningrum, M.D, M.Sc

Organising Committee
Putrya Hawa, M.D, M.Biomed
Ukhti Jamil Rustiasari, M.D, Sp.PA
Antari Retno Bintarti
Milda Khoirina M.D
Anny Hardiyah
Rahma Yuantari, M.D, M.Sc., Sp.PK
Novyan Lusiyana, M.D, M.Sc
Abd. Basith, M.D
Rokhimaw Lusiantari, M.D
Ana Fauziyati, M.D, M.Sc., Sp.PD
Fajar Alfa Saputra, M.D
Heru Sudjanto
Wibowo
Dimas Satya Hendarta, M.D
Sigit Dermawan
Ali Ubaidillah
Rahmansyah
Tri Suwarno
Sri Ngadilah
ABSTRACT OF
CONFERENCE SPEAKER

Keiichiro Yoshinaga, M.D., Ph.D, F.A.A.C.
BATTLING CARDIOVASCULAR DISEASE WITH NUCLEAR MEDICINE

Prof. Dr. Mohammad Iqbal Khan, MD; FRCS(Glasg); FRCS(Eng); DVS (UK); MHPE (Neth)
HYPERTENSIVE TEAR OF AORTA A SURGICAL EMERGENCY

dr. Eka Ginanjari, Sp.PD-KKV, FIBASIM, FACP, FICA
HEART FAILURE

dr. Nahar Taufik, Sp.JP (K) (will be provided in Proceeding Book)
NEW GUIDELINE IN ACUTE CORONARY SYNDROME MANAGEMENT

dr. Erika Maharani, Sp. JP (K)
THE ROLE OF CATHETER ABLATION IN ARRHYTHMIA MANAGEMENT

Prof. Dr. Abu Kholdun Al Mahmood, MBBS, Ph.D
METABOLIC SYNDROME AND CVD RISK FACTOR

Prof. Dr. dr. H. Rusdi Lamsudin, M.Med.Sc., Sp.S(K)
NEWEST EVIDENCE IN MANAGING ISCHEMIC STROKE

dr. Johan Kurnianda, Sp.PD-KHOM
ADVANCED RESEARCH HIGHLIGHT IN VENOUS THROMBOEMBOLISM

Prof Dr Abd Rahim Mohamad, MBChB, MScPH, MPH, FFPH, NorhafizahAbdul Manan, BSc (Biomedic)(Hons), MSc(MedStat).
PREVENTION OF CARDIOVASCULAR DISEASES IN A COMMUNITY

Prof. Dr. Mohammad Iqbal Khan, MD; FRCS(Glasg); FRCS(Eng); DVS (UK); MHPE (Neth)
MANAGEMENT OF CAROTID ARTERY DISEASE AND SPIRITUALITY
ABSTRACT OF
POSTER PRESENTATION

P-001
Miranti Dewi Pramaningtyas, Denny Agustiningsih, Setyo Purwono, Totok Utoro.
CHANGES ON AORTIC DIAMETER AND NUMBER OF ENDOTHELIN-B RECEPTOR IN AORTIC ENDOTHELIAL OF DIABETES MELLITUS RAT MODEL AFTER EXERCISE

P-002
Mahdea Kasyiva, Linda Rosita, Utami Mulyaningrum.
THE RELATIONSHIP BETWEEN ATHEROSCLEROSIS PLAQUE WITH NUMBER OF MONOCYTE IN BLOOD CELL OF THE WHITE RAT (RATTUS NORVEGICUS STRAIN WISTAR) THAT IS INDUCED BY ATHEROGENIC DIET

P-003
Jeli Jati Anggeria, Sufi Desrini.
THE EFFECT OF ALOE VERA JUICE AND GLIBENCLAMIDE COMBINATION IN DECREASING LDL AND INCREASING HDL BLOOD LEVELS ON THE DIABETIC DYSLIPIDEMIA RAT MODELS INDUCED BY STREPTOZOTOCINE AND NIKOTINAMIDE

P-004
Ferry Herdiyan Pratama, Ety Sari Handayani, Evi Sulistyoningrum.
THE EFFECT OF CENTELLA ASIATICA TO MYOCYTOLYSIS NUMBER ON RATS MYOCARDIUM CELLS WHICH INDUCED BY SODIUM NITRIT SUB-ACUTE.

P-005
BLACK SUGARCANE DECOCTION TO REDUCE RAT BRAIN ISCHEMIA

P-006
Aulia Rahma, Ety Sari Handayani.
THE EFFECTS OF SOURSOP LEAVES TO RATS MYOCYTOLYSYS NUMBER

P-007
Linda Roshita, Adika Zhulhi Arjana.
PROFILE OF CKMB AND TROPONIN I EXAMINATIONS IN PATIENTS WITH CHEST PAIN COMPLAINTS
P-008
Lin Novita Nurhidayati Mahmuda, Lucia Kris Dinarti, Nahar Taufiq.
CORRELATION LIPOPROTEIN (A) LEVEL WITH COMPLEXITY OF CORONARY LESION IN CORONARY HEART DISEASE PATIENT AT RSUP DR. SARDJITO YOGYAKARTA

P-009
Fajar Nursulistyo, Erlina Marfianti, Linda Rosita.
RELATIONSHIP BETWEEN URIC ACID LEVEL WITH CORONARY HEART DISEASE IN THE CHRONIC RENAL FAILURE PATIENTS IN RSUD SOEROTO NGAWI

P-010
Fitriani Taharu, Erlina Marfianti, Rahma Yuantari.
RELATIONSHIP BETWEEN TOTAL CHOLESTEROL WITH SEVERITY OF CORONARY HEART DISEASE IN PATIENTS OF RS PKU MUHAMMADIYAH YOGYAKARTA

P-011
Ikhlas Jenie, Adang Gugun.
A PRELIMINARY STUDY ON PLATELET REACTIVITY IN NORMOTENSIVE SUBJECTS WITH FAMILY HISTORY OF HYPERTENSION

P-012
Tjokorda Istri Pramitasuri, Arya Krisna Manggala, AA Ayu Dwi Adelia Yasmin.
HISTORY OF DIABETES MELLITUS (DM) AS A PREDICTOR OF MAJOR CARDIOVASCULAR EVENTS (MCE) AMONG ACUTE MYOCARDIAL INFARCTION (AMI) PATIENTS IN SANGLAH HOSPITAL, DENPASAR, BALI

P-013
Erlina Marfianti.
PROFILE OF CARDIOMETABOLIC STATUS IN ELDERLY POPULATION AT POSYANDU OF ELDERLY KOTAGEDE YOGYAKARTA

P-014
Ika Ariyati, Utami Mulyaningrum, Ana Fauziyati.
ASSOCIATION OF ABO BLOOD GROUP WITH CHOLESTEROL LEVEL AMONG HYPERTENSIVE PATIENTS IN PUSKESMAS PANJATAN 1 KULON PROGO

P-015
Erlina Marfianti, Isnatin Miladiyah.
EFFECT OF INSULIN RESISTANCE TO INCREASE SYSTOLIC AND DIASTOLIC BLOOD PRESSURE IN THE OBESE PATIENTS

P-016
Rima Nur Rahmawati, Pradhana Satria Pinandhita, Lya Vianda Putri, Husna Nadiyya.
ANALYSIS OF RELATIONSHIP BETWEEN DURATION OF SEATED AND HIGH BLOOD
PRESSURE ON EMPLOYEES: CASE CONTROL STUDY AT FACULTY OF MEDICINE ISLAMIC UNIVERSITY OF INDONESIA

P-017

Halida Hasyati Aima, Refa Nabila, Nur Fitriyani, Sena Ananta Putra, Akmalu Rijal Afifullah Azis.
CORRELATION BETWEEN HABITUAL FASTING WITH BLOOD PRESSURE ON MALE STUDENT OF MEDICAL FACULTY ISLAMIC UNIVERSITY OF INDONESIA

P-018

ASSOCIATED COFFEE CONSUMPTION WITH BLOOD PRESSURE IN THIRD YEAR MEDICAL STUDENT OF ISLAMIC UNIVERSITY OF INDONESIA

P-019

Ivan Dwi Saputro, Siti Solichatul Makkiiyah, Dwi Dhita Emelia, Indra Ayu Mugihariyani, Aprilia Arifiyanti, Ana Fauziyati.
THE ASSOCIATION BETWEEN THE WAIST CIRCUMFERENCE TO BLOOD PRESSURE ON MEN AND WOMEN STUDENTS OF THE FACULTY MEDICINE INDONESIAN ISLAMIC UNIVERSITY 2013

P-020

Fitri Rachmawati Putri, Galuh Nafisa Nastiti, Farah Az Zahra, Rifan Farisqi, Bima Ananta Putra.
THE ASSOCIATION OF STUDENTS WHO JOIN AND NOT JOIN SPORT ACTIVITY CLUB WITH RESTING HEART RATE IN MEDICAL STUDENTS BATCH OF 2013 UNIVERSITAS ISLAM INDONESIA

P-021

I Gusti Ayu Nyoman Danuyanti, Tasmini, Ahmad Hamim Sadewa.
LOW PREVALENCE OF DISTAL RENAL TUBULAR ACIDOSIS (DRTA) AMONG SOUTHEAST ASIAN OVALOCYTOSIS (SAO) PATIENTS IN SEKOTONG, LOMBOK ISLAND

P-022

Yogi Agung Prima Wardhana, Ricardo Adrian Nugraha, Michael Jonatan.
TOPICAL GENTIAN VIOLET AS TRIPLE DYE IN COMBINATION WITH ROBOTIC SURGERY FOR REDUCING RISK OF PERIOPERATIVE SURGICAL SITE INFECTION DURING PEDIATRIC ROSS PROCEDURE

P-023

Ricardo Adrian Nugraha, Michael Jonatan, Rina Yudiwati.
BETTER ANATOMICAL IMAGING FOR ATHEROSECLEROSIS VIRTUAL RISK ASSESSMENT:
SYSTEMATIC REVIEW ABOUT ACCURACY OF ANGIOGRAPHY VS INTRA VASCULAR ULTRA SOUND (IVUS) IN DETECTING SUBCLINICAL CORONARY ARTERY DISEASE

P-024
Yogi Agung Prima Wardhana, Ricardo Adrian Nugraha, Dwika Novendrianto, Lukman Raya Praja
STUDY COMPARISON BETWEEN SAFETY OF USING LEVOBUPIVACAINE AS SPINAL ANESTHETIC COMPARED TO LOCAL ANASTHETIC AND EPIDURAL ANESTHETIC IN ENDOVASCULAR ANEURYSM REPAIR (EVAR) IN PATIENT WITH ABDOMINAL AORTICANEURYSM

P-025
Arief Rachman
SUSCEPTIBILITY WEIGHTED MAGNETIC RESONANCE IMAGING, AN ADDITIONAL SEQUENCE IN STROKE IMAGING

P-026
Ricardo Adrian Nugraha, Michael Jonatan.
HYDROTHERMAL NON-LINEAR WAVES (HNLW) USING BEKKI-NOZAKI AMPLITUDE HOLES EQUATION AS A CLINICAL NON-INVASIVE PREDICTOR FOR INTERVENTRICULAR SEPTUM WALL DYSFUNCTION RELATED TO CARDIAC EXCITATION

P-027
Yanasta Yudo Pratama, Nurul Hidayah, Susan Indriani.
THE USE OF GAMMA KNIFE AS LATEST INNOVATION IN NUCLEAR MEDICINE FOR TREATING ARTERIOVENOUS MALFORMATION

P-028
Ricardo Adrian Nugraha, Michael Jonatan, Tan Nicko Octora, Rina Judiawati.
EVIDENCE-BASED INTRACORONARY ADMINISTRATION OF GPIIB/III A INHIBITOR FOR REDUCING NO-REFLOW PHENOMENON AND IMPROVING TIMI FLOW FOR MYOCARDIAL SALVAGE DURING PRIMARY PERCUTANEOUS CORONARY INTERVENTION

P-029
Yosi Ridinal Fitra, Titis Nurmasitoh, Miranti Dewi Pramaningtyas.
THE CORRELATION BETWEEN PHYSICAL ACTIVITY AND PHYSICAL FITNESS OF STUDENTS IN THE FACULTY OF MEDICINE, ISLAMIC UNIVERSITY OF INDONESIA, BY USING BLEEP TEST

P-030
Evy Sulistyoningrum, Susiana Candrawati
12-WEEKS PROGRAMMED AEROBICS DANCE REDUCED BODY MASS INDEX AND WAIST CIRCUMFERENCE OF YOUNG WOMEN
P-031
Ricardo Adrian Nugraha, Radityo Bagus Wicaksono, Tan Nicko Ocotra, Rina Judiwati.
OUTCOME OF 1-YEAR TRANSCATHETER AORTIC VALVE IMPLANTATION VERSUS SURGICAL AORTIC VALVE REPLACEMENT IN SEVERE SYMPTOMATIC AORTIC STENOSIS PATIENTS: FOCUSING ON POST-PROCEDURAL NEW ONSET ATRIAL FIBRILLATION, CRYPTOGENIC STROKE, AND CARDIOVASCULAR DEATH

P-032
Nurdin Rahman, Muh. Ryman Napirah, Hartika Paulani.
THE CORRELATION BETWEEN OBESITY AND PHYSICAL ACTIVITY AND HYPERTENSION INCIDENCE OF INPATIENT AT ANUTAPURA PUBLIC HOSPITAL IN PALU

P-033
Inandra Yogi, Nur Aisyah Jamil and Titis Nurmasithoh.
FACTORS INFLUENCING THE PHYSICAL FITNESS INDEX OF CV AUFLARUNG EMPLOYEES YOGYAKARTA USING MC ARDLE STEP TEST

P-034
Anna Suraya, Astrid Sulistomo.
APPLYING SEVEN STEPS OF RETURN TO WORK IN MYOCARDIAL INFARCTION AFTER PERCUTANEOUS TRANLUMINAL CORONARY ANGIOGRAPHY TREATMENT

P-035
OUTCOME DIFFERENCES OF THE GOAL SYSTOLIC BLOOD PRESSURE <120 MMHG AND <140 MMHG IN THE TREATMENT OF HYPERTENSION: CRITICAL APPRAISAL FROM JNC 8 GUIDELINES TAKE HOME MESSAGES

P-036
Syaefudin Ali Akhmad.
TREND OF CARDIOVASCULAR DISEASES IN INDONESIA: ISLAMIC BIOETHICS PERSPECTIVE

P-03 Suyanto Suyanto.
CARDIOVASCULAR DISEASES – A CAUSE TO WORRY IN INDONESIA WHAT PUBLIC HEALTH POLICY MAKER CAN DO?

P-038
BIOETHICS ASPECT OF NATIONAL HEART CENTER IN INDONESIA
Handayani Dwi Utami.
FINGERPRINT PATTERNS IN HYPERTENSION, COULD BE A NON INVASIVE DIAGNOSTIC TOOLS?

Sani Rachman Soleman.
NOISE INDUCED HYPERTENSION IN COMMUNITY SETTING

Fikri Wahyudi, Wahda Syafa Adella, Putry Bayu Rini, Rachmi Hidayati Pattimura.
ARTICLE REVIEW: CIGARETTES SMOKING RISK FACTOR RELATED TO HYPERTENSION

Muhammad Zaky Hardianto, Nimas Ayu Nirwanti, Agitya Setya Yogaswara, Anindya Cintantya Prasidya, Vina Fathiyatul Inayah.
RELATIONSHIP BETWEEN BODY MASS INDEX AND BLOOD PRESSURE STUDY OF LITERATURE REVIEW

Aquarna Firda, Muhammad Roydh, Laila Firdausi.
CORRELATION INSOMNIA WITH HYPERTENSION

Ria Wijaya, Detia Ilman, Muhammad Bahdar, Sholihatun Mardain, Merisa Putri.
THE RISK FACTORS OF HYPERTENSION

Isna Maulida Hanum, Muhammad Ilham Agung Nugroho, Galih Putro Dewantoro, Septantri Handayani, Irbi Eki Habibi.
A LITERATURE REVIEW OF THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND THE OCCURRENCE OF ATHEROSCLEROSIS

Indra Wahono, Faizia Maulida, Faqih Shintani, Talitha Alpha.
RELATIONSHIP OF DEPRESSION AND BLOOD PRESSURE IN THIRD YEAR MEDICAL STUDENTS ISLAMIC UNIVERSITY OF INDONESIA

Kiki Faradina Ardiyanti, Ninda Ariesta, Barbarani Satriyani Hayyu, Daris Riandi Januriyanta, Inge Nolla Purwita Siwi.
CORRELATE BETWEEN COFFEE CONSUMPTION AND HEART RATE IN THIRD-YEAR MEDICAL STUDENT FROM ISLAMIC UNIVERSITY OF INDONESIA.
P-048
Yosy Ridinal Fitra, Malombassi Dharmawan Hadiwijoyo Hutomo, Amiroh Dewi Kartika, Destika Pumamasari, Asri Ayuning Kusuma, Andra Gita Arumsari.
THE CORRELATION BETWEEN BODY MASS INDEX (BMI) AND CARDIOPULMONARY FUNCTION WHICH IS MEASURED BY A BLEEP TEST (PHYSICAL PERFORMANCE TEST)

P-049
Ana Fauziyati.
CARDIOVASCULAR PHYSIOLOGY AND CARDIOVASCULAR DISEASE MANAGEMENT IN PREGNANCY

P-050
Ika Fidianiingsih.
EFFECT OF RAMADAN FASTING ON OXIDATIVE STRESS PARAMETERS AS THE PREVENTION OF CARDIOVASKULER DISEASES: A MINI REVIEW

P-051
Amanda S D Hertika, Athaya H N Fahsa, Roby Cahyono, Muhammad S Pradipta, Charisma I Pratama.
THE EFFECTS OF RAMADAN FASTING TO BLOOD PRESSURE: A REVIEW

P-052
Farida Juliantina Rachmawaty.
BACTERIA THAT CAUSED RHEUMATIC HEART DISEASE

P-053
Titiek Hidayati, Ardi Pramono, Ikhlas Muhammad Jenie.
DEVELOPMENT OF HUMAN ENDOTHELIAL CELL CULTURE METHOD (HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS) FOR RESEARCH ANTI-AGING CARDIOVASCULAR

P-054
Roby Cahyono, Siti Solichatul Makkiyyah.
THE DIFFERENCE OF STEM CELL TYPE ON STEM CELL THERAPY IN CARDIOREGENERATIVE STUDY

P-055
Achmad Bima Aryaputra, Reza Fanani, Hefson Agung D Frinces, Ainunnisa Zsa Zsa Fitria Rozana
AUTOTRANSPLANTATION OF CARDIAC VALVE WITH AUTOLOG PERICARDIUM AS A SOLLUTION FOR CONTRAINDICATION TO ANTICOAGULANT

P-056
Rima Nur Rahmawati, Roby Cahyono, Fanana Firdaus.
THE DIFFERENCE OF STEM CELL DELIVERY ON STEM CELL THERAPY IN CARDIOREGENERATIVE STUDY
P-057
Yoanda Aniska Berasila Siregar, Ratna Rahmi Asih, Astri Anindita Utomo, Naela Nabila, Nadhifah Khairunnisa.
THE EFFECT OF CONSUMING YOUNG COCONUT WATER IN HYPERTENSION REDUCTION

P-058
Faradina Puspita Sarl, Dria Nur Fathan, Raihan Arrachman.
POMEGRANATE EFFECT ON HIPERTENSION

P-059
POTENTIAL OF CHERRY LEAVES (MUNTINGIA CALABURA) EXTRACT FOR PREVENT CORONARY HEART DISEASE

P-060
Annisa Faradilla, Cempaka Jaga Paramudita, Dwi Ana Setyawati, Muthmainnah K Hamid.
THE POTENCY OF ROSMARINIC ACID ON JINTAN TREE'S TRUNK (PECTANTHRUS AMBOINICUS) METHANOL EXTRACTION TO INHIBIT THE OXIDATION OF LDL IN THE ATHEROSCLEROSIS PLAQUE FORMATION AS THE ATTEMPT TO PREVENT CORONARY HEART DISEASE: STUDY OF LITERATURE REVIEW

P-061
Faisal Ridho Sakti, Dian Yuliarmi, Galvin Giffari Grenaldi S, Shen Novita Irjayanti.
ROSELLA (HIBISCUS SABDARIFFA L) TEA AS HEALTH DRINK TO PREVENT CARDIOVASCULAR DISEASE

P-062
Adhika Rahman, Vitia Ajeng Nur Linda.
POTENTIAL ANALYSIS OF ZALACCA (ZALACCA EDULIS REINW) SAP IN ANTIBACTERIAL XYLITOL GUM FOR REDUCE PERIODONTAL DISEASE TO PREVENT INFECTIVE ENDOCARDITIS

P-063
Helmi Zunan Tanuwijaya, Faishal Majid.
THE POTENTIAL OF OMEGA-3 (EPA AND DHA) IN SQUID EYE FOR CARDIOVASCULAR DISEASE (CVD) PREVENTION

P-064
Yusa Muhammad Thoriq, Zulfikar Loka Wicaksana .
GARLIC AS ETHNOMEDICINE FOR CARDIOVASCULAR DISEASE
P-065
Adhika Rahman, Teguh Sulistiyanto, Wulan Sari Tias Nuraini, Nabila Rachmi Nuzulia Badami.
POTENCY OF MICROENCAPSULATED RETINOIC ACID TO PREVENT MYOCARDIAL FIBROSIS VIA MICRO RNA-21 EXPRESSION AS ONE OF THERAPEUTIC MODALITY FOR ACUTE MIOCARDIAL INFARCTION

P-066
Galih R. Muchamad, Sabila A. Prabawani, Taufiq P. Wijayanto.
DINOCAPSULE (DIABETIC NEUROPATHY CAPSULE): USAGE OF ALDOSE REDUCTASE “DIFFERENTIONAL” INHIBITOR IN WITH ANTIOXIDANT ON ALLIUM SATIVUM IN MICROCAPSULE FOR HANDLING DISTAL NEUROPATHY IN DIABETES MELLITUS TYPE 2 PATIENTS

P-067
Fanana Firdaus, M Taqwauadin M.
THE POTENTIAL OF RESVERATROL AS CARDIOPROTECTIVE LINKED TO PREVENTION OF ATEROGENESIS

P-068
Dany Martha Pradipta, Hidayaning Nur Syahbania, Latifah Latifah, Bella Ratna Anggraini, Hajar Admira Widiatninda.
THE CORRELATION BETWEEN METFORMIN AND DECREASED BLOOD PRESSURE IN DIABETES MELLITUS WITH HYPERTENSION: A LITERATURE REVIEW

P-069
ANALYSIS OF CALCULUM CHANNEL BLOCKER USAGE FOR INFARCT MYOCARDIUM TREATMENT: A REVIEW ARTICLE

P-070
Sausan Fanana, Asrhafi Mustika Effendi, Dellarious Benefit Yubaidi.
REVIEW ARTICLE: THE EFFECTIVENESS BETWEEN INDOMETHACIN, IBUPROFEN, AND PARACETAMOL AS TREATMENT FOR PATENT DUCTUS ARTERIOSUS CLOSURE IN NEONATES
BACTERIA THAT CAUSED RHEUMATIC HEART DISEASE

Farida Juliantina Rachmawaty
Microbiology Department, Faculty of Medicine, Islamic University of Indonesia

Rheumatic Heart Disease (RHD) is a disease of the heart as a result of residual symptoms (sequelae) of Rheumatic Fever (RF), which marked the occurrence of heart valve defects. Rheumatic fever is an autoimmune disease that attacks the multi system due to infection of *Streptococcus* group A ã-hemolyticus of the pharynx (pharyngitis). These bacteria usually attack children and young adults. Rheumatic fever causes inflammation that usually occurs in the heart, skin and connective tissue. In endemic areas, 3% of patients with pharyngitis by *Streptococcus* develop rheumatic fever within 2-3 weeks after the infection of the upper respiratory tract. Approximately 40-60% of patients experience acute rheumatic fever that develops into Rheumatic Heart Disease. The bacteria are believed as *Streptococcus* ã-hemolyticus group A. This bacterium is a gram-positive bacteria, cocci shaped with the trademark arranged like a chain on microscopic examination. The length of the chain is highly variable and influenced by environmental factors. The chain will be longer in liquid medium rather than in solid medium. The bacteria can do hemolysis to the blood perfectly so that the seed so that the blood look like a clear area around the colony. Protein M, virulence factors found in the cell walls of *Streptococcus* group A ã-hemolyticus, has similarities with the structural protein in the myocardium, heart valves, synovial, skin and sub thalamic that causes cross-reactions.

Keywords: Rheumatic Heart Disease, rheumatic fever, *Streptococcus* ã-hemolyticus
CERTIFICATE
SKP IDI No. 011/IDI/WIL.DIY/SKP/I/2016
January 25, 2016 | Participant: 14 SKP | Speaker: 10 SKP | Moderator: 4 SKP | Committee: 2 SKP

This is to certify that:

Dr. dr. Farida Juliantina Rachmawaty, M.Kes

has successfully participated in:

Participant in Poster Presentation

INTERNATIONAL CONFERENCE ON CARDIOVASCULAR DISEASES
INTEGRATIVE APPROACH FROM BASIC, CLINICAL SCIENCE, PUBLIC HEALTH AND BIOETHICS (CVD-IA)
FACULTY OF MEDICINE, ISLAMIC UNIVERSITY OF INDONESIA
YOGYAKARTA, MAY 14-17, 2016

Conference Chair,
dr. Putra Fauzi, M.Biomed
Bacteria That Caused Rheumatic Heart Disease

Farida Juliantina Rachmawaty
Microbiology Department, Faculty of Medicine, Islamic University of Indonesia
faridajulli@gmail.com

Rheumatic Heart Disease (RHD) is a disease of the heart as a result of residual symptoms (sequelae) of Rheumatic Fever (RF), which marked the occurrence of heart valve defects. Rheumatic fever is an autoimmune disease that attacks the multi system due to infection of Group A Streptococcus β-hemolyticus (GAS) of the pharynx (pharyngitis). These bacteria usually attack children and young adults. Rheumatic fever causes inflammation that usually occurs in the heart, skin and connective tissue. In endemic areas, 3% of patients with pharyngitis by Streptococcus develop rheumatic fever within 2-3 weeks after the infection of the upper respiratory tract. Approximately 40-60% of patients experience acute rheumatic fever that develops into Rheumatic Heart Disease.

The bacteria are believed as Group A Streptococcus β-hemolyticus. This bacterium is a gram-positive bacteria, cocci shaped with the trademark arranged like a chain on microscopic examination. The length of the chain is highly variable and influenced by environmental factors. The chain will be longer in liquid medium rather than in solid medium. The bacteria can do hemolysis to the blood perfectly so that the seed so that the blood look like a clear area around the colony.

Figure 1. Rheumatic mitral stenosis. Cross-sectional view of the base of the heart showing the 4 valves. The mitral valve (a left-sided heart valve; identified by arrows) has 2 leaflets around an orifice through which it allows blood flow from the upper chamber (atrium) to the lower chamber (ventricle). On the left-hand side is a normal mitral valve with normal leaflets, whereas on the right-hand side a mitral valve narrowed as a result of rheumatic heart disease is depicted. Note how the orifice is severely narrowed as a result of abnormal thickening and fusion of the valve leaflets. Obstruction to blood flow through the narrowed orifice results in symptoms as heart failure or stroke. Reproduced with permission from A.D.A.M. Inc. (Mirabel, 2014)

Figure 2. Group A Streptococcus β-hemolyticus. A. S. pyogenes on Columbia agar with 5% defibrinated sheep blood, 24 hours in an aerobic atmosphere, 37°C. Colonies are surrounded by a wide zone of beta-hemolysis. B. Streptococcus is seen with an electron microscope.

M-protein, virulence factors found in the cell walls of Group A Streptococcus β-hemolyticus, has similarities with the structural protein in the myocardium, heart valves, synovial, skin and subthalamic that causes cross-reactions. M-protein contributes to invasiveness through its ability to impede phagocytosis of streptococci by human polymorphonuclear leukocytes (PMNL). Conversely, type specific antibody against the M-protein enhances phagocytosis. Following infection with a particular M-type, specific antibody confers resistance to challenge with viable GAS of that M-type. Recently, Boyle has shown that GAS protease cleaves the terminal portion of the M-protein, rendering the organism more susceptible to phagocytosis by normal serum but more resistant to phagocytosis in the presence of type specific antibody. While M types 1 and 3 strains have accounted for the vast majority of strains isolated from cases of Streptococcal Toxic Shock Syndrome (StrepTSS), many other M types.