



16th ASIA-OCEANIA
CONGRESS OF
ENDOCRINOLOGY



Endocrinology and Environment

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2018



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WELCOME MESSAGE

It is truly a great pleasure for me to welcome you all to the 16th Asia-Oceania Congress of Endocrinology held at this historical city of Yogyakarta. The theme chose from 2018 AOCE is Endocrinology and Environment.

It has been a great experience to organized this important meeting, thank you to all committee members that have work very hard in these past 12 months and also thank you for the support from following organizations: The ASEAN Federation of Endocrine, The International Society of Endocrinology and The Indonesian Society of Endocrinology. Our sincere thanks also goes to all participant and our partners in pharmaceutical and medical equipment industry – thank you for all the support.

Prof. Ketut Suastika, MD, PhD
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TABLE CONTENT

Proceeding Book16 th Asia-Oceania Congress Endocrinology (AOCE) 2018	i
Welcome Message	ii
Table Content	iii
Scientific Schedule	iv

WORKSHOP 1 ADRENAL AND PITUITARY

Hypoadrenalism – Recognition and Management	013
Aung Cho Myint The Role of Nuclear Medicine in the Management of Differentiated Thyroid Carcinoma	014
Johan S. Masjhur Surgical Aspect in Diabetic Foot Ulcer	015
Akhmadu Muradi Offloading and Orthotic Prosthetic Technique in Diabetic Foot	016
Sri Wahyudati	

WORKSHOP 5 OBESITY AND HORMONE

The Effect of Exercise on Hormonal Changes that Play a Role in Obesity	017
Rachmad Wishnu Hidayat Nutrition Management in Obesity; Diet Types (Ketogenic vs Mediterranean) in Obesity	018
Yuanita Asri Langi Surgical Intervention in Obesity; focus on Surgery for Diabetes	020
Peter Ian Limas	

WORKSHOP 6 THYROID INTERVENTION

Thyroid Sonography in the Endocrinology Perspective	021
Harli Amir Mahmudji Role of Radiofrequency Ablation for Thyroid Nodules: From Opportunity to Challenges	022
Hendra Zufry	

TABLE CONTENT

WORKSHOP 7 DIAGNOSTIC AND MANAGEMENT OF OSTEOPOROSIS

Calcium Metabolism	023
Nyoman Kertia Risk Factors for Osteoporosis	025
Roy Panusunan Sibarani	

MEET THE EXPERT 1: EPIGENETIC IN ENDOCRINOLOGY

Mitochondrial Epigenetics in Obesity and Diabetes Mellitus	030
Safarina G. Malik and Sukma Oktavianthi Epigenetic-related Endocrinology	031
Tjin-Shing Jap	

MEET THE EXPERT 2: INTEGRATED DIABETES MANAGEMENT

Environmental Risk Factors for Type 2 Diabetes and Cardiovascular Disease	032
Sidartawan Soegondo	

SATELLITE SYMPOSIA 1: MULTI FACETED APPROACHES TO TREATING TYPE 2 DIABETES

Where do DPP4 Inhibitors Fit within Today's Treatment Paradigm for Patients with Type 2 Diabetes?	034
Made Ratna Saraswati	
Clinical Considerations in the Individualized Treatment of Patients with Type 2 Diabetes?	041
Roy Panusunan Sibarani	

MEET THE EXPERT 3: ENVIRONMENTAL ENDOCRINOLOGY

Environmental Chemicals & Disruption of Hormone Action: Representative Thyroid Hormone Disrupting	
---	--



TABLE CONTENT

Chemicals.....	045
Noriyuki Koibuchi Endocrine Disruptors on Fertility	046
Kai-Fai LEE Endocrine Disruption in Daily Life	047
Djoko Wahono Soeatmadji	

MEET THE EXPERT 4: ENDOCRINOLOGY AND BONE DISEASES

Bone as an Endocrine Organ	048
Heri-Nugroho HS Bone and Diabetes	050
Dyah Purnamasari	

MEET THE EXPERT 5: ADRENAL AND HYPOPHYSIS DISORDER

Molecular Basis of Congenital Adrenal Diseases.....	051
Satoshi Narumi Adrenal Crisis	052
Hye Soon Kim Stereotactic Therapy in Hypophysis Tumor.....	053
Soehartati A. Gondhowiardjo	

PLENARY LECTURE 1: RECENT ADVANCES IN ENDOCRINOLOGY

Recent Advances in Thyroid Disease: A selection of significant publications since the 2015 International Thyroid Congress.....	054
Duncan J Topliss Factors Predicting Treatment Outcomes of Acromegaly	056
Eun Jig Lee	

TABLE CONTENT

WORKSHOP 7 DIAGNOSTIC AND MANAGEMENT OF OSTEOPOROSIS

Calcium Metabolism	023
Nyoman Kertia Risk Factors for Osteoporosis	025
Roy Panusunan Sibarani	

MEET THE EXPERT 1: EPIGENETIC IN ENDOCRINOLOGY

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MEET THE EXPERT 2: INTEGRATED DIABETES MANAGEMENT

Environmental Risk Factors for Type 2 Diabetes and Cardiovascular Disease.....	032
Sidartawan Soegondo	

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Environmental Chemicals & Disruption of Hormone Action: Representative Thyroid Hormone Disrupting	
---	--



TABLE CONTENT

Chemicals.....	045
Noriyuki Koibuchi Endocrine Disruptors on Fertility	046
Kai-Fai LEE Endocrine Disruption in Daily Life	047
Djoko Wahono Soeatmadji	

MEET THE EXPERT 4: ENDOCRINOLOGY AND BONE DISEASES

Bone as an Endocrine Organ	048
Heri-Nugroho HS Bone and Diabetes.....	050
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MEET THE EXPERT 5: ADRENAL AND HYPOPHYSIS DISORDER

Molecular Basis of Congenital Adrenal Diseases.....	051
Satoshi Narumi Adrenal Crisis	052
Hye Soon Kim Stereotactic Therapy in Hypophysis Tumor.....	053
Soehartati A. Gondhowiardjo	

PLENARY LECTURE 1: RECENT ADVANCES IN ENDOCRINOLOGY

Recent Advances in Thyroid Disease: A selection of significant publications since the 2015 International Thyroid Congress.....	054
Duncan J Topliss Factors Predicting Treatment Outcomes of Acromegaly	056
Eun Jig Lee	

TABLE CONTENT

PLENARY LECTURE 2:

IMPLEMENTING OF THYROID CANCER GUIDELINES & GUT MICROBIOME AND DIABETES

Implementing Guidelines of the management of DTC.....	057
Young Kee Shong Gut Microbiota and Metabolites: in Chronic Low-Grade Inflammation and Novel Strategy for Obesity Prevention and Treatment.....	058
Rina Agustina	

SATELLITE SYMPOSIUM 3 SHAPING DECISION-MAKING IN TYPE 2 DIABETES

Diabetes Mellitus and Cardiovascular Disease: The Unmet Needs.....	059
Nanny NM Soetedjo New SGLT2 Inhibitor: Empagliflozin - Linking Type 2 Diabetes Medication Cardiovascular Outcome.....	060
Soebagijo Adi Soelistijo	

SATELLITE SYMPOSIUM 4 CARDIOVASCULAR OUTCOME TRIALS IN SGLT2-I AND STATIN

One Decade of Cardiovascular Outcome Trials (CVOT) on Diabetes Drugs: Is It Beneficial for Patients?	061
Tri Juli Edi Tarigan	

SATELLITE SYMPOSIUM 4 CARDIOVASCULAR OUTCOME TRIALS IN SGLT2-I AND STATIN

The Role of Pitavastatin in Reducing Cardiovascular Events.....	064
Budi Yuli Setianto	

MEET THE EXPERT 6: THYROID DISORDER

The Role of Immunological Factors with Clinical Activity Score and Degree of Severity of Graves Ophthalmopathy.....	065
Imam Subekti Anti-Thyroid Drugs Therapy w/s Thyroid I-131 Ablation: Cost Effectiveness and Safety.....	067
Muhammad Yazid Jalaludin	



TABLE CONTENT

Radioactive Iodine Therapy in Hyperthyroidism.....068
Emerita Andres-Barrenechea

MEET THE EXPERT 7: GROWTH AND DEVELOPMENT

Clinical Evaluation of Children with Short Stature.....071
Suryono Yudha Patria
 Growth hormone as a metabolic regulator in Liver.....072
Dong-Sun Kim
 Delayed Puberty.....073
Maki Fukami

MEET THE EXPERT 8: MULTIPLE ENDOCRINOPATHY

Endocrine malignancy – focusing on hereditary tumors.....074
Akihiro Sakurai
 Optimized Management of Hyperprolactinemic Pituitary Adenoma.....075
Eun Jig Lee

PLENARY LECTURE 3

Generation of Pancreatic Beta Cells from Human IPS Cells.....076
Shoen Kume
 Patient Safety & Medical Ethics in Stem Cell Therapy.....077
Ismail Hadisoebroto Dilogo

LUNCH SYMPOSIUM

NEW ERA IN TYPE 2 DIABETES MANAGEMENT WITH INSULIN ULTRA-LONG ACTING

The Association of Hypoglycemia and Outcome in T2DM: The Hypo Triad-Should it be a concern?.....079
Ketut Suastika
 Innovation and the Need for Next Generation insulin - Where are we?.....080

TABLE CONTENT

PANEL DISCUSSION

TOWARD OF THE STANDARDIZATION OF CURRICULUM ENDOCRINOLOGY IN ASIA-OCEANIA REGION

Standardization of Competencies in Myanmar.....082
Than Than Aye

MEET THE EXPERT 9:

THE ISSUE OF CARDIOVASCULAR DISEASE IN METABOLIC SYNDROME FROM CHILDHOOD TO ADULT

Early Adiposity Rebound and Cardiometabolic Diseases in The Future: Early Detection and Prompt Treatment.....083
Damayanti Rusli Sjarif
 Empa-Reg, Leader, Sustain-6 & Canvas : Lingered Issues in Recent Cardiovascular Outcome Trials (CVOT) in Diabetes Mellitus?.....084
Nor Azmi
 Thinking Like Pancreas.....085
Takashi Akamizu

MEET THE EXPERT 10: SEXUAL DISORDER

Molecular Basis of Disorders of Sex Development.....086
Maki Fukami
 Hormon Treatment for Transgender.....087
Thiti Snabboon
 Bridging the Gap during the Transition Time in Endocrine.....088
Dr Muhammad Yazid Jalaludin
 Diabetes in the Young.....089
Lee Yung Seng

ORAL PRESENTATION POSTER

091
127

FP 03

Development of Gel Formulation of *Merremia Mammosa* (LOUR.) Water Fraction as a Topical Drug on Diabetic Wound Healing Treatment

Ancah Caesarina Novi Marchianti

Background: Treatment of diabetic ulcer is quite difficult, because of the defective of blood vessels and bacterial infection. Water fraction of *Merremia mammosa* (LOUR.) extract that contains flavonoids proven to have potential antioxidant that helps the wound healing process in our previous study. Therefore, it is potential to be developed further as a topical drug. This study aims to develop gel formulation of *Merremia mammosa* (LOUR.) water fraction and searching the most potent gelling agent in wound healing treatment of diabetic rat model.

Methods: This experimental study used forty-five male Wistar rats that were made diabetic by intraperitoneal injection of 40 mg/kg body weight streptozotocin. Rats divided into five groups, which consist of positive control (gentamicin 0.1%), negative control (aquadest) and 10% of the water fraction of *Merremia mammosa* (LOUR.) extract in each 1.5% base (HPMC, Carbopol, CMC Na). Wound was made by Morton method and treatment applied on the wound every other day for 25 days. Wound healing process were observed by calculating the percentage of reduction in wound size. Data were described and analyzed further using appropriate statistic tools.

Results: The percentage of reduction in wound size comparison showed differences in every base gelling agent when compared with negative control. This study showed that among the three bases, HPMC had the fastest healing rate in relevant with the highest bioavailability. This result proved that the HPMC provides the highest release rate compared with gel which used Carbopol or CMC Na base.

Conclusion: Gel formulation of *Merremia mammosa* (LOUR.) water fraction accelerated the process of wound healing in diabetic rat model and the most effective base to be developed as topical drug was HPMC.

Finding: Gel formulation of *Merremia mammosa* (LOUR.) water fraction in HPMC base potential to be developed as a topical drug on diabetic wound healing treatment.

Keywords: *Merremia mammosa* (LOUR.), gelling agent, wound healing, diabetic ulcer

Participant code: R-0103

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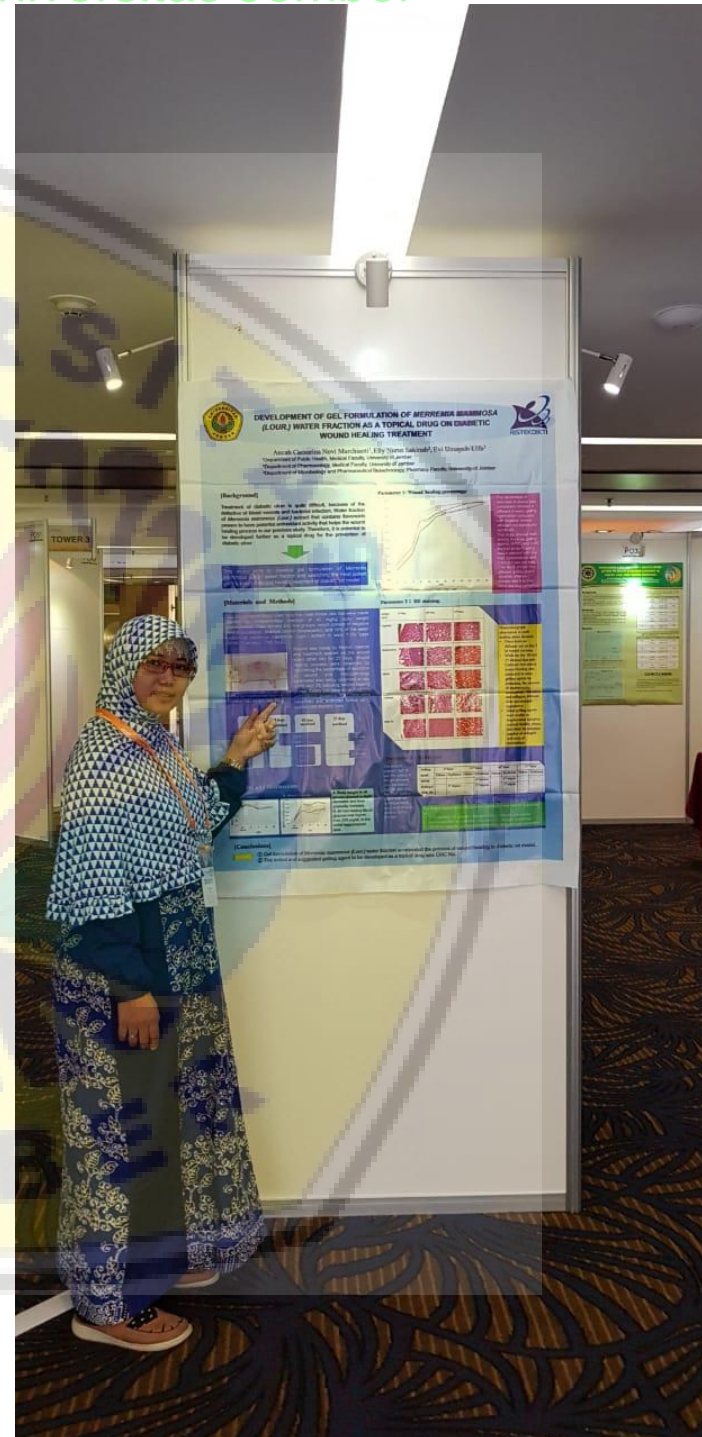
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Certificate of Attendance

This is to certify that

Ancah Caesarina Novi Marchianti, MD

has participated as

POSTER PRESENTER

“Development of Gel Formulation of Merremia Mammosa (LOUR.) Water Fraction as a Topical Drug on Diabetic Wound Healing Treatment”

SYMPOSIUM

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Endocrinology and Environment

28th - 30th September 2018

Royal Ambarrukmo Hotel, Yogyakarta - Indonesia

Prof. Achmad Rudijanto, MD, PhD

Advisor

Past President of Indonesian Society of Endocrinology

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