

PATH TALK



MESSAGE FROM THE PRESIDENT

December 2017 Issue



Dear members,

Good news to members whose subscription to the AMM is in arrears!

The AMM Council has agreed to give an amnesty to members in arrears, provided they will opt to be a life member of the AMM. Otherwise they have to pay the full amount of the cumulated membership fees owed to the AMM. In this amnesty programme, members would have to pay for 2 years' arrears (RM150 per year) and the life membership fee which is RM2,500 for those below 50 years of age and RM1,000 for those 50 years and above. Please hurry to renew your membership, while the amnesty is on!

We are in the Fourth Industrial Revolution!

It has been said that the communities of Homo sapiens are now in the beginning of the 4th Industrial Revolution from year 2015 onwards. This is an era characterised by new technologies fusing the physical, digital and biological worlds. It will impact all disciplines, economies, industries and walks of life. The ubiquitous smart mobile phones and the arrival of driverless vehicles are some of the many examples.

It is going to transform how we are going to practise laboratory medicine in the coming years. We must now seriously think about the disruptions that are going to affect us and plan how to cope with the changes. Otherwise, we would become irrelevant and left out of the value chains. For those in capacity building and education, we need to incorporate these changes in our curricula and inculcate relevant values to our trainees to face the challenges ahead.

In facing the increasingly technology-driven healthcare industries, likely to be dominated by artificial intelligence, big data analytics, cloud computing, robotics and the Internet of Things, we must ensure that we do not lose touch with the elements of medical humanities. We also need to address issues such as cyber ethics, cultural intelligence, internet addiction disorders, etc. which we are already beginning to encounter.

Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, outlines the key technologies driving this revolution, discusses the major impacts on governments, business, civil society and individuals, and offers bold ideas for what can be done to shape a better future for all, in his book entitled "The Fourth Industrial Revolution" published by Penguin Random House, United Kingdom.

It is worthwhile to read this book!

A glimpse into the future – Farming Haemopoietic Stem Cells.

In 2006, Dr. Shinya Yamanaka successfully re-programmed mouse fibroblasts to become pluripotent stem cells that are capable of re-differentiating into multiple cell types. He and his research group were able to do similarly on human skin fibroblasts the next year. He was awarded the Nobel Prize in 2012, six years after this landmark scientific discovery – the making of induced pluripotent stem cells (iPSCs). Since then, scientists have been working fervently to generate different cell types anticipating the use of these cells for repair and it has heralded the dawn of regenerative medicine.

For the haematologists, it would be logical to ask whether we could generate haemopoietic stem cells. We could then produce different mature blood cells from these stem cells. This year, Nature has published results of successful making of haemopoietic stem cells by 2 groups of researchers. Dr. Sugimura's team worked on human mature cells. They made iPSCs first and then differentiate them into haemopoietic stem cells [Nature. 2017; 545:432-438]. Dr. Lis's team took a different approach using murine endothelial cells. They made haemopoietic stem cells direct from mature cells without going through the iPSC stage [Nature. 2017; 545:439-445].

With these technological breakthroughs, we are now on the way to farm these stem cells to yield different mature blood cells: red cells, platelets, cancer-killing T cells, dendritic cells, NK cells, and many others for treatment purposes. The haemopoietic stem cells too could also be used for haemopoietic stem cell transplantation.

If the 4th Industrial Revolution is going to take away many jobs as predicted, it will also create new jobs. If farming haemopoietic stem cells in an industrial scale is to be assisted in a great way by emerging technologies brought by the Revolution, such farming efforts would create new jobs. Pathologists should therefore be planning ahead to see what role we could play to exploit new technologies brought about by the Revolution.

We will remain relevant and prosper!

With best wishes,
Emeritus Professor Dr. SK Cheong,
President,
15th December 2017.



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UPCOMING EVENT



**MEDLAB Haematology Conference
Dubai International Convention & Exhibition Centre
6th February 2018**

The conference will provide delegates the opportunity to discuss the emerging therapeutic options and recognise the factors that affect the diagnosis, staging, and prognosis of patient's treatments. Following extensive research and the guidance of the **Cleveland Clinic Conference Activity Director**, Dr Fadi W. Abdul-Karim, Professor of Pathology and Vice Chair for Education, Robert Tomsich Pathology and Laboratory Medicine Institute, Cleveland Clinic, Ohio, USA and local Conference Chair, **Dr Rania Medhat Seliem**, Consultant Hematopathologist, Head of Pathology Laboratory, Rashid Hospital, Dubai, UAE; this programme has been carefully designed to meet the needs of all haematologists and other medical laboratory professionals. Excellent line-up of speakers including:

- **Dr. Allam Shawwa**, Assoc. Prof., Department of Pathology, Dalhousie University, Halifax, Nova Scotia, Canada
- **Dr. Eric D. Hsi**, Section Head, Hematopathology; Chair, Department of Laboratory Medicine Robert J. Tomsich Pathology & Laboratory Medicine Institute, Cleveland Clinic, Cleveland, Ohio, USA
- **Dr. Ridas Juskevicius**, Assistant Professor, Hematopathology Division, Dept. of Pathology, Microbiology and Immunology, Vanderbilt University School of Medicine, Nashville, Tennessee, USA
- **Dr. Ziad Peerwani**, Consultant Physician, Anatomic Pathology & Cytopathology - Medical Affairs, Tawam Hospital, Al Ain, UAE

For further information on the conference and registration, please visit the following website: <http://www.medlabasia.com/>.

POCT In Acute Setting Seminar (D-Dimer, Troponin & BNP)

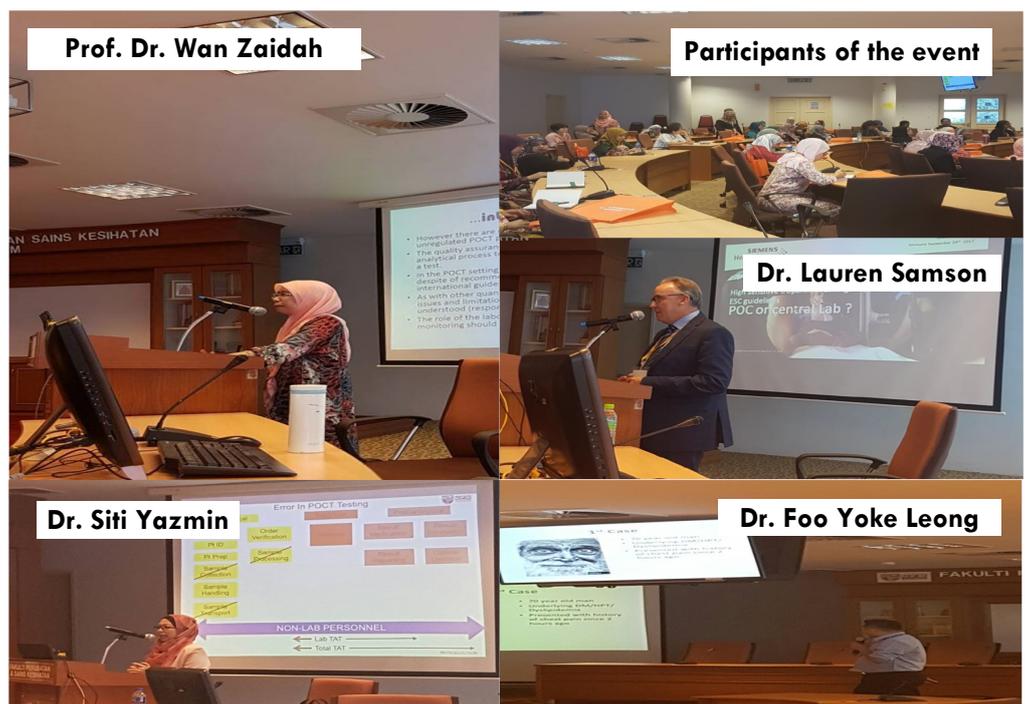
The Departments of Pathology & Medicine, Faculty of Medicine & Health Sciences, UPM in collaboration with College of Pathologists, National Heart Association Malaysia and College of Emergency Physician with support from Siemens Healthineers Malaysia organised a one day educational seminar on POCT in acute setting (D-Dimer, troponin and BNP) on the 20th September 2017 in the Faculty of Medicine & Health Sciences, UPM, Serdang. A total of 50 participants attended the event with a registration fee of RM50/ person.

The speakers were a mixture of pathologists, cardiologists and emergency physicians which enables the participants to get an overall overview on the clinical uses and limitations of point of care test (POCT) from the point of view of lab and users of POCT. Although the seminar focussed on troponin, BNP and D-Dimer, the use of ultrasound as POC was also introduced to the participants. The list of speakers and their topic of presentations were as follows:

- POCT issues from a lab point of view by Dr. Siti Yazmin Zahari Sham (Chemical Pathologist, UPM)
- POCT on PT/INR & D-Dimer by Prof. Dr. Wan Zaidah Abdullah (HOD Haematology & Transfusion, USM)
- Local perspective on the use of cardiac biomarkers – troponin, BNP by Assoc. Prof. Dr. Sazzli Kassim (Cardiologist UiTM)
- POCT in Emergency Department by Dr. Ahmad Luqman Md Pauzi (Emergency Physician, UPM)
- High sensitive troponin I in Emergency setting & ESC guidelines – POC or central lab? by Dr. Lauren Samson (Siemens Healthineers, France)
- How POCUS change patients management by Datuk Dr. Alzamani Mohamad Idrus (Emergency Physician, HKL)

It ended with interactive case presentations by Dr. Cecelia Anthonysamy (Emergency Physician, Hospital Serdang), Dr. Intan Nureslyna Samsudin (Chemical Pathologist, UPM) and Dr. Foo Yoke Leong (Cardiologist UPM). Certificate of attendance was given to each participant.

(Report prepared by Dr. Intan Nureslyna Samsudin)





2017 International Pathology Day Celebration

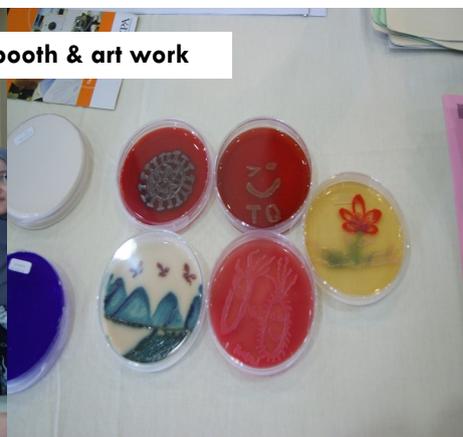
International Pathology Day (IPD) was first established by the Royal College of Pathologists and the inaugural celebration took place on 5th November 2014. The aims of the IPD are: (1) To recognise and celebrate the role of Pathology and Laboratory Medicine services in addressing global health challenges and improving health outcomes of communities, and (2) To create wider public awareness on the important role of Pathology in their daily lives. The College of Pathologists, Academy of Medicine of Malaysia (CPathAMM) is one of the participating organisations in this yearly event. This year, the **Microbiology Unit of Hospital Raja Permaisuri Bainun (HRPB)** and the **Pathology Department of Hospital Selayang** along with **Universiti Sains Islam Malaysia (USIM)** celebrated the IPD on 15th November in their respective hospitals in collaboration with the College.

In the report prepared by **Dr. Nurul Suhaiza Hasanudin**, the event at HRPB started off with an opening speech by the Head of Department of Pathology, Dato' Dr. Norain Karim and was officiated by the Hospital Director, Dr. Teo Gim Sian. These were followed by a multimedia presentation about Pathology services provided in HRPB. Attendees, estimated to be around 150 healthcare workers and employees of HRPB and also hospital visitors, took a tour of "A day in Department of Pathology" through exhibition booths and posters, viewed slides and learnt about the process of sample processing in order to produce timely and accurate results for the clients. They also took part in quizzes during the interactive exhibitions. There was also a talk on the blood culture technique followed by hands-on practical session of blood culture sampling technique. In addition, there was a hands-on session of doing blood film for malarial parasites for the doctors of HRPB. It was hoped that this event would create awareness on the roles of Pathologists in patient management and at the same time provide a platform for feedback session from clinicians and patients in order to improve services for better patient care. The celebration was also an opportunity to commemorate the ever hardworking personnel of the Department of Pathology of HRPB. Therefore, laboratory-themed cookies were given to each of them as token of appreciation. There was also a photo booth for attendees and volunteers and a 'guessing booth' where attendees were required to guess the number of expired vacutainers and pipette tips in the jars. The event was a success. To most of the attendees, the event was an eye opener on the roles of the Department of Pathology in patient care. Some were truly impressed by the work done in the Department and felt that the event should be done on a regular basis throughout the year. They also took the opportunities to speak to the Medical Officers and Pathologists to find out more on the exhibitions materials and other services carried out in the laboratories.

Over at **Hospital Selayang**, the theme of the celebration was "Moving Together Towards Excellence". The event started with a transfusion talk from Dr Azura Abd. Hamid (Kajang Hospital Haematologist). This was followed by the opening ceremony of by the Hospital Director, Dr. Hajah Siti Zaleha Mohd. Salleh. There were also exhibition booth and poster display by each discipline of the Pathology Department at the hospital lobby to showcase the services provided in the laboratories.

Path Talk, on behalf of the College, would like to thank the Microbiology Unit of HRPB and Pathology Department of Hospital Selayang for organising the event. We would also like to record our appreciation to all the attendees and volunteers for their generous support. Lastly, the College would like to thank the Royal College of Pathologists of Australasia (RCPA) for kindly providing the promotional materials for the International Pathology Day 2017.

Hospital Raja Permaisuri Bainun IPD Celebration



Hospital Selayang IPD Celebration



Opening ceremony by Hospital Director, Dr. Hajah Siti Zaleha



Registration of attendees



Organising committee and attendees at the event



Volunteers at the CPathAMM exhibition booth



16th Annual Scientific Meeting, CPathAMM Grand Royal Adelphi Hotel, Seremban 12th - 13th October 2017

The 16th Annual Scientific Meeting of CPathAMM with its theme of 'Strengthening Basics, Enhancing the Future' was co-organised by the Pathology Department, Hospital Tuanku Jaafar Seremban (HTJS) and CPathAMM. As many as 179 participants from various fields of pathology and clinical discipline took part in this scientific meeting.

Among the featured speakers were Prof. Dr. Tan Soo Yong from Singapore, Mr. Amit Manjure from India and the former Head of National Pathology Service, Dr. Mohd. Ariff Mohd. Hashim who was given the privilege to deliver the K. Prathap Memorial Lecture. The event was officiated by the Director of Negeri Sembilan Health Department, Dr. Zainudin Mohd. Ali.

The 2-day meeting included 18 lectures from 15 distinguished speakers from various fields of pathology, forensics and medicine-related pathology.

The Scientific Meeting started with an opening speech by the President of CPathAMM, Emeritus Prof. Dr. Cheong Soon Keng and a welcoming speech from Dato Dr. Azizon Othman, the organising chairperson as well as the Head of HTJS Pathology Department. The first day resumed with a total of 6 common lectures including the K. Prathap Memorial Lecture

entitled '**Future of Pathology and Pathology of the Future**', chemical safety, laboratory acquired infections and sepsis markers from clinician point of view. Two industrial talks regarding optimising diagnostic process with risk assessment and HCV confirmatory test were also given.

The second day of event resumed with 11 lectures covering issues such as autopsy in traumatic brain injury and medical negligence, update in 2016 WHO classification of CNS tumour, lymphoid neoplasm and myeloproliferative disorder, primary immunodeficiency, immunoglobulin tests; methodology and service delivery in Malaysia, lupus anticoagulant diagnosis, updates on TDM of antibiotics and patient blood management.

A total of 56 abstracts were submitted for poster presentation from the participants and 6 best posters were awarded. These abstracts were judged by senior pathologists who were expert in their respective fields.

An overwhelming support from various companies providing laboratory support were shown when all the 12 booths set up for exhibitors were taken up. In addition, there were companies who invited speakers from abroad such as India and Vietnam to deliver lectures.



Officiating ceremony by the Director of Negeri Sembilan Health Department accompanied by Prof. Dr. Cheong and Dato Dr. Azizon.



Some of the invited speakers.

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The closing ceremony were preceded by prize giving for best posters and lucky draws. This special event ended with a thank you speech from Dato Dr. Azizon Othman. The organising committee received positive comments from delegates on the scientific content and conducive atmosphere of the venue. The committee also expressed their thanks to CPathAMM for giving the Pathology Department of HTJS the honour in hosting this year's scientific meeting.



Path Talk, on behalf of the College, would like to thank **Dato Dr. Azizon Othman**, the Organising Chairperson of the event, and her team of dedicated committee members for their hard work in ensuring the success of this meeting. We would also like to record our appreciation to all the speakers, participants and corporate sponsors for their generous support.

(Report prepared by Dr. Norfadzilah Mohd. Yusof)



CiRA 2017 International Symposium

Kyoto, Japan

An international symposium on induced pluripotent stem cells (iPSC) was recently organised by the Centre for IPS Cell Research and Application (CiRA), Kyoto University (Japan) at Miyako-messe Kyoto International Exhibition Hall from 6th November to 8th November 2017. This symposium with its theme of 'A decade of human iPSCs: From bench to bedside', was held in conjunction with the celebration of the 10th anniversary of the discovery of human iPSCs. Professor Dr. Shinya Yamanaka, winner of the Nobel Prize in Physiology and Medicine in 2012 for discovering iPSCs and also the Director of CiRA, inaugurated the event by delivering the opening remarks. Among highlights of the symposium were talks by prestigious scientists from CiRA, Harvard Stem Cells Institution, Gladstone Institution, Sanger Institution and Karolinska Institution ranging from basic research on pluripotency and cutting-edge technologies to novel applications of stem cells. Two of Emeritus Prof. Dr. Cheong Soon Keng's Scientific Officers from MAKNA were given the opportunity to join this symposium to explore advanced iPSC cell research. Being one of the pioneer groups to work with iPSC cells in Malaysia, they shared their research work in the form of posters entitled: Gene expression profile of DNA damage response pathways upon osteosarcoma cell lines reprogramming and Epithelial-mesenchymal transition (EMT) deregulation in oral squamous cell carcinoma induced pluripotent stem cells (OSCC-iPSCs).



From left: Ms. Erica Choong Pei Feng, Prof. Dr. Shinya Yamanaka & Ms. Nalini Devi Verusingam