



The 2019 International Joint Symposium

8th APPEEN Conference

(Asia Pacific Pharmacy Education Network)

2nd HPC Conference

(Halal Pharmaceuticals & Cosmetics)

PROGRAM BOOK

Hosted by
UNIVERSITAS AIRLANGGA

8-9 October 2019



Co-Hosted by





“SYNERGIZING BEST PRACTICE IN PHARMACY EDUCATION AND SCIENCE”



The 2019 International Joint Symposium
8th APPEN Conference
(Asia Pacific Pharmacy Education Network)
2nd HPC Conference
(Halal Pharmaceuticals & Cosmetics)



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WELCOME MESSAGES



MESSAGE BY DEAN OF FACULTY OF PHARMACY
UNIVERSITAS AIRLANGGA



**Prof. Dr. Umi
Athiyah, MS.,
Apt.**

DEAN
Faculty of
Pharmacy
Universitas
Airlangga

Dear delegates, members and participants,

It is indeed a great honor and privilege for me to welcome you to the 2019 International Joint Symposium of the 8th Asia Pacific Pharmacy Education Network (APPEN) Conference and the 2nd Halal Pharmaceuticals and Cosmetics (HPC) Conference. This year the joint symposium is conducted by Faculty of Pharmacy Universitas Airlangga in collaboration with Halal Center Universitas Airlangga. As the host of the symposium, I am delighted to invite you not only to experience and take advantages from the academic and research atmosphere during the conference but also to seize and share any great moments during your stay in Surabaya, the sparkling city of Indonesia.

The current symposium envoys theme on “Synergizing best practice in pharmacy education and science”. This theme is not new in the research and higher education realms. It has been proved that innovation and positive outcomes in the education and science is also influenced by synergistic approach. APPEN and its networking universities can be a perfect vehicle to create and implement such synergy in pharmacy education. The twelve members of APPEN stretching from Eastern to Southeast Asian countries offers opportunities to establish structure and content of the educational knowledge based on the characteristics and the uniqueness of each member.



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The integration of Halal Pharmaceuticals and Cosmetics conference to the current symposium broaden our horizon about halal issues and development. As the global communities increasingly recognizes the significance of halal concept, this conference can become a venue for sharing and promoting halal values and its importance.

I am delightful to report that there will be more than 150 participants including 40 halal auditors and 17 presenters from 9 different countries in Asia, Pacific and American continents attending the conference. Approximately, 100 topics will be presented in form of poster presentation comprising issues in pharmaceuticals, technologies, clinical and community health and halal development. The wide range of participants and ideas in this conference is guaranteed to provide audience with atmosphere of enthusiasm for knowledge development.

I wish all participants including members and delegates of APPEN can extract greater benefits from the symposium. More importantly, I expect that the symposium can be your starting line for creating synergistic approach with other participants including future relation with us in Universitas Airlangga.



MESSAGE BY DIRECTOR OF HALAL CENTER
UNIVERSITAS AIRLANGGA



**Dr. Mustofa
Helmi Effendi,
drh., DTAPH**

DIRECTOR
Halal Center
Universitas
Airlangga

Assalamu'alaikum Warohmatullahi Wabarokatuh

Good morning and best wishes for all of us

Ladies and gentlemen

Alhamdulillah robbil'alamin, we always pray for the presence of Allah SWT, for all the blessings and gifts that have been given to us all so that today Tuesday 8 October 2019 we can gather and discuss in order to carry out this noble task by contributing a little of our thinking towards the development of a nation that seeks to revive all efforts to achieve national independence and prosperity in the fields of food, medicine and cosmetics that included in pharmaceutical product, especially in halal aspects.

Further gratitude, this activity can run and the 2nd Halal Pharmaceutical Conference will be held with the headline "Synergizing best practice in pharmacy education and science". The current event is joining two international conferences which marks the second joint symposium held under the network initiatives. The current international joint symposium is conducted in Surabaya Indonesia and organized by Faculty of Pharmacy Universitas Airlangga in collaboration with Halal Center of Universitas Airlangga.

As a center for halal research on product and development, Airlangga University always feels called to strive to contribute to the progress of this nation, including in the fields of technology and concepts related to halal products. One of the efforts that we routinely do is organizing international conference. The conference this time is the second time and will be scheduled annually.



For that reason, we must not forget to express our highest appreciation to you, ladies and gentlemen, for producing the work to be presented at this Conference. We believe that the results of in-depth thinking in the form of research from various fields related to halal and halal product development will contribute to the advancement of technological innovation to solve the problems of the fundamental needs of the Indonesian people. We also believe that there is no innovation without research.

We thank all those who have supported the success of this event both the resource persons, the moderator and the organizing committee. Hopefully this activity will continue to be held every year, and the benefits can be felt by the people of Indonesia, especially in the form of new findings that can improve the quality of life with *the Halalan Thayyibah* approach.

Amin ya rabbal 'alamin

Wassalamu'alaikum Warohmatullahi Wabarokatuh.



MESSAGE BY RECTOR OF UNIVERSITAS AIRLANGGA



**Prof. Dr.
Mohammad Nasih,
SE., MT., Ak**

**RECTOR
Universitas
Airlangga**

It is with great honour and enthusiasm that I welcome you to the 2019 International Joint Symposium of the 8th Asia Pacific Pharmacy Education Network (APPEN) Conference and the 2nd Halal Pharmaceuticals and Cosmetics (HPC) Conference in the beautiful city of Surabaya.

Universitas Airlangga is proud to be the host institution of the conference for this year. The conference theme “Synergizing best practice in pharmacy education and science” has been carefully chosen to mark the second-year integration between APPEN conference and HPC conference.

Within a past decade since the first APPEN conference was introduced in 2010, APPEN members have made substantial contribution in the education practice and research in pharmacy. Although Universitas Airlangga has just joined the network in 2018, it has been extraordinary for us to witness how much APPEN has grown from what was a small society to one of the prominent networks in pharmacy education across Asia Pacific. At this conference let us celebrate what we, as a community, have achieved.

As APPEN is continuously growing and expanding our boundaries beyond geographical limits, I would expect that every APPEN conference reaches new heights offering innovation and inspiration for excellence. This conference is no exception. I hope that you will have a productive and fun-filled time at this conference.



To put a conference of this magnitude is not an easy task. The conference is hosted by Universitas Airlangga with Faculty of Pharmacy and Halal Center are the key organizer for the program. Therefore, I would like to appreciate organizing committee from these institutions and many other volunteers for their tireless works and dedicated efforts. My special thanks are delivered to all speakers and moderators who have generously worked to make this conference rich in content and pleasant for the participants.

I wish all participants, delegates and members enjoy and be benefited from your time with us. This is an opportunity for you to build and enhance your contacts and friendships with others in the field of pharmacy and halal sector. Thank you for taking part in the conference.

Sincerely,



MESSAGE BY PRESIDENT OF MANAGEMENT & SCIENCE UNIVERSITY



**Prof. Tan Sri Dato'
Wira Mohd. Dr.
Mohd. Shukri Ab.
Yajid**

PRESIDENT
Management &
Science University

It is an honour to welcome all of you to the 8th Asia Pacific Pharmacy Education Network 2019 (APPEN Conference).

This year's conference will also include "The 2019 International Joint Symposium" at integrating Halal Pharmaceuticals & Cosmetics (HPC Conference) for the second year running.

Indeed, it is worthy to take note of how far we have come. This is the 8th year of this conference being held at multiple international venues since 2010. I would like to thank the organizing committee, speakers, research paper presenters, partners, and colleagues on their relentless effort for making this event possible.

As always, I am pleased to note of research presentations that will give rise to thought-provoking discussions, debates and plenary speeches. My appreciations to all the speakers who have contributed to the success of this conference. Your valuable inputs have undoubtedly aided the success of this 8th summit.

It is my hope that this platform will enrich the collaborative eco-system that was initiated eight years ago. Through this premise I am optimistic that the opportunity is apt for all to understand and address issues and ideas relevant to pharmacy, be it education or practices, from the regional and global perspectives.



Appropriately, this year's theme on "Synergizing Best Practice in Pharmacy Education And Science" will provide opportunities for all present to explore further pharmacy education in the twenty-first century. The vast range of topics to be presented in this symposium welcome ideas and recommendations for the best practices in pharmacy education and science. They are undoubtedly essential in our effort at creating a better future.

Finally, my utmost appreciation to Universitas Airlangga for hosting the APPEN & HPC 2019 edition and I wish all plenty of success.

All the best.





ABOUT APPEN



The 2019 International Joint Symposium
8th APPEN Conference
(Asia Pacific Pharmacy Education Network)
2nd HPC Conference
(Halal Pharmaceuticals & Cosmetics)

The Asia Pacific Pharmacy Education Network (APPEN) was formed to address issues common to the pharmacy profession. APPEN was established in 2010 by founding members Management and Science University (MSU), Malaysia; Josai University, Japan; Universiti Sains Malaysia; and Institut Teknologi Bandung, Indonesia. This year, APPEN shall be inviting Thailand's Mahidol University and Universiti Brunei Darussalam into the collaboration.

Beginning life as the Asia Pacific Pharmacy Education Workshop (PharmEd), APPEN has come a long way, with the 2019 International Joint Symposium integrating Halal Pharmaceuticals & Cosmetics (HPC) conference for the second year running.

The goal of this series of workshops is to work together in shaping the future of pharmacy education and its graduates, as a catalyst to comprehensive improvements that advance the field of pharmacy and the pharmaceutical industry.

Standardizing practice demands cross-border harmonizing, recognition, and education, which the network aims to address in setting precedents for best practice in pharmacy education towards exemplary standards that lead to a better future.

Gathering academia, scientists, students, and professionals of pharmacy, APPEN is a great platform to exchange teaching, learning, and research experiences into Pharmacy and Pharmaceutical Sciences.





THE COMMITTEE



PATRON

Rector Universitas Airlangga	Prof. Dr. Moh. Nasih, ST., MT., Akt
President Management and Science University	Prof. Tan Sri Dato' Wira Dr. Mohd Shukri Ab. Yajid

STEERING COMMITTEE

Faculty of Pharmacy, Universitas Airlangga	Prof. Dr. Umi Athiyah, MS., Apt. Dr. Riesta Primaharinastifi, MSi., Apt. Prof. Dr. Dwi Setyawan, MSi., Apt. Dewi Melani Hariyadi, MPhil., Ph.D., Apt.
Halal Center, Universitas Airlangga	Dr. Mustofa Helmi, drh., DTAPH Dr. Abdul Rahem, MKes., Apt.
School of Pharmacy, Management and Science University	Dr. Mohd. Fadli Mohd. Asmani, RPH., MMPS Dr. Ibrahim Abdullah
International Center for Halal Studies, Management and Science University	Prof. Eddy Yusuf, PhD Wan Mohd. Ashraf Adlin
Faculty of Pharmaceutical Sciences Josai University and Josai International University	Prof. Kenji Sugibayashi, PhD Dr. Hiroaki Todo

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Vice Chairman	<ul style="list-style-type: none"> Mahmud Aditya Rifqi, M.Si Dhandy K. Wardhana, M.Vet., drh.
Secretary	Anila Impian Sukorini, M. Farm., Apt.
Treasurer	<ul style="list-style-type: none"> Ana Yudha, M. Farm., Apt. Khoirofin Nisak, M. Farm. Klin., Apt. Lita Rakhma Yustinasari, M.Vet., drh.



ORGANIZING COMMITTEE

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Program Session and Protocol	<ul style="list-style-type: none"> • Andang Miatmoko, PhD., Apt. • Mareta Rindang Andarsari, M. Farm. Klin., Apt. • Dini Retnowati, M. Farm., Apt. • Dr. Hanni Plumeriastuti, M.Kes., drh. • Dr. Lilik Maslachah, M.Kes., drh. • Dr. Tika Widiastuti, M.Si.
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GENERAL INFORMATION



The 2019 International Joint Symposium
8th APPEN Conference
(Asia Pacific Pharmacy Education Network)
2nd HPC Conference
(Halal Pharmaceuticals & Cosmetics)

CONFERENCE VENUE

Faculty of Pharmacy Universitas Airlangga

Nanizar Zaman Joenoes Building

Campus C : Jl. Mulyorejo

Surabaya Indonesia

Phone: +6231 593150

Website: www.ff.unair.ac.id



CERTIFICATE OF ATTENDANCE

Certificate of attendance will be provided for participant after the conclusion of the conference.

CONFIDENTIALITY

Attendees must obtain approval from speaker or presenter before quoting or publishing his/her scientific results. This policy includes any use of social media or information sharing related to the speaker or presenter presentation.

However, participants are allowed to share their experiences or any great moments during the conference in social media. Please use #appen2019 when you post in social media.



The 2019 International Joint Symposium

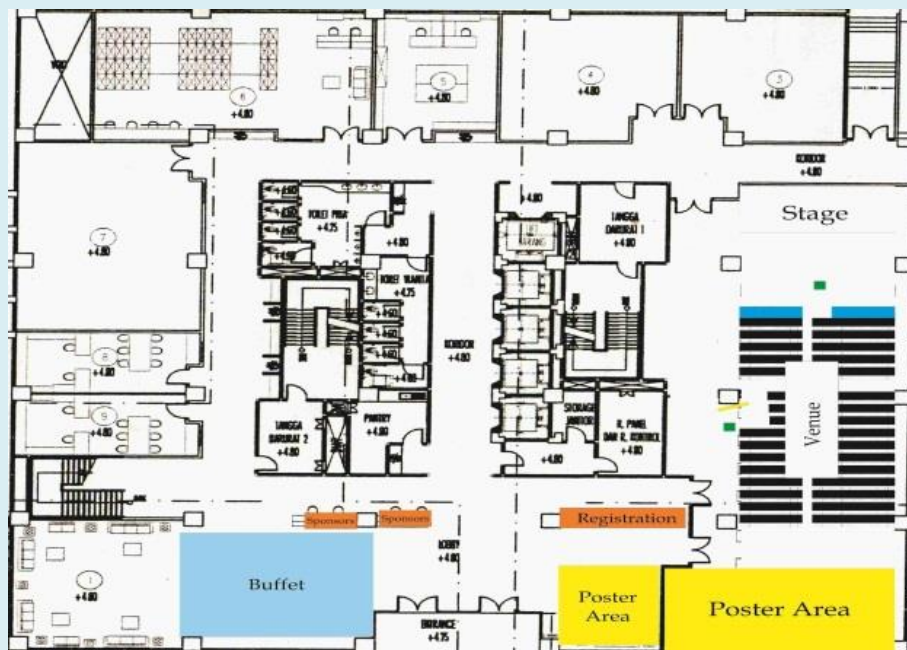
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CONFERENCE SITE MAP





SCIENTIFIC PROGRAM



PROGRAM TIMETABLES

CONFERENCE DAY 1 (OCTOBER 8, 2019)

08.00 – 08.30	Registration
08.30 – 09.00	OPENING CEREMONY: <ul style="list-style-type: none"> ■ Performance ■ Message from Dean of Faculty of Pharmacy Universitas Airlangga ■ Message from President Management & Science University ■ Opening Remark by Rector Universitas Airlangga
09.00 – 09.40	SHUKRI DISTINGUISHED KEYNOTE LECTURE AWARD: <ul style="list-style-type: none"> ■ Introduction of the Award ■ Award Giving Ceremony ■ Keynote Lecture by Award Winner
09.40 – 09.50	Booth Visit and Coffee Break
09.50 – 11.05	APPEN Plenary Session I Moderator: Elida Zairina, MPH., Ph.D., Apt.
	Pharmacy Education and Learning Strategy in the Industrial Revolution Era 4.0 Prof. Dr. Umi Athiyah, MS., Apt. (Universitas Airlangga, Indonesia)
	Global Approach to Standardization and Accreditation in Pharmacy Education: From Theory to Action Special Focus on Pharmacy Education in USA Prof. Yashwant V Pathak, MPharm, Executive. MBA, MSCM, Ph.D. (University of Soth Florida, USA)
	Q & A
11.05 – 12.20	HPC Plenary Session I Moderator: M. Nur Ghoyatul Amin, M.Sc.
	The New Era of Pharmaceutical Products must be Halal-Certified in Indonesia Prof. Dr. Sugiyanto, MS, Apt. (Universitas Airlangga, Indonesia)
	Halal Pharmaceuticals: the Challenges and Practices of Halal Products Prof. Eddy Yusuf, Ph.D. (ICHLAS – Management and Science University, Malaysia)



CONFERENCE DAY 1 (OCTOBER 8, 2019)

	Q & A	
12.20 – 13.00	Lunch Break	
13.00 – 14.00	Poster Session I (Odd Number)	
14.00 – 15.20	HPC Symposium Moderator: Mahmud Raditya Rifqy, MSi.	Focus Group Discussion – APPEN
	Development of Halal Supplements Based on Local Resources for Pregnant Mothers in Reducing Maternal Anemia and Stunting in Indonesia Prof. Dr. Veni Hadju, MSc. (Universitas Hasanuddin, Indonesia)	
	The Strategy of Halal Industry Development in Indonesia Dr. Tika Widiastuti, MSi (Universitas Airlangga, Indonesia)	
	Q & A	
15.20 – 15.50	Booth Visit and Coffee Break	
15.50 – 16.50	APPEN Symposium Moderator: Dr. Yunita Nita, M.Pharm., Apt.	Focus Group Discussion – HPC
	Standardization of Competence for Indonesian Pharmacist Prof. Daryono Hadi Tjahjono, MSc.Eng., Apt. (Institut Teknologi Bandung, Indonesia)	
	Integrated Pharmacy Course for The Pharmacists in Future" Dr. Nazrul Islam (Queensland University of Technology, Australia)	
	Q & A	



CONFERENCE DAY 2 (OCTOBER 9, 2019)

08.00 – 08.30	Registration
08.30 – 09.50	APPEN Plenary Session II Moderator: Chrismawan Ardianto, MSc., Ph.D., Apt.
	Curriculum Development Planning for BHSc Pharmacy Programme at UBD: Our Journey Dk. Dr. Nurolaini Pg Haji Muhd. Kifli, Ph.D. (Universiti Brunei Darussalam, Brunei Darussalam)
	Development of Clinical Pharmacy Education and Qualification: Thailand's Experience Assoc. Prof. Surakit Nathisuwan, PharmD, BCPS (Mahidol University, Thailand)
	Globalization of Pharmacy Education: MSU Experiences Assoc. Prof. Dr. Ibrahim Abdullah (Management & Science University, Malaysia)
	Q & A
09.50 – 10.00	Booth Visit and Coffee Break
10.00 – 11.20	HPC Plenary Session II Moderator: Dr. Tika Widiastuti, M.Si
	Development of Gelatine Production from Multi Stock Feed of Fish Type and Its Application in Foods Dr. Meiny Suzery, MS (Universitas Diponegoro, Indonesia)
	Market Opportunities for Halal Pharmaceuticals Products and Turkey's Experience to Enter Asian Muslim Countries Market Prof. Dr. Hasan Yetim (Istanbul. Sabahattin Zaim University, Turkey)
	Q & A
11.20 – 12.00	Q & A Session about Article Publication Moderator: Elida Zairina, MPH, Ph.D., Apt., Andi Hermansyah, MSc., Ph.D., Apt.
11.50 – 13.00	Lunch Break
13.00 – 14.00	Poster Session II (Even Number)
14.00 – 15.20	APPEN - HPC Final Plenary Session Moderator: Andi Hermansyah, MSc., Ph.D., Apt.
	Ways toward Malaysian Pharmacist



CONFERENCE DAY 2 (OCTOBER 9, 2019)

Assoc. Prof. Dr. Mohd. Fadli M. Asmani, RPH., MMPS (Management and Science University, Malaysia)

The Role of Halal Certification in Pharmaceutical Product
Dr. Mustofa Helmi Effendi, drh., DTAPH (Halal Center – Universitas Airlangga, Indonesia)

Q & A

15.20 – 15.50

CLOSING:

- Award
- Closing remarks by Director of Halal Center, Universitas Airlangga
- Announcement for the next conference

15.50 – 16.00

Afternoon Tea



PLENARY SESSION

APPEN PLENARY SESSION I



**Prof. Dr. Umi Athiyah,
MS., Apt.**

Faculty of Pharmacy,
Universitas Airlangga,
Indonesia

**Pharmacy Education and Learning
Strategy in the Industrial Revolution
Era 4.0**

At present, orientation policies on graduate outcomes has been changed by Ministry of Research, Technology and Higher Education has been changes to meet the demands of the Industrial Revolution 4.0. In pharmacy education there are several changes, namely 1) Curriculum Reorientation; 2) Hybrid/Blended Learning; 3) Quality Assurance of Health Personnel through Competency Test as Exit Exams; and 4) Clinical Research and Translational for Pharmacy. The essence of this policy change is the reorientation of the curriculum, including: Professional Education by emphasizing new literacy (data, technology, humanities) which is internalized in the curriculum, while the extra curriculum is social activities including the development of values of leadership, entrepreneurship, collaboration and team work. The substances of the curriculum is based on the main competencies of graduates, namely "medicine expert" which is the expertise to produce drugs and ensure that the drugs are used correctly according to the delivery system and the therapeutic objectives. From this reason, learning methods need to be developed with a focus on "student centered learning" given that the main skills relevant to the Industrial Era 4.0 are Thinking and Learning Skills, which are represented in 5 minds: Disciplines, Synthesizing, Creating, Respectful and Ethical Mind.



APPEN PLENARY SESSION I



Prof. Yashwant V Pathak, MPharm, Executive MBA, MSCM, PhD.

College of Pharmacy,
University of South
Florida, USA

Global Approach to Standardization and Accreditation in Pharmacy Education: From Theory to Action Special Focus on Pharmacy Education In USA

Higher Education accreditation in the United States was developed “to protect public health and safety and to serve the public interest.” The process of accreditation gradually evolved along three parallel paths, commonly referred to as the Triad, forged by the development of peer-evaluation amongst institutions and accrediting agencies, and the development of regulation, legislation and oversight by state governments, and the federal government.

The first regional accrediting agencies formed in the 1880s with particular focus on educational standards and admissions procedures. The need to develop transfer of credit policies and equivalency of degrees between the United States and foreign countries drove the process towards national standards. In the early stages accreditation standards were developed on a regional basis, but gradually national accreditation standards were developed to provide minimum quality standards throughout the United States. Simultaneously with the development of regional agencies, professional schools also began developing new accreditation standards. In 1912, a group of 23 private career schools created ACICS (then called the National Association of Accredited Commercial Schools), which became one of the first national accrediting agencies. The American Council on Education (ACE) was formed in 1918, a national association for higher education institutions interested in standardization, effectiveness and reducing duplication in the accreditation process. By the 1930's accreditation had become a well established element of the higher education landscape.

The end of World War II and the advent of the GI Bill saw an increase of professional and specialized accrediting agencies that were national in scope. They became the impetus for the formation of new national agencies that sought to coordinate the efforts of various sectors of the higher education community. In 1949, efforts were underway to deal with the rapid expansion, and the major national higher education associations came together to create a national association on institutional accreditation called the National Commission on Accrediting (NCA). The Regional accrediting agencies also formed the National Committee of Regional Accrediting agencies (NRCAA), later to be renamed the Federation of Regional Accrediting Commissions of Higher Education (FRACHE).

In 1952, Congress passed the Veteran's Readjustment Assistance Act, which mandated the U.S. Secretary of Education (then Commissioner of Education) to publish a list of



recognized accreditation associations. "The federal government implicitly asserted that accrediting agencies were the most reliable source for determining the quality of education and training of institutions of higher education, and began relying on non-governmental accreditation." ACICS was soon recognized by the U.S. Secretary of Education in 1956, four years after the federal recognition process was introduced.

In 1965, Congress enacted the Higher Education Act, which regulates accreditation in the United States. The Higher Education Act is periodically reviewed by Congress, and most recently Congress revised and passed the Higher Education Opportunity Act of 2008. Congress authorizes the U.S. Department of Education to develop rules to implement The Higher Education Act. The Higher Education Act also gives the Department of Education authority to oversee the disbursement of Title IV funding.

In 1975 the self-regulating accrediting agencies sought to improve the process of accreditation and NCA and FRACHE merged to create a national organization with a wide membership base called the Council on Postsecondary Accreditation (COPA). Through COPA, accrediting agencies sought to provide a unified process of recognizing accrediting agencies through peer-review evaluation, and to improve quality assurance amongst member institutions in the United States.

To be more effective in dealing with Higher Education challenges that arose in the late 1980s and early 1990s, COPA was eventually replaced with the Council for Higher Education (CHEA) in 1996. Today ACICS is recognized by CHEA.

Accreditor assessment standards

The Higher Education Amendments of 1992 required accreditors to assess a list of quality indicators: (1) Curricula, (2) Faculty, (3) Facilities, equipment, and supplies, (4) Fiscal and administrative capacity as appropriate to the specified scale of operations, (5) Student support services, (6) Recruiting and admissions practices, academic calendars, catalogs, publications, grading, and advertising, (7) Program length and tuition and fees in relation to the subject matter taught and the objectives of the degrees or credentials offered, (8) Measures of program length in clock hours or credit hours, (9) Success with respect to student achievement in relation to its mission, including, as appropriate, consideration of course completion, state licensing examination, and job placement rates, (10) Default rates in the student loan programs under Title IV of this act, based on the most recent data provided by the secretary of education, (11) Record of student complaints received by, or available to, the agency or association.

In the years following 2008, there has been a growth of the same problems that were seen in the 1950s and 1980s and 1990s in terms of concern about for-profit fraud. A 2012 Senate committee investigation led by Sen. Tom Harkin (D-IA), for example, found significantly lower completion rates, higher student loan debt, and higher loan default rates in the for-profit sector when compared with public and nonprofit institutions. Instead of refocusing on accreditation, as the 1992 amendments sought to do, the federal government has increasingly sought alternatives to accreditors for the purpose of protecting access to federal student aid.



Some of this has been accomplished through federal regulations administered by the Department of Education through negotiated rulemaking. The Obama administration has enacted two major regulations aimed at rooting out fraud. One, known as gainful employment, judges career training programs based on how much their graduates earn upon graduation vs. the debt borrowed. If a program is in violation, it loses access to federal funds. A second attempt—the state authorization standards, which has been challenged in court and has yet to go into effect—includes state authorization regulations. The rule requires institutions offering distance education to students in a state where they are not physically located to meet requirements in each state where they have students. The goal is to create a more formal role for states in approving schools.

Gainful employment, state authorization, and the executive actions announced earlier this month are all important efforts to create greater accountability among institutions that receive taxpayer funds. Accreditors, however, remain the primary gatekeepers. The legislative history of accreditation shows that fraud and abuse of the federal aid system have persisted despite repeated attempts to enact oversight and steer accreditors toward consumer and taxpayer protection. If accreditors are incapable of performing this function, then maybe it is time for an entirely new gatekeeper.



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APPEN PLENARY SESSION II



**Dr. Dr. Nurolaini Pg Haji
Muhd. Kifli, Ph.D.**

Institute of Health
Sciences, Universiti
Brunei Darussalam,
Brunei Darussalam

Curriculum Development Planning for BHSc Pharmacy Programme at UBD: Our Journey

PAPRSB Institute of Health Science Universiti Brunei Darussalam (UBD) was established in 2001 with the introduction of undergraduate twinning programme to train medical students between UBD and University of Queensland and also the Diploma of Primary Health Care programme. In 2005, the Institute introduce the (3+3) programme of BHSc (Medicine) with Partner Medical Schools from various countries.

PAPRSB Institute of Health Sciences has expanded its focus beyond solely medical training to include Public Health, Biomedical Sciences, Dentistry, Nursing and Midwifery.

In August 2016, BHSc (Pharmacy) undergraduate programme was offered in the form of GenNEXT degree format, i.e. 4-years with 1-year Discovery Year Programme. Before the BHSc (Pharmacy) programme started the planning was done 3 years before with the various stakeholders meeting and a survey was conducted at pre-universities level. As a result of the survey the admission criteria was set and the needs of stakeholders were taken into considerations. The programme was designed to be in line with the objectives of the National Vision 2035 and UBD's 2020 Vision to nurture students to be entrepreneurial and innovative with wide-ranging skills across disciplines. Stakeholders involved were the Department of Pharmacy, Ministry of Health, JPMC Pharmacy, Simpura Pharma Sdn Bhd. and other stakeholders, so as to ensure courses taught meet the demands and trends of pharmacy practices. An outcomes-based approach was used in the pharmacy curriculum development, the Academic Steering Committee (ASC) formed in 2013 designed the BHSc (Pharmacy) curriculum to incorporate an integrated curriculum (eg, organ system-based instruction of combined anatomy/physiology, combined pharmacology and therapeutics) and also various pharmacy clerkships and projects in clinical pharmacy, public health, community projects as well as research component. During the Discovery Year programme, pharmacy students will have the opportunity to gain first-hand experience and exposure on pharmacy practices in the real world, and outside of Brunei. Now the BHSc (Pharmacy) programme have 3 cohorts of students with the average number of students admitted about 10 students per year. The graduates from this BHSc (Pharmacy) programme are required to complete a 1-year internship before licensure with the Brunei Darussalam Pharmacy Board, Ministry of Health.



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APPEN PLENARY SESSION II



**Assoc. Prof. Surakit
Nathisuwan, PharmD,
BCPS**

Faculty of Pharmacy,
Mahidol University,
Thailand

Development of Clinical Pharmacy Education and Qualification: Thailand's Experience"

Since the introduction of clinical pharmacy and pharmaceutical care concept, the direction of pharmacy profession toward patient-oriented role has become the shining light of the profession. The new role expands the responsibility of pharmacist from a passive role as dispenser to an active role of a drug expert working closely with other healthcare professionals and patients to promote effective, safe and cost-effective drug use. With such new role, a paradigm shift in pharmacy education is necessary to equip pharmacy graduates with knowledge and skills necessary to achieve that goal. Such concept and implementation has been resoundingly successful in the Western countries. However, adapting and implementing such concept is a daunting task for Thailand or any developing countries.

During the early period (1975-1990), clinical pharmacy education in Thailand was limited especially in the undergraduate level. Mostly, there was a 1-2 courses that were related clinical pharmacy in a given pharmacy curriculum. As a result, this was more as an introduction to the concept rather than education for skill development. For those who were interested to obtain structured education on clinical pharmacy, the only option was to pursue a graduate degree. For Thailand, the first Master of Science in Clinical Pharmacy program was established at Mahidol University in 1976 and then expanded to other universities years later.

During 1990 – 2008, the tide of clinical pharmacy and pharmaceutical care concept was growing stronger. There was a progressive and continuous expansion and integration of clinical pharmacy into core competency of pharmacy education. This was evident from the expansion of courses related to clinical pharmacy into one of the two tracks under the undergraduate curriculum of most universities. As for qualification, students who graduated from both tracks would obtain the same pharmacy degree but with some indication of the track that they chose. It is important to note that during this period there was the establishment of the US-Thai Pharmacy Consortium in 1994. The primary aim of such collaboration was to promote the development of pharmacy education in Thailand through the support of top U.S. pharmacy schools. Young staffs from all Thai faculties of pharmacy were given the opportunities to be enrolled in professional programs, graduate programs and postdoctoral training through facilitated processes. Active staff and student exchange programs were continuously promoted and supported. Pharmacists serving as preceptors were sent to gain short term experience and skills that allows them



to transform into competent preceptors at the practice site for pharmacy student training. Despite this advancement, a division between those who had a vision of "pharmacy as a clinical profession" and those who saw "clinical pharmacy as a specialty" still lingered and provoked intense debates among pharmacy educators.

Since 2009, Thai's pharmacy education has transitioned into the 6-year Doctor of Pharmacy program. Within this program, students receive almost two years long of clinical pharmacy education and practice. Some of the courses are courses that used to be the required courses of the Master of Science in Clinical Pharmacy program. As for skill development, students undergo 7-8 clinical rotation at practice sites which last almost a full year. As a result, time dedicated to education and equip students with clinical skills in this 6-year curriculum is considerably much higher than a 5-year curriculum. It is crucial to note that there are two tracks of the 6-year Doctor of Pharmacy degree in Thailand including patient care and product tracks. This is due to the different nature of job availability in Thailand compared to that of the Western world. Despite such difference, the similarity is the long duration of practice in the last year of training. While one practices in a healthcare setting, the other practices in industry setting.

Based on such change, there is a clear need for a new form of postgraduate training of pharmacy graduates especially those who choose to practice in healthcare setting that require advanced pharmacy practice skills with specialization credentials. To support the advancement of postgraduate training for those in the patient care track, the Pharmacy Council of Thailand has established and endorsed the Board Certification Program (BCP) through the governing body entitled "the College of Pharmacotherapy of Thailand or CPhT". The program has undergone several changes and modification since it was first established in 2003. Currently, the program is structured as 4 years in total with the Board Certified Pharmacotherapy certification as the degree bestowed upon those who complete the program by the Pharmacy Council. The 4-year program comprises of 1 year of general residency, 2 years of specialized residency and 1 year of research fellowship. Currently, there are 7 universities running the program across the nation. Such reform of postgraduate training for pharmacy workforce is perfectly coincided and serves as a catalyst for the contemporary national policy supporting the advancement of specialized care for a vast number of diseases inflicting the population. Throughout the years, increasing number of applicants is the testament of the success of the program. Successful graduates of the programs have now been working at the forefront of the pharmacy practice circle and as the leaders for change. The board certification has become a nationally accepted qualification for clinical pharmacist with specialization and recognized by both public and private organization nationwide.



APPEN PLENARY SESSION II



Assoc. Prof. Dr. Ibrahim Abdullah

Management and
Science University,
Malaysia

Globalization of Pharmacy Education: MSU Experience

Effects of Globalization are inevitable at this moment, including in pharmacy education and pharmacy practice. Phenomena of professional migration and cross border education increase tremendously with various reasons, making our generation become a world citizen. As the implementation of Erasmus Mundus Program and Bologna Declaration, the pharmacy education in Europe has made great strides in harmonizing pharmacy education between EU countries, allowing the implementation of trans-border education in the field of pharmacy education and pharmacy practice.

The Association of Southeast Asian Nations (ASEAN) comprising the member countries, including Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Vietnam, Laos, Myanmar and Cambodia was established in 1967 to promote regional peace and stability. The ASEAN Economic Community blueprint has been introduced few years back, featuring a single market and production base, characterized by free flow of professionals and skilled workers, among other things. ASEAN Mutual Recognition Arrangements are in different stages of development and cover the fields of Engineering, Nursing, Surveying, Architecture, Dentistry, Medicine and Accountancy.

The ASEAN's Pharmaceutical Product Working Group (PPWG) is contributing to this vision by establishing the pharmaceutical harmonization scheme. The goal is to create common regulations for pharmaceuticals in the region, to reduce trade barriers and to ensure that pharmaceutical products penetrating the ASEAN markets show sufficient safety quality and efficacy. PPWG has come out with implementation of the ASEAN Common Technical Dossier (ACTD) and the ASEAN Common Technical Requirements (ACTR), followed by implementation of MRA on the Post-Marketing Alert System (PMA), MRA on Good Manufacturing Practice (GMP) inspections, MRA on Bioavailability and Bioequivalence.

In education part, there are some university net-workings that have been formed to standardize recognition and credit transfer process among the university members, such as the Asean University Network (AUN), the University Mobility in Asia and the Pacific (UMAP) and the ASEAN International Mobility for Students (AIMS) Program. These programs have been created to accommodate the trend of trans-border education among the university students.



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Some independent forums have been created by various schools of pharmacy in the region to accommodate need of current students toward globalization of their education system. The School of Pharmacy MSU, together with some other universities has initiated the Asia Pacific Pharmacy Education Workshop in 2010. It is a sharing forum to discuss about harmonization of pharmacy education system among the schools of pharmacy in Asian Pacific region. The workshop was held in few universities annually, including Universiti Sains Malaysia (USM, Malaysia), Management & Science University (MSU, Malaysia), Institut Teknologi Bandung (ITB, Indonesia), Josai University (JU, Japan), Chulalongkorn University (CU, Thailand), and Burapha University (Thailand). The collaboration leads the school members to conduct global mobility programs, such as global internship program, join student research project, dual degree program and other global exchange program. These programs will contribute to the implementation of professional recognition of pharmacy profession in ASEAN.



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HPC PLENARY SESSION I



**Prof. Dr. Sugiyanto
Kartosentono, MS, Apt.**

Faculty of Pharmacy,
Universitas Airlangga,
Indonesia
The Assessment Institute
for Food, Drugs and
Cosmetics, The
Indonesian Council of
Ulama (AIFDC ICU/
LPPOM MUI), Indonesia

The New Era of Pharmaceutical Products must be Halal-Certified in Indonesia

Islam is a complete way of life, with its unique belief system and practices. Muslims are the fastest-growing consumer segment in the world. Consumer's views on halal products are not only confined to the religious viewpoint but the confidence that comes with the Halal Branding, healthy, wholesome & hygiene. Awareness and interest in Halal products in Indonesia has increased tremendously among Muslims and Non-Muslims as well. Therefore recommendation of halal status of any product (including halal medicines) should be strictly based on sharia and needs to be consistently implemented. And the implementation of this mandate is stipulated in Law No. 33/2014 concerning Halal Product Assurance (JPH), and Government Regulation No.31/2019. JPH is legal certainty on the halal status of a product as proven by Halal Certificate. Moreover, products that enter, circulate, and trade on Indonesian territory must be halal certified. Muslims are taught to choose halal medicines. Since halal medicine is urgently needed by the ummah, it would need some guidelines on mechanisms to foster national, regional and international partnerships to implement the Halal Assurance System (HAS) on pharmaceutical products and medical care services. Halal certification and HAS design that implemented by LPPOM MUI have also been recognized and even adopted by halal certifier bodies abroad.



HPC PLENARY SESSION I



Prof. Eddy Yusuf, Ph.D.

The International
Centre for Halal Studies
(ICHLAS),
Management and
Sains University,
Malaysia

Halal Pharmaceuticals: the Challenges and Practices of Halal Products

The world demands for halal products, covering foods, cosmetics, pharmaceuticals, services and other products will continue to grow with the increase in global population, particularly for the Muslim community. It is forecasted that in the year of 2030, Muslim will cover 27% of the global population. Thus, the halal industry is the fastest growing global business across the world. The global halal commodity becomes a huge market of USD 2.3 trillion (excluding banking) and is expected to grow each year.

In 2016, Indonesia, the world biggest number of Muslim country, declared a new policy that all the products enter of distributed in Indonesia must be halal certified. This policy will be implemented in stages, started from food products, followed by cosmetics and pharmaceutical products. This policy will force the industries to comply with halal requirement to get their products halal certified.

Several challenges are faced by the pharmaceutical industries in implementing halal requirement, including difficulties in getting halal source of raw materials and shortage of work-force that understands syariah requirements and implementing this theoretical knowledge into actual industrial practice. In monograph of animal origin materials listed in British Pharmacopeia (2012), found that 28%, 14% and 58% of raw materials were categorized under red list, green list and grey list, respectively while in Japan Pharmacopeia (2011) found that 15%, 11% and 74% fall in similar category, respectively. Red list refers to the only pig source raw materials (Haram), green list is to the only bovine source raw materials (Halal, subject to the slaughtering method), and grey list refers to the both source of raw materials (can be Halal or Haram).

From the perspective of pharmaceutical care, the understanding of patient's rights and patient's compliance are part of issues need to address with regard to Halal pharmacy products. Furthermore, managing halal products in hospital and community pharmacy is another challenge need to be resolved. A standard operational procedure in handling halal products with all the current constraint need to be developed by the relevant healthcare professionals with full consideration of fatwa ruling by Islamic authorities.



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Halal research centers in universities, including ICHLAS have taken initiative in finding replacement of non-halal raw materials, development of Halal analysis industries. The program includes the development of the halal training modules across the universities, establishment of halal research center, and development of halal executive program. The holistic initiative of combining syariah knowledge with technology will benefit the halal industries, education system, Muslim communities and consumers.



HPC PLENARY SESSION II**Dr. Meiny Suzery, MS**

Halal Study Center,
Diponegoro University,
Indonesia
Faculty of Science and
Mathematics,
Diponegoro University,
Indonesia

**Development of Gelatine
Production from Multi Stock Feed of
Fish Type and Its Application in
Foods**

Gelatin is an elementary protein produced from collagen hydrolysis which has a reversible transformation from sol to gel. On 2011, demand of gelatin in the world is 48.9 kilo ton and it is predicted to reach 450.7 kilo ton on 2018. Indonesia imported gelatin from other countries, namely Australia, China, Germany, Japan and France. Gelatin import on 2014 reached 601,681 kg. Majority of gelatin is produced from pig skin (46%) and cow skin (29.4%). The objective of this research is to produce halal gelatin from fishery products and development production of gelatin production and its applications. Gelatin was synthase by conventional method with hydrolysis reaction. It was conducted with maceration in acid condition at 1-2 days. Development process on gelation production was conducted by using ultrasonic assisted and microwave assisted. Hydrolysis reaction was conducted in 1-6 hours.

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HPC PLENARY SESSION II

**Prof. Dr. Hasan Yetim**

Halal Foods R & D
Center and Food
Engineering
Department, Faculty
of Engineering &
Natural Sciences,
Istanbul Sabahattin
Zaim University, Turkey

Market Opportunities for Halal Pharmaceutical Products and Turkey's Experience to Enter Asian Muslim Countries Market

Nearly $\frac{1}{4}$ persons in this world is Muslim by birth or geography, and by 2030, 79 countries are expected to hold millions of Muslim residents, as is the case 72 countries for now. Religion is an important factor affecting the human nature and their functions in daily life. The Muslims in general also adhere strongly to religious principles and increasingly become more sensitive over the halalness of their goods and other commodities used in daily life, especially for foods, medicines, cosmetics etc. The largest opportunity within the Halal market is undoubtedly for foods, then we could conclude that the prospective halal market is enormous for all daily needs or supplies. Currently, total expenditure of the Muslims around the world for halal products is around \$1.4 trillion and expected to be \$1.86 trillion in 2023.

"Halal" is an Arabic term meaning lawful or permitted, "Halal Food" refers to the food that has been prepared according to Islamic dietary rules, defined in the Koran that is free from pork products, alcohol and some other unlawful ingredients. In Turkey, recently a "Halal Accreditation Authority" (HAK) was established under the law no: 7060 and published in the Turkish Official News Paper on November 2017. The HAK now is affiliated with the Ministry of Economy and is expected to be only body authorized to provide halal accreditation services. Again, Turkey advocates the establishment of SMIC (Standards and Metrology Institute of Islamic Countries) standards, although currently Halal certification has been a voluntary process in the country. On the other side, Halal Food and the other daily conveniences and supplies have been gaining importance among the consumers and as well as local and foreign trade sectors in Turkey over the past 10 years. Halal certification focus is driven mostly by Turkey's turn toward the Middle East, Asian and African Muslim countries as new trading partners where Halal certification is usually required. For example, new Muslim tourists usually look for Halal labeling while they are visiting Turkey. Another factor is Turkey's growing domestic conservative, religious population would like to see a Halal label on some products and are skeptical for the goods produced by multinational companies that may not be strictly observing Halal.

Halal pharmaceuticals refer to medicines that do not contain any parts of unlawful animals (pig, dog, mouse, insects etc), alcohol and other materials that not permitted under the Shariah law. The market share of halal pharmaceuticals is around US \$90-100 billion in the world according to the State of Global Islamic Economy Report 2018/19, and



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Turkey's share in this sector is estimated between % 8 - 10, which is around US \$10 billion. As far as halal pharmaceuticals production and marketing concern, Turkish pharmaceutical companies have no short-term plan to enter Asian Muslim countries' market in near future. Because there has been a general opinion or fatwa that medicinal products might be exempted from halal concern as long as a doctor prescribed that is critical for life. However, currently majority of devout scholars in Turkey have been trying to invalidate this opinion that was informally issued during the strictly secular periods. Consequently, Turkey made great advancement in terms of halal issue, and it is expected that the production and marketing of halal pharmaceuticals in Turkey will soon start and develop rapidly to have a great market share in the world.



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APPEN - HPC FINAL PLENARY SESSION



**Assoc. Prof. Dr. Mohd.
Fadli M. Asmani, RPH.,
MMPS**

Management and
Science University,
Malaysia

Ways toward Malaysian Pharmacist

Pharmacist in Malaysia is one of the professional careers and is categorized under the discipline of Professional and management in the Ministry of Health Malaysia. September 2019 reported 18,195 full registered Pharmacist and 1329 Provisional Registered Pharmacist (PRP) but the growth of Pharmacist in Malaysia is decreasing trend and now is -26.4%. There are 22 institutions offered pharmacy program in Malaysia and produced more than 1000 new Pharmacy graduate yearly.

To become Pharmacist in Malaysia, it took minimum 18 years study life which is 6 years in primary school, 5 years in secondary school, 1 year in Pre-university program, 4 years in Bachelor of pharmacy program and the last mile is 1 year in PRP and 1 more year in compulsory service program in government or recognized private sector.

1 year (52 weeks) Provisional Registered Pharmacist plus 1-year compulsory services are required to obtain full registered pharmacy in Malaysia and with that only, the pharmacist can obtain licensed A to legally practice as Pharmacist in hospital or community pharmacy or Manufacturing company.



APPEN - HPC FINAL PLENARY SESSION**Dr. Mustofa Helmi Effendi, drh., DTAPH**

Halal Center,
Universitas Airlangga,
Indonesia

The Role of Halal Certification in Pharmaceutical Product

Since the issuance of Law 33 of 2014 concerning Guaranteed Halal Products, the Government has an obligation to remind all parties that the Law is implemented properly without exception including in pharmaceutical product. Regarding the availability of in pharmaceutical product, it is very dependent on the attitude of the pharmacists who practice in the pharmaceutical industry towards halal certification, including their readiness to produce halal drugs. This material aims to disseminate regulations regarding the halal certification in pharmaceutical product and its readiness to produce halal in pharmaceutical product.

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SYMPOSIUM SESSION

APPEN SYMPOSIUM



**Prof. Daryono Hadi
Tjahjono, MSc.Eng.,
Apt.**

School of Pharmacy,
Bandung Institute of
Technology, Indonesia

Standardization of Competence for Indonesian Pharmacist

First pharmacy higher education in Indonesia was established in 1946, which held by Department of Pharmacy, and had been managed under a faculty named *Faculteit voor Wiskunde and Natuurwetenschappen* (Faculty of Mathematics and Natural Sciences), or under Faculty of Pharmacy. Since 2006 most of pharmacy higher education institutions changed to School/Faculty of Pharmacy for more independent in academic management. Pharmacy higher education consist of diploma (3 year), bachelor (4 year), pharmacist (4+1 year), magister (2 year) and doctoral (3 year) programs. Since April 2015, all study programs in pharmacy or pharmaceutical sciences are accredited by Indonesia Accreditation Agency for Higher Education in Health (IAAHEH).

Curricula of education for bachelor program in pharmacy is mainly product oriented, since at first established in 1940s, and the community pharmacy was the main pharmacy practice of Indonesian pharmacist. Since 2006, some schools/faculties as well as Association of Indonesian Pharmacy Higher Education (APTFI) and Association of Indonesian Pharmacist (IAI) have been showing a concern on how to strengthening clinical pharmacy in Indonesia. Thus, content of pharmacotherapy and other related subjects have been added in recent curriculum. Some schools and faculties have also been conducting bachelor program in clinical (and community) pharmacy to support the competence of pharmacist candidates.

In line with the global pharmacy education to produce competence pharmacists who should have the role in improving the safety and effectiveness of medication use, we are concerning in continuous curriculum reform, as well as practice development and scholarly activities. Since 2013, final national competence examination (CBT and OSCE) has been setup to standardize pharmacist.



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APPEN SYMPOSIUM



Dr. Nazrul Islam

Pharmacy Discipline,
School of Clinical
Sciences, Faculty of
Health, Queensland
University of
Technology, Australia

Integrated Pharmacy Course for The Pharmacists in Future

Pharmacists are an integral member of the healthcare professionals and play an essential role in delivering quality patient care. As a provider of health solutions to patients, pharmacists need to have strong knowledge and experiences in the pharmacy profession. If community/ clinical pharmacy is to reach its full potential, it is critical to provide pharmacy education with a more coordinated and collaborative approach to ensure better patient care across the health care system. The integrated pharmacy courses is a way forward to contribute to the broader health care system and a key to drive for greater efficiency and wellness of patients with complex diseases. The 4 years Bachelor of Pharmacy (Honours) offered at QUT is an integrated course structure focussing on the priority health areas of patient care with appropriate clinical skills required for the patients benefits. In future, the health conditions and new challenges related to the needs of patients will be changed and the efficient pharmacists will be required to understand the needs of their patients. Therefore, an integrated pharmacy course is a central avenue to address the anticipated needs of the patients and produce efficient pharmacists to respond in the changing environment.



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HPC SYMPOSIUM



**Prof. Dr. Veni Hadju,
MSc**

School of Public Health,
Hasanuddin University,
Indonesia

**Development of Halal Supplements
Based on Local Resources for
Pregnant Mothers in Reducing
Maternal Anemia and Stunting in
Indonesia**

Maternal anemia and stunting are still prevalent in Indonesia. Around 50% of pregnant mothers suffer from anemia and 30% under five children suffer from stunting. Iron and folic acid (IFA) supplement became national program for pregnant women since 80's however the coverage and compliance are very low. Anemia during pregnancy would increase low birth weight and this would create stunting in under five children. We developed a Moringa oleifera leaf capsule (MOL) as well as honey as local supplements to prevent mothers from anemia and improve birth weight. We have done biological active compound analyses of MOL and Honey from three different places in South Sulawesi. We did analyses for proximate, viscosities, polyphenol, acidities, pH, anti oxidant, flavonoid and some vitamin and minerals. The results showed that MOL from three locations were almost similar; water (9.22-9.41%), ash (10.10-11.65%), protein (24.24-29.83%), lipid (8.43-9.56%), polyphenol (0.24-0.34%), flavonoid (192-209ppm), anti oxidant total (57.92ppm). However, honey from three different locations showed somewhat different; water (21.14-25.41%), abu (0.27-2.05%), protein (1.10-1.60%), lipid (0.01-0.09%), polyphenol (0.06-0.11%), flavonoid (14-36ppm), and anti oxidant (343ppm). Powder and aqueous extract MOL were then developed and tested to pregnant mothers in several studies. In addition, honey was combined with MOL or IFA given to mothers during pregnancy in some studies. A systematic review was made and found that MOL and honey could reduce maternal anemia (>200% compared to IFA) and improve birth weight (>200g compared to IFA). We are now looking for a honey product that come directly from bee fed with MOL juice. We expect that it would be a good supplement for Indonesian pregnant mothers in the future.



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HPC SYMPOSIUM**Dr. Tika Widiastuti, MSI**

Halal Center,
Universitas Airlangga,
Indonesia

**The Strategy of Halal Industry
Development in Indonesia**

The development of halal industry has become a popular discussion and attract the attention of businesses and consumers. Labeling "halal" or "sharia" on a product is not only a form of obedience to Muslims but has become the strength to attract market. It acts as a guarantee of products allowed for Muslims, a symbol of global quality assurance and a lifestyle choice. Previous studies were interested in examining the potential of halal industry, while very few discuss the problems in the development process of halal industry in Indonesia. This research examines obstacles and provide strategies needed to accelerate the development of halal industry. Study of previous researches and in-depth interviews with academicians and practitioners found issues in the development of the halal industry in Indonesia and divided into five aspects that include Government Policy, Production, Socialization, Infrastructure, and Human Resources.



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FOCUS GROUP DISCUSSION

This year, the symposium facilitates 2 (two) group discussions namely forum for APPEEN board members and forum for Indonesian halal auditors.

APPEEN board members will be attended by the Deans, Directors and Leaders of the school or faculty of pharmacy within APPEEN consortium. A number of universities have confirmed their participation in the forum including Universitas Airlangga Indonesia, Bandung Institute of Technology Indonesia, Management and Science University Malaysia, Universiti Sains Malaysia, Universiti Brunei Darussalam and Mahidol University Thailand. Non-member universities are also welcomed to take part as reviewer in the forum. This includes representatives from University of South Florida USA, Queensland University of Technology Australia and Istanbul Sabahattin Zaim University Turkey. The objective of this group discussions is to explore opportunities for developing research and publication through crowdsourcing and co-sharing journal amongst APPEEN members.

The group discussion for Indonesian halal auditors will raise a primary issue on the implementation of mandatory Halal certification in Indonesia. The objective of this discussion is to brainstorm ideas among halal auditors regarding the potential challenges and solution prior to the implementation of halal certification obligation. It is expected that a number of recommendations will be produced from this group discussion which subsequently passes to the government for policy improvement.



POSTER PRESENTATION

Guide for Poster Presentations

1. How to prepare a poster
 - a) Please make your poster into an X-banner with the size of 60 cm × 160 cm, PORTRAIT orientation.
 - b) The main contents of the poster should be in the upper part where it is easily visible.
 - c) Posters must be prepared in English.
2. There will be a registration desk for speakers of poster presentations in the hall entrance. Please find your poster position with your paper ID number, and put up your poster within the installation time.
3. During poster presentation and free discussion time, please remain at your poster site
4. Participants should install their poster not later than October 8, 2019, 12.00 WIB.
5. Installation, presentation and removal time schedule

All poster installation	October 8, 2019	08.30-12.00
Poster Presentation (odd number)	October 8, 2019	13.00-14.00
Poster Presentation (even number)	October 9, 2019	13.00-14.00
Poster viewing	October 8, 2019	08.30-17.00



ABSTRACT LIST

Clinical and Community Pharmacy (Code: CP)

No	POSTER NUMBER	PRESENTER	TITLE
1.	CP001	Gunawan Widjaja	The importance of bioethics subject in healthcare professionals' education in Indonesia
2.	CP002	Yunti Fitriani	Analysis of factors affecting compliance with diabetes mellitus patients in using insulin correctly with approach theory of health belief model (HBM) (Study at PHC hospital in Surabaya)
3.	CP003	Ragil Setia Dianingati	Knowledge and perception of pharmacy students about herbal medicine and chemical medicine at Ngudi Waluyo University
4.	CP004	Andi Hermansyah	The contemporary role and potential of pharmacist contribution for community health using social media
5.	CP005	Ayudika Permatasari	The correlation between type 2 diabetes mellitus risk factor using the finnish diabetes risk score (FINDRISC) questionnaire with random blood glucose
6.	CP006	Ratna Kurnia Illahi	Homecare pharmacy project as an innovative patient-oriented communication, information, and education learning program
7.	CP007	Aprillia Diana Resti	Profile of pharmacological therapy adherence and non-pharmacological therapy adherence of hypertensive patients
8.	CP008	Ayu Wulan Dwiputri	Pharmacist contributions in the treatment of diabetes mellitus in southeast asia: a narrative review
9.	CP009	Milhatul Labibah	Pharmaceutical services for demand of natural medicine for diabetes mellitus treatment in Surabaya drugstores
10.	CP010	Emilya Primada Sari	The service on requesting of natural medicine as immunostimulant in Surabaya drugstores
11.	CP011	Aminatush	Natural medicines in Surabaya: its use,



ABSTRACT LIST

Clinical and Community Pharmacy (Code: CP)

No	POSTER NUMBER	PRESENTER	TITLE
		Ummah	knowledge, and attitudes among the elderly
12.	CP012	Vindia Khendy Aksandra	Pharmaceutical services for requests of natural medicine as immunostimulant in Surabaya pharmacies
13.	CP013	Wahidatunnur	Knowledge, attitudes, and usage of natural medicine among mothers in Surabaya
14.	CP014	Asri Indahning Warni	Pharmaceutical services for requests for natural medicine to treat hypertension in Surabaya pharmacies
15.	CP015	Ahmad Elfaris Ash Shiddiqi	The self medication services profile of phytopharmaca drug products for diabetes mellitus patients at some of community pharmacies in Surabaya
16.	CP016	Yenni Desilia Indahsari	The relationship between adherence barriers and medication adherence in hypertensive patients (Study at primary health care centers in Surabaya)
17.	CP017	Muhammad Rizal Alfandi	A study to assess the adherence of patients with diabetes mellitus at community health care center in East Surabaya
18.	CP018	Elinda Eka Rachmawati	The correlation between the risk level of diabetes mellitus using the Australian type 2 diabetes risk assessment tool (AUSDRISK) questionnaire with random blood glucose test (Study in staffs of Universitas Airlangga)
19.	CP019	Sindy Irvana Kurnia Saputri	The correlation between the risk level of diabetes mellitus type 2 with random blood glucose test using the canadian diabetes risk (CANRISK) questionnaire
20.	CP020	Sesty Rachmawati	A review of the implementation of chronic disease management program (PROLANIS) in Indonesia



ABSTRACT LIST

Clinical and Community Pharmacy (Code: CP)

No	POSTER NUMBER	PRESENTER	TITLE
21.	CP021	Ayuk Lawuningtyas Hariadini	Student scope of practice in pharmacies: definitions, student competencies, and guidelines for implementation
22.	CP022	Wenny Putri Nilamsari	Study of co-prescription of drugs potentially interact with warfarin in Indonesian ambulatory patients
23.	CP023	Diesty Anita Nugraheni	Utility analysis of kidney disease outpatients with anemia undergoing hemodialysis
24.	CP024	Eko Prasetyo	Evaluating current practice and policies in the use of injectable medicines for treating myalgia
25.	CP025	Fithria Dyah Ayu Suryanegara	Cost consequences analysis of antihypertensive in outpatients department of PKU Muhammadiyah Gamping hospital
26.	CP026	Muhammad Khalid Rijaluddin	Exploration of barriers affecting job satisfaction among community pharmacist
27.	CP027	Yunita Nita	Cost of illness in type 2 diabetes mellitus patients with sulphonylurea monotherapy at several primary health care centre in Surabaya
28.	CP028	Yunita Nita	Cost of illness in type 2 diabetes melitus patients with two oral antidiabetic drug at primary health care centre in Surabaya
29.	CP029	Mufarrihah	Cost of illness on type 2 diabetes mellitus with insulin therapy in several community health care centers in Surabaya
30.	CP030	Septi Anggraini	Factors affecting active medication information services towards pregnant and breastfeeding woman with chronic disease
31.	CP031	Anisyah Achmad	The relationship between the level of education and accuracy of insulin injection techniques in dm patients with measurement of HbA1C values



ABSTRACT LIST

Clinical and Community Pharmacy (Code: CP)

No	POSTER NUMBER	PRESENTER	TITLE
32.	CP032	I Nyoman Wijaya	Knowledge, attitude, practice of pharmacist towards management of hypertension in puskesmas
33.	CP033	Rizky Farmasita Budiastuti	Evaluation of patients' knowledge on their warfarin therapy in tertiary hospital setting
34.	CP034	Ahda Sabila Eddy Yusuf	Colistin induced numbness and giddiness in hospitalized patients receiving intravenous collistin: a case report



ABSTRACT LIST

Halal Research (Code: HL)

No	POSTER NUMBER	PRESENTER	TITLE
1.	HL001	Hotmaria Hertawaty Sijabat	Halal cosmetics in Indonesia; how should it be regulated?
2.	HL002	Khairiah Santa	Questionnaires evaluation: knowledge, attitude and perception regarding halal dietary supplements among sport students' in public universities of Malaysia
3.	HL003	Khairiah Santa	Knowledge, attitude and perception regarding halal dietary supplements among sport students' in public universities of Malaysia
4.	HL004	Reviany Vibrianita Nidom	Vaccine manufacturing : a halal approach
5.	HL005	Osman Sagdic	Determination of palm oil adulteration with lard used in some pharmaceuticals by using differential scanning calorimetry and raman spectroscopy techniques
6.	HL006	Abdul Rahem	Analysis of pharmacist attitude in the pharmaceutical industry of halal certification and their readiness to produce halal medicine
7.	HL007	lif Hanifa Nurrosyidah	Prospectivity of red passion fruit (<i>Passiflora edulis Sims</i>) as a halal source of resistant probiotic againts vancomycin and erythromycin
8.	HL008	Muhammad Nur Salam Hamzah	Inhibitory activity of aqueous extract and cell free fermentation broth of passion fruit against ESBL and MRSA as alternative halal source of antibacterial substances.
9.	HL009	Diar Herawati Effendi	Comparison of characteristic design of halal capsules from fruit peel waste extraction



ABSTRACT LIST

Pharmaceutical Biology (Code: PB)

No	POSTER NUMBER	PRESENTER	TITLE
1.	PB001	Suherni Susilowati	The potency of bull seminal plasma protein in different extender on frozen goat semen process for support artificial insemination effectivity
2.	PB002	Rizki Putri Nurdiana	The effect of green tea (<i>Camellia sinensis</i>) extract in egg yolk skim milk extender on post-thawed merino sheep sperm quality
3.	PB003	Maha Granitari	Effect of media pH and incubation temperature on the inhibitory activity of <i>Bacillus tequilensis</i> BSM-F symbiotic <i>Halichondria panicea</i> from Cabbija Madura waters against <i>Staphylococcus aureus</i> ATCC 25923 and <i>Eschericia coli</i> ATCC 25922
4.	PB004	Galuh Damar Buana	Identification of marine sponge <i>Halichondria panicea</i> symbiotic bacteria isolated from Cabbija Madura coast and optimization of media for producing its antibacterial metabolite
5.	PB005	Sonia Khoirun Nisa'	Effect of carbon and nitrogen sources on the antibacterial activity of <i>Bacillus tequilensis</i> BSM-F symbiotic with <i>Halichondria panicea</i> sponge from Cabbija Madura seawater
6.	PB006	Kiran Nilugal	The evaluation of antiulcer activity using <i>Armoracia rusticana</i> (horseradish) extract in ethanol- induced rats
7.	PB007	Santosh Fattepur	Wound healing properties of <i>Coriandrum sativum</i> L. leaves extract and its formulated ointment in wistar rats
8.	PB008	Yuny Erwanto	Characterization of "kacang" goat skin collagen and their potency as an antioxidant
9.	PB009	Risqy Sobriya Anggryni	Antimalarial activity study of andrographolide-chitosan solid dispersion and histopathological effect in <i>Plasmodium berghei</i> infected mice



ABSTRACT LIST

Pharmaceutical Biology (Code: PB)

No	POSTER NUMBER	PRESENTER	TITLE
10.	PB010	Retno Widyowati	The effect of 70% ethanol and aqueous extract of <i>Rusa unicolor</i> antler against anti-inflammatory and anti-osteoarthritis
11.	PB011	Nuril Fadilatul Nehru	Plasma blood of primaquine and chloroquine in mice after intravenous administration of liposome
12.	PB012	Heni Rachmawati	The potency of snail (<i>Achatina fulica</i>) slime-derived elastin as a natural anti aging
13.	PB013	Andiena Elsafira	In vitro anticancer activity of acetone extract of <i>Solanum mammosum</i> CGS callus culture against HeLa and T47D cancer cells
14.	PB014	Tutik Sri Wahyuni	Anti-hepatitis C activity combination of <i>Ruta angustifolia</i> extract and ribavirin
15.	PB015	Tri Puji Lestari Sudarwati	Concentration and time exposure determination of methanol extract from <i>Carica papaya</i> leaves in the larvicidal activity against <i>Aedes aegypti</i> larvae



ABSTRACT LIST

Pharmaceutical Chemistry (Code: PC)

No	POSTER NUMBER	PRESENTER	TITLE
1.	PC001	Nuzul Wahyuning Diyah	Synthesis, cytotoxicity, antimicrobial activity of N-ethyl-N-(ethylcarbamoyl)-4-nitrobenzamide, and its in silico molecular docking
2.	PC002	Indy Bustanul Haq	Determination of epigallocatechin gallate (EGCG) and caffeine in domestic black tea products by TLC-densitometry
3.	PC003	Ali Nur Ad Deen	Determination of epigallocatechin gallate (EGCG) and caffeine in domestic green tea products using TLC-densitometry
4.	PC004	Dwi Wulan Andarini	The bioavailability study of chitosan and its derivate solid dispersion of andrographolide: validation of HPLC assay for the quantification of andrographolide in the rabbit plasma
5.	PC005	Juni Ekowati	In silico pharmacokinetic evaluation of sixteen O-hydroxycinnamic acid derivatives by pKCSM web tool as an attempt to improve the potency as anti-angiogenesis.
6.	PC007	Mohammad Rizki Fadhil Pratama	Molecular docking of novel 5-O-benzoylpinostrobin derivatives as EGFR wild type and L858R-T790M-V948R mutant inhibitor
7.	PC008	Tedjo Narko	Optimization of robusta green coffee fermentation using response surface methodology
8.	PC009	Valentika F. S.	In vitro acetylcholinesterase inhibitory activity of the ethyl acetate subfractions of Agelas nakamura
9.	PC010	Suzana	Synthesis of 4-hydroxybenzohydrazide derivatives from methyl 4-hydroxybenzoate as antibacterial
10.	PC011	Hans Alif Firmansyah	Comparative studies of total soluble solid determination of Curcuma longa rhizome extract using refractometer and moisture



ABSTRACT LIST
Pharmaceutical Chemistry (Code: PC)

No	POSTER NUMBER	PRESENTER	TITLE
11.	PC012	Yusuf Alif Pratama	analyzer Optimization of the extraction process of Piper retrofractum fruit using total soluble solid parameter



ABSTRACT LIST

Pharmaceutical Technology (Code: PT)

No	POSTER NUMBER	PRESENTER	TITLE
1.	PT001	Nahda Mujahida Ula	Effect of PEG 400 on elasticity of scaffold of diclofenac sodium with chitosan gelatin matrix
2.	PT002	Azisia Insanya Lamakluang	The effectivity of glutaraldehyde as a crosslinking agent on characteristics and diclofenac sodium release from chitosan-gelatin-PEG400 scaffold
3.	PT003	Diajeng Putri Paramita	Evaluation of ketoconazole tablet prepared using dry granulation technique with filler-binder and disintegrant excipient
4.	PT004	Aristha Novyra Putri	Drug development : optimization buccal mucoadhesive bilayered tablet of simvastatin using design factorial
5.	PT005	Yotomi Desia Eka Rani	Dissolution of p-methoxycinnamic acid (PMCA)- β -cyclodextrin (β -CD) inclusion complex prepared by solvent drop grinding method
6.	PT006	Yuna Fajar Herdiansyah	Characterization of p-methoxycinnamic acid - β -cyclodextrin inclusion complex (prepared by co-grinding method)
7.	PT007	Anindya Ramadhanti Yufinanda	Dissolution of p-methoxycinnamic acid (PMCA) - β -cyclodextrin (β -CD) inclusion complex made using co-grinding method
8.	PT008	Beatrice	Characterization of p-methoxycinnamic acid (PMCA)- β -cyclodextrin inclusion complex prepared by solvent drop grinding method
9.	PT009	Fadzrin Herawati Ningsih	The influence of stabilizer type on the physical properties of granule and tablet of dried hesperetin nanosuspension
10.	PT010	Aditya Dwi Listyaningrum	Effect of glutaraldehyde on bio screw bovine hydroxyapatite-gelatin with of addition of alendronate as bone fixation material



ABSTRACT LIST

Pharmaceutical Technology (Code: PT)

No	POSTER NUMBER	PRESENTER	TITLE
11.	PT011	Galuh Primadani Primadani	The effect of stabilisator on particle size and dissolution rate of dried hesperetin nanosuspensions : a preliminary study
12.	PT012	Fenita Shoviantari	Coenzym Q10 nanostructured lipid carrier as inducer of skin fibroblast cell and its irritability test in mice model
13.	PT013	Sabrina Dahlizar	Potential of low molecular weight gelling agent N-palmitoyl-glycyl-histidine (Pal-GH) as a new component of a topically applied gel formulation
14.	PT014	Herlinda Mawardika	Formulation of anti-acne emulgel containing kersen leaf extract (Muntingia calabura L.) and antibacterial activity test against propionibacterium acnes
15.	PT015	Ni Made Krisantina Shandra	Preparation of peel off cosmetic of virgin coconut oil from Cocos nucifera L. and anti acne activity against propionibacterium acnes : effect of polyvinyl alcohol concentration
16.	PT016	Esti Hendradi	The influence of polymer composition in matrix type-transdermal patch to anti-inflammatory effect of meloxicam (composition of polymer: sodium alginate, hydroxyl propyl methyl cellulose E15, and ethyl cellulose N22)
17.	PT017	Ira Nurjannah	The effect of dual loading primaquine and chloroquine on the integrity of liposomal bilayer membrane
18.	PT018	Theresa Binayu Prabhawati	The enhancement of andrografolide bioavailability by solid dispersiosn forming using chitosan as matrix
19.	PT019	Kosasih Kosasih	Effects of gelatin and glutaraldehyde concentrations on characteristics of cantigi (Vaccinium varingiaefolium Miq.) extract loaded gelatin nanoparticles as antioxidant



ABSTRACT LIST

Pharmaceutical Technology (Code: PT)

No	POSTER NUMBER	PRESENTER	TITLE
20.	PT020	Itsna Fadlilatul	Effect of ratio D- α -tocopheryl polyethylene glycol 1000 succinate and poloxamer P84 on physical characteristic and stability of mixed micelles (for delivery system of hesperetin)
21.	PT021	Dini Retnowati	The stability and irritability study of chitosan-Aloe vera spray gel as wound healing
22.	PT022	Deni Rahmat	Antioxidant activity of capsule containing Sargassum polycystum nanoparticles
23.	PT023	Alhara Yuwanda	Review articles: the potential of liposome technology as a system for the development of Central Nervous System (CNS)

