



FACULTY of  
PHARMACY



# 5<sup>th</sup> International Postgraduate Conference on Pharmaceutical Sciences 2017

15<sup>th</sup> – 18<sup>th</sup> May 2017

Faculty of Pharmacy,  
Universiti Teknologi MARA, MALAYSIA

“ **Concerted Research Towards  
Holistic Healthcare through  
Pharmaceutical Sciences** ”

**PROGRAMME  
BOOK**

## **WELCOME MESSAGE FROM THE VICE CHANCELLOR OF UNIVERSITI TEKNOLOGI MARA (UiTM)**



*Assalamualaikum wbt*

I would like to congratulate the Postgraduate Society of Faculty of Pharmacy, UiTM Puncak Alam for organising the 5<sup>th</sup> International Postgraduate Conference on Pharmaceutical Sciences 2017 (iPoPS 2017).

This conference has been successfully organised since 2012 by the postgraduate students together with the Faculty of Pharmaceutical Sciences, Tokyo University of Science, Japan without fail. This symbolises the strong collaboration between UiTM and TUS towards academic excellence, which enhances our academic visibility. UiTM has been ranked top 200 in the QS World University Ranking by subject 2017 for Pharmacy & Pharmacology. This is a big achievement for a young faculty of 14 years.

On that note, contributions from the postgraduates play an important role in the development of human capital headed for a personified nation with humanistic values, forward thinking with an edge in entrepreneurship. Postgraduate students nowadays not only face challenges in completing their studies but also competing with the fast pace of ever changing technology. Therefore, we need to allow their full integration into the global knowledge society together with international collaboration to advance the quality of higher education worldwide.

Participation in event with different cultures and background like iPoPS 2017 helps develop articulate thinking and inspire healthy competition of ideas among the young, budding research generation in Malaysia. Hopefully, by continuing to invite eminent speakers from all over the world, the Conference will gain its recognition in the international research community and make UiTM soar upwards. We trust this Conference will be a success and carry on for years to come.

Congratulations!

**EMERITUS PROFESSOR DATO' DR. HASSAN SAID**  
**Vice-Chancellor**  
**Universiti Teknologi MARA (UiTM)**

## FOREWORD FROM THE DEAN, FACULTY OF PHARMACY, UiTM



*Assalamualaikum wbt.* Greetings.

It gives me great pleasure to welcome all of you to the 5<sup>th</sup> International Postgraduate Conference on Pharmaceutical Sciences 2017 (iPoPS 2017). We are proud to host iPoPS 2017 which is organised by postgraduate students from the Faculty of Pharmacy, Universiti Teknologi MARA (UiTM) and the School of Pharmaceutical Sciences, Tokyo University of Science (TUS) on an annual basis.

One of the major thrusts of the Faculty of Pharmacy, UiTM is to develop human capital in core research areas to fulfil the needs of Malaysia in nation development. iPoPS 2017 supports this aspect by enabling young minds to explore ideas through sharing of thoughts and research findings with other scientists. As part of our efforts in broadening the views of postgraduate students beyond their field of study, we have set the theme of this year's iPoPS as "Research Insights: Holistic Healthcare through Pharmaceutical Sciences".

I trust that all participants of iPoPS 2017 will seize this opportunity to network and initiate collaborative activities. With the participation of local and international postgraduate students, academicians and researchers, I am certain that iPoPS 2017 will serve as an excellent platform for networking.

As the dean of Faculty of Pharmacy, I am very proud of my postgraduate students. It is my hope that they will continue to excel in their research with passion and enthusiasm. I wish to congratulate all committee members, postgraduate students, lecturers, staff, and all those involved for their wonderful effort at making iPoPS 2017 a success. To all conference delegates, may your visit here be fruitful and enjoyable.

Yours truly,

**PROF. DR. AISHAH ADAM,**  
**Dean**  
**Faculty of Pharmacy**  
**Universiti Teknologi MARA (UiTM)**

## FOREWORD FROM CONFERENCE PROGRAM DIRECTOR



*Assalamualaikum wbt.*

On behalf of the committee members, I would like to sincerely welcome all participants to our 5<sup>th</sup> International Postgraduate Conference on Pharmaceutical Sciences 2017 (iPoPS 2017), which is held here at the Faculty of Pharmacy, Universiti Teknologi MARA (UiTM), Puncak Alam Campus, from 15<sup>th</sup> to 18<sup>th</sup> May 2017. We are delighted to see our annual iPoPS to go from strength to strength under the guidance and leadership of our dean, Prof Dr Aishah Adam. This prestigious event will continue to serve as an excellent platform that showcases pharmaceutical sciences-related research activities of postgraduate students not only from the UiTM, but also from other institutions of higher learning.

iPoPS 2017 is certainly one of the important highlights of the yearly activities at the Faculty of Pharmacy, UiTM. It creates many wonderful opportunities that allow postgraduate students to enjoy a unique and memorable conference experience. More importantly, iPoPS 2017 facilitates development of young researchers who can think critically and communicate their research findings effectively.

We warmly welcome participants from other institutions of higher learning. Their participation will enrich the diversity of research cultures and also foster linkages between universities. It is our hope that all these interactions will eventually benefit the pharmaceutical industry in this region.

Last but not least, I would like to sincerely express my heartfelt gratitude to all students and staffs of the Faculty of Pharmacy, UiTM, in making iPoPS 2017 a great success. In particular, I would like to thank Prof. Dr. Aishah Adam and Assoc. Prof. Dr. Mizaton Hazizul Hasan for their continuous support and guidance.

I hope that you will have an enjoyable time at this event.

**QAMARUL HAFIZ ZAINOL ABIDIN**

**Program Director**

**5<sup>th</sup> International Postgraduate Conference on Pharmaceutical Sciences  
iPoPS 2017**

**PROGRAMME (17<sup>th</sup> – 18<sup>th</sup> May 2017)**

Day 1: 17th May 2017 (Wednesday)					
Time	Programme				Venue
08:00-09:00	Registration				Pavilion
09:00-09:15	Doa recital & Welcoming speech				DK500
09:15-09:30	Welcoming Address by Dean of Faculty of Pharmacy Prof. Dr. Aishah Adam				DK500
09:30-10:00	Opening Speech by Vice Chancellor of Universiti Teknologi MARA (UiTM) Emeritus Prof. Dato' Dr. Hassan Said				DK500
10:00-10:15	Tea break				Pavilion
10:15-11:15	Keynote Address: Apoptosis, BCL-2 family inhibitors and cancer chemotherapy Prof. Dr. Gerald M. Cohen, University of Liverpool, United Kingdom				DK500
11:15-12:05	Plenary 1: Development of new methods for diagnosis and treatment of cancer in chemistry, biochemistry and material sciences – multidisciplinary approach in TUS Prof. Dr. Shin Aoki, Tokyo University of Science, Japan				DK500
12:05-12:55	Plenary 2: Integrating pharmacogenomics & metabolomics for clinical research Prof. Dr. Teh Lay Kek, Universiti Teknologi MARA, Malaysia				DK500
12:55-14:30	Lunch/Poster Session (Category A and B)				Pavilion
14:30-15:00	<b>Concurrent session 1: Pharmacology</b>	<b>Concurrent session 2: Chemistry</b>	<b>Concurrent session 3: Life Science</b>	<b>Concurrent session 4: Undergraduate</b>	DK500, DK6, DK7 & DK9
	Invited 1: New strategy for cancer immunotherapy targeting myeloid-derived suppressor cells Asst. Prof. Dr. Ichiro Horie TUS, Japan	Invited 2: Design and syntheses of ESI enhancing and deuterium labelling reagents and their applications of LC/EMI-MS/MS analyses for trace bioactive compounds Dr. Shoujiro Ogawa, TUS, Japan	Invited 3: Effects of the anti-convulsants on the neuropathic pain-like state and pain-induced anxiety in mice Dr. Kazumi Yoshizawa, TUS, Japan	Invited 4: Role of pictograms in patient education Dr. Wong Pei Sei, International Medical University, Malaysia	
	OP1	OP1	OP1	OP1	
	OP2	OP2	OP2	OP2	
	OP3	OP3	OP3	OP3	
15:00-16:00	OP4	OP4	OP4	OP4	
	OP5		OP5		
16:00-16:50	Plenary 3: Quality use of medicine research: impact to whom? Assoc. Prof. Dr. Mohd Makmor Bakry, Universiti Kebangsaan Malaysia, Malaysia				DK500
16:50-17:40	Plenary 4: Dihydroartemisinin nanocrystals: characterization and in-vitro anticancer activity Assoc. Prof. Dr. Satit Puttipipatkachorn, Mahidol University, Thailand				DK500

17:40	Tea & End of Day 1				Pavilion
<b>Day 2: 18th May 2017 (Thursday)</b>					
<b>TIME</b>	<b>Programme</b>				<b>Venue</b>
08:00-09:00	Registration				Pavilion
09:00-09:50	<b>Plenary Speaker 5:</b> Occupational toxicology for understanding environment-induced disorders in humans <b>Prof. Dr. Gaku Ichihara, Tokyo University of Science, Japan</b>				DK500
09:50-10:10	Tea Break				Pavilion
10:10-11:00	<b>Plenary Speaker 6:</b> Application of nanotechnology for future development pharmaceutical and cosmetic products from Indonesian herbal plant <b>Dr Mahdi Jufri, Universitas Indonesia, Indonesia</b>				DK500
11:00 – 11:50	<b>Plenary Speaker 7:</b> Pharmaceutical care: should we be involved in medication administration? <b>Prof. Dr. Mohamed Mansor Manan, KPJ Healthcare University College, Malaysia</b>				DK500
11:50-13:00	<b>Concurrent session 1: Pharmacology</b>	<b>Concurrent session 2: Pharmacy Practice</b>	<b>Concurrent session 3: Pharmaceutics</b>	<b>Concurrent session 4: Life Science/ Chemistry/ Undergraduate</b>	DK500, DK6, DK7 & DK9
	OP1	OP1	OP1	OP1	
	OP2	OP2	OP2	OP2	
	OP3	OP3	OP3	OP3	
	OP4	OP4	OP4	OP4	
	OP5	OP5	OP5	OP5	
OP6	OP6	OP6	OP6	OP6	
13:00-14:30	Lunch/Poster Session (Category C and D)				Pavilion
14:30-15.20	<b>Plenary 8:</b> Computational modelling of host-pathogen interactions: from atoms to systems <b>Dr. Peter J. Bond, Bioinformatics Institute A*STAR, Singapore</b>				DK500
15:20-16:10	<b>Plenary 9:</b> Advancement of pharmacy practice research in Thailand and its impact on national health policy <b>Assoc. Prof. Dr. Surakit Nathisuwan, Mahidol University, Thailand</b>				DK500
16:10-17:00	<b>Plenary 10:</b> Making your research relevant and translatable from bench to market <b>Prof. Dr. Yuen Kah Hay, Universiti Sains Malaysia, Malaysia</b>				DK500
17:00-19:00	Closing Ceremony/ Prize Giving / Grand Hi-Tea and Dismiss				DK500

## **ORGANIZING COMMITTEE MEMBERS**

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Nurl Hayati Jamal  
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**Special Tasks**

Syahriah Fadhilah binti Abdul Razak  
Athirah binti Abdul Rahman

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## SPEAKERS INFORMATION



**Prof. Dr. Gerald M. Cohen**  
*University of Liverpool, United Kingdom*

Prof. Dr. Gerald M. Cohen's area of specification is Mechanism of Toxicity (Apoptosis). Currently, he concentrates on utilising this knowledge in improving current cancer treatments using chemotherapy. Other than that, his current research involves understanding of both apoptotic and non-apoptotic roles of BCL-2 family proteins and the significance of a novel endoplasmic reticulum stress response was identified recently in his laboratory.



**Prof. Dr. Shin Aoki**  
*Tokyo University of Science, Japan*

Prof. Dr. Shin Aoki is currently a Professor at the Department of Medical and Life Sciences. He is a recipient of the Award of Japan Society of Coordination Chemistry for Young Scientists (1999), the AJINOMOTO Award in the Synthetic Organic Chemistry, Japan (2001), the Pharmaceutical Society of Japan Award for Young Scientists (2002) and many more.



**Prof. Dr. Teh Lay Kek**  
*Universiti Teknologi MARA, Malaysia*

Prof. Dr. Teh Lay Kek was registered as a pharmacist in since 1995. Her research areas are Experimental and Clinical Pharmacogenomics and also Clinical and experimental Metabolomics. Currently, she is working as a lecturer at Faculty of Pharmacy and the Deputy Director of Integrative Pharmacogenomics Institute (iPROMISE), one of Centre of Excellence in Universiti Teknologi MARA, Malaysia.



**Assoc. Prof. Dr. Mohd Makmor Bakry**  
*Universiti Kebangsaan Malaysia, Malaysia*

Assoc. Prof. Dr. Mohd Makmor Bakry is the Deputy Dean Graduate, Research and Innovation. Most of his research interest is regarding Clinical Pharmacy practice and Clinical Pharmacokinetics. He was the recipient of UKM Excellent Teaching Award 2013 (Health Sciences) in 2014.



**Assoc. Prof. Dr. Satit Puttipipatkachorn**  
*Faculty of Pharmacy, Mahidol University, Thailand*

Dr. Satit Puttipipatkachorn is currently the Head of Department of Manufacturing Pharmacy and associate professor in Pharmaceutics at Faculty of Pharmacy, Mahidol University, Thailand. His research interest is Solid Pharmaceutics, especially physicochemical properties of drug substances and excipients, drug-polymer interaction, and many more. Another area of his research is oral controlled-release drug delivery system, nanoparticulate drug delivery system and new pharmaceutical excipients from polysaccharides. At present, he has published over 100 original articles in international journals.



**Prof. Dr. Gaku Ichihara**  
*Tokyo University of Science, Japan*

Prof. Dr. Gaku Ichihara is currently a professor at Department of Occupational and Environmental Health, Faculty of Pharmaceutical Sciences, Tokyo University of Science. In 2000, he was the recipient of Incentive Award, 2000, Japan Society for Occupational Health.



**Dr. Mahdi Jufri**  
*Universitas Indonesia, Indonesia.*

Dr. Mahdi Jufri's latest research involved the creation of phytosome gel from piper betle extract for an anti-acne solution. Dr. Jufri has been active in the academic world and has been invited to present at many events locally and Malaysia. His research papers have been featured in multiple journals such as the *International Journal of PharmTech Research*, *Asia Pacific Journal of Tropical Disease* and many others.



**Prof. Dr. Mohamed Mansor Manan**  
*KPJ Healthcare University College, Malaysia*

Prof. Dr. Mohamed Mansor Manan. He is an expert in Pharmacokinetics, Pharmacodynamics, Pharmacotherapy, Pharmacoepidemiology and Pharmacoconomics and collaborative study with the PSD on diabetes mellitus drug utilization pattern in Malaysia. He was a pharmacist in the Ministry of Health for 27 years. Currently he is working at KPJ Healthcare University College, Malaysia.



**Dr. Peter J Bond**  
*Bioinformatics Institute (A\*STAR), Singapore*

Dr. Peter J Bond is currently appointed as Principal Investigator at Bioinformatics Institute (A\*STAR), Singapore. He is experienced in the development and application of multiscale modelling and simulation approaches to understand biomolecular recognition and assembly. His special fields are Bioinformatics, Computational Biology, Molecular Modelling.



**Assoc. Prof. Dr. Surakit Nathisuwan**  
*Mahidol University, Thailand*

Assoc. Prof. Dr. Surakit Nathisuwan's areas of specialization are efficacy and safety evaluation of drugs on cardiovascular system, evaluation of pharmacogenomics on drug actions pharmaceutical care for patients with cardiovascular diseases, pharmaceutical care for patients in internal medicine ward and medication use evaluation.



**Prof. Dr. Yuen Kah Hay**  
*Universiti Sains Malaysia, Malaysia*

Prof. Dr. Yuen Kah Hay is an expert in Pharmaceutical Technology. His special field are Biopharmaceutics Studies, Design and Development of novel drug delivery systems. Currently, he is a professor at School of Pharmaceutical Sciences, Universiti Sains Malaysia.



**Asst. Prof. Dr. Ichiro Horie**  
*Tokyo University of Science, Japan*

Asst. Prof. Dr. Ichiro Horie's research interest is Immunopharmacology, especially to reveal the function or pharmacological regulation of myeloid-derived suppressor cells (MDSC), which plays important roles for immunosuppressive system and involves in the pathophysiology of tumours, autoimmune diseases, or chronic inflammation.



**Dr. Shoujiro Ogawa**  
*Tokyo University of Science, Japan*

Dr. Shoujiro Ogawa is a lecturer at Faculty of Pharmaceutical Sciences, Tokyo University of Science (Chiba, Japan). He is a recipient of Hoshino Foundation's young scientists awards in BMAS 2016 and Award for young scientists by the division of physical sciences in 2017.



**Dr Kazumi Yoshizawa**  
*Tokyo University of Science, Japan*

Dr. Kazumi Yoshizawa's areas of specialization are Pharmacology and Palliative Care. Currently he is a lecturer at Faculty of Pharmaceutical Sciences, Tokyo University of Science. He obtained his Doctor of Philosophy in Pharmaceutical Sciences in September 2011.



**Dr. Wong Pei Se**  
*International Medical University, Malaysia*

Dr. Wong Pei Se is currently a senior lecturer in the School of Pharmacy, International Medical University. She has over 13 years of teaching experience in the area of Pharmacy Practice. She obtained her PhD in Pharmaceutical Sciences (Pharmaceutical Care) from the University of Strathclyde, United Kingdom. Her research interests include pharmacy education and emerging roles of pharmacists. Her current projects involve better understanding of self-care in chronic disease and developing the evidence to support future roles for pharmacists.

## **PC-O 11: IMPACTS OF BINDER AND DISINTEGRANT ON DETAM II SOYBEAN (*GLYCINE MAX* (L.) MERR) TABLET MADE BY DRY GRANULATION**

Aditya Trias Pradana<sup>1\*</sup>, Rika Yulia<sup>2</sup>, Ella Viani<sup>2</sup>, Yulyana Christine<sup>2</sup>

<sup>1</sup>Department of Pharmaceutics, Faculty of Pharmacy, University of Surabaya, Jl. Raya Kalirungkut, Surabaya, Indonesia.

<sup>2</sup>Department of Clinical and Community Pharmacy, Faculty of Pharmacy, University of Surabaya, Jl. Raya Kalirungkut, Surabaya, Indonesia.

\*Corresponding author: Aditya Trias Pradana, phone: +62312981110, fax: +62312981111  
aditya\_trias@staff.ubaya.ac.id

**Keywords:** Detam II black soybean (*Glycine max* (L.) Merr), Tablet, Binder, Disintegrant, Disintegration time

Black soybean (*Glycine max* L. Merr) Detam II Variety has a scavenging activity and total phenolic compound higher than yellow soybean. As a natural compound, the flow properties of black soybean (*Glycine max* (L.) Merr) Detam II powder is poor due to its high content of moisture, so it must be made by dry granulation method. Dry binder and disintegrant have opposite functions on tablets formula where one serves to increase consolidation between particles while other accelerate the disintegration time as the rate limiting step of dissolution. The effects of disintegrant and dry binder variation on the physical characteristics of black soybean tablets have been observed. The variations of polyvinylpyrrolidone (PVP)-K30 combined with Plasdone S-630 were used as binders, while sodium starch glycolate (SSG) was used as a disintegrant. Approximately 4% of PVP-K30 as a single binder in the formula component provides better hardness and friability value of tablets, but the disintegration time was longer than other formulas. The amount of SSG used was increased to 4 and 8%, respectively in the formula component. 4% was the ideal amount of SSG as a disintegrant to get the best physical tablet characteristics and also disintegration time, about 4.45 minutes. Increasing the amount of SSG has no significant effect on the disintegration time even tends to slow down.