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# **MSPP 34th SCIENTIFIC MEETING 2021**



**MALAYSIAN SOCIETY  
OF PHARMACOLOGY  
AND PHYSIOLOGY  
(MSPP)**

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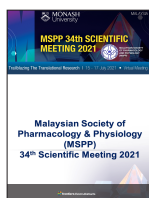
## **Malaysian Society of Pharmacology & Physiology (MSPP) 34<sup>th</sup> Scientific Meeting 2021**

# **MALAYSIAN SOCIETY OF PHARMACOLOGY & PHYSIOLOGY (MSPP) - 34<sup>TH</sup> SCIENTIFIC MEETING 2021**

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## **Welcome to the 34<sup>th</sup> MSPP Scientific Meeting 2021**

The Malaysian Society of Pharmacology and Physiology (MSPP) has been the primary Malaysia learned society of pharmacologists and physiologists for more than 33 years. The Society has been organizing its own Scientific Meetings as a platform for researchers to share their research findings and build networking and collaborations. To date, MSPP is proud to have organized 34 scientific meetings. Due to the pandemic, for the first time the 34th Scientific Meeting of MSPP was held virtually on July 15-17, 2021. The meeting which was organized by Monash University Malaysia together with MSPP in collaboration with several local and private universities in Malaysia had attracted 700 delegates from locally and abroad and received more than 160 abstracts. The scientific programme this year focused on translational research under the theme 'Trailblazing the Translational Research'. The three-day conference provided opportunities for sharing and exchanging evidence-based practices and scientific endeavors among physiologists, pharmacologists, physicians, general practitioners, scientists and allied health professionals.

### **LIST OF ORGANIZERS**

Jeffrey Cheah School of Medicine and Health Science, Monash University Malaysia  
Malaysian Society of Pharmacology and Physiology (MSPP)

# **34<sup>th</sup> MSPP 2021 Programme** **“Trailblazing the Translational Research”**

**Day 1: 15<sup>th</sup> July 2021**

## **Programme**

**8.30 am – 9.15 am**

**Opening Ceremony**

### **Speakers**

*Prof. Dr. Nafeeza Hj Mohd Ismail*  
(President, MSPP; International Medical University)

*Prof. Dr. Shajahan Yasin*  
(Head, JCSMHS, Monash University Malaysia)

*Assoc. Prof. Dr. Mohd. Farooq Shaikh*  
(Chair, 34<sup>th</sup> MSPP 2021; Monash University Malaysia)

**9.15 am – 10.00 am**

**Keynote Address**

*Prof. Dr. Gordon Harold Williams*  
Professor of Medicine, Harvard Medical School, USA

**Title: Personalized Medicine: The Link  
Between People, Animals and Cells**

**10.00 am – 10.30 am**

**Break**

**10.30 am – 11.00 am**

**Plenary Lecture 1**

*Prof. Dr. Wayne Hodgson*  
Monash University, Australia

**Title: Things That Bite and Sting: The  
Pharmacological Characterization of  
Animal Venoms and Toxins**

**11.00 am – 12.00 pm**

**Sponsored Seminar**

*Labquip Sdn. Bhd*

12.00 pm – 2.00 pm

Lunch Break

2.00 pm – 3.00 pm

MSPP Young Investigator Award 2021

3.00 pm – 3.30 pm

Break

3.30 pm – 5.30 pm

MSPP Annual General Meeting

Day 2: 16<sup>th</sup> July 2021

9.00 am – 9.30 am

Plenary Lecture 2

*Assoc. Prof. Dr. Elizabeth Davis  
Monash University, Australia*

**Title: Developing and Incorporating Learning Resources to Facilitate Active Learning in Pharmacology**

9.30 am – 9.35 am

Break

9.35 am – 10.00 am

Symposium 1: Drug Metabolism Research

**Invited speaker:**

*Prof. Dr. Ong Chin Eng  
International Medical University*

**Title: Structure-Function Analysis of Cytochrome P450 Enzymes: Kinetic and Computational Modelling for Drug Clearance Prediction**

**Symposium 2: Natural Products and Integrative Medicine**

**Invited speaker:**

*Assoc. Prof. Dr. Wan Amir Nizam Wan Ahmad  
Universiti Sains Malaysia*

**Title: Flavonoids and Metainflammation in Diabetes**

10.00 am – 10.15 am

Break

<b>10.15 am – 11.15 am</b>	<b>Finalist 1: Oral presentations</b> <b>Finalist 2: Oral presentations</b>
<b>11.15 am – 11.30 am</b>	<b>Break</b>
<b>11.30 am – 12. 30 pm</b>	<b>Finalist 1: Shortlisted Poster presentations</b> <b>Finalist 2: Shortlisted Poster presentations</b>
<b>12.30 pm – 2.00 pm</b>	<b>Lunch Break</b>
<b>2.30 pm – 2.50 pm</b>	<b>Symposium 3: Cardiovascular Research</b> <b>Invited speaker:</b> <i>Assoc. Prof. Dr. Satirah Zainalabidin Universiti Kebangsaan Malaysia</i> <b>Title: The Action of SAC on Cardiac Remodelling in Myocardial Injury</b>
	<b>Symposium 4: Cancer Research</b> <b>Invited speaker:</b> <i>Dr. Alan Yiu Wah Lee</i> <i>Monash University, Malaysia</i> <b>Title: Exploration of the Tumor Suppressor Function of Semaphorin 5A in Brain Cancer Treatment</b>
<b>2.50 pm – 3.00 pm</b>	<b>Break</b>
<b>3.00 pm – 4.00 pm</b>	<b>Finalist 3: Oral presentations</b> <b>Finalist 4: Oral presentations</b>
<b>4.00 pm – 4.15 pm</b>	<b>Break</b>
<b>4.15 pm – 5.15 pm</b>	<b>Finalist 3: Shortlisted Poster presentations</b> <b>Finalist 4: Shortlisted Poster presentations</b>

**Day 3: 17<sup>th</sup> July 2021**

**9.00 am – 9.30 am**

**Plenary Talk 3:**

*Prof. Dr. Michael Fenech  
University of South Australia, Australia*

**Title: Nutrigenomics from Laboratory to Clinical Practice**

**9.30 am – 9.50 am**

**Symposium 5: Neurological Diseases**

**Invited speaker:**

*Prof. Dr. Renu Agarwal  
International Medical University*

**Title: Glaucoma and Neuroinflammation: Role of Magnesium-Based Compounds as Therapeutic Instruments**

**Symposium 6: Metabolic Diseases**

**Invited speaker:**

*Assoc. Prof. Dr. Naguib Salleh University of Malaya*

**Title: Ion channels in Endometrium: Their Roles in Uterine Fluid Regulation and Embryo Implantation**

**9.50 am – 10:30 am**

**Finalist 5: Oral presentations**

**Finalist 6: Oral presentations**

**10.30 am – 11.30 pm**

**Break**

**11.30 pm – 12.00 pm**

**Awards Presentation**

**Closing ceremony and remarks**



**PNPIM-20****Microarray data analysis to identify differentially expressed genes and biological pathways associated with tualang honey supplementation in NASH animal model****Mohd Afzal Alias<sup>1</sup>, Roslina Abdul Rahim<sup>1\*</sup>, Naznin Muhammad<sup>1</sup>, Nor Zamzila Abdullah<sup>2</sup>, Norlelawati A. Talib<sup>2</sup>**<sup>1</sup>Department of Basic Medical Sciences, Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Malaysia<sup>2</sup>Department of Pathology and Laboratory Medicine, Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Malaysia

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Tualang Honey (TH) is a multifloral jungle honey that has been shown to have anti-inflammatory and antioxidant properties. Thus, it has been proposed as a potential supplement in the management of non-alcoholic steatohepatitis (NASH). This study aimed to identify potential key genes and biological process associated with the therapeutic effects of TH in NASH animal model. Twenty Sprague Dawley rats were used in this experiment. Five rats were given standard commercial pellets throughout the experiment and acted as controls. Fifteen rats were subjected to the 12% high-cholesterol diet (HCD) for sixteen weeks to induce NASH. They were then divided into 3 groups, with each group receiving 3 different dosages of TH supplementation for four weeks. RNA was extracted from serum using RNeasy extraction kit (Qiagen) and microarray analysis was performed. A total of 3062 differentially expressed genes (DEGs) were identified including 2788 upregulated genes and 274 downregulated genes in all treated groups. There were 15 genes significantly upregulated including aldehyde dehydrogenase family, cytochrome P450 and nuclear transcription factor. Whilst, 13 genes were significantly downregulated such as apelin, interferon regulatory factor 2 and stearyl-Coenzyme A. Following pathway enrichment analysis, 34 biological processes were significantly modified ( $p < 0.05$ ). Among the pathways implicated in the effects of TH were those involved in the inflammatory response, lipid biosynthetic process and cholesterol metabolic process. The present

study demonstrated that the DEGs involved in the therapeutic effects of TH were enriched in several pathways and further validation is required to confirm their specific roles.

**Keywords: Tualang honey, NASH, DEG, Microarray, Pathway analysis**

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