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PREFACE



Profesor Dr. Syed Azhar Syed Sulaiman
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Assalamualaikum w.b.t and Greetings..

I am very proud to present you the 1st edition of the AMDI Magazine, which covers a selection of news and articles from AMDI Newsletter from the current year. It is intended to give you some insight into our developments and our activities that span research, academic and clinical services. We wanted to share with you the strategic progress we are making at AMDI.

All the articles were written by AMDI staff personally. We are grateful that our staff are willing to share their expertise and stories in this way.

I would like to thank all the news contributors as well as our editors and editorial secretariat for their contribution to AMDI Magazine. I hope that you will all greatly enjoy reading this publication.



Kejayaan Berganda IPPT Dalam KIK USM 2020

Oleh: Mohd Faisal Jamaludin – 10 November 2020

BERTAM, 10 November 2020 -

Institut Perubatan dan Pergigian Termaju (IPPT) Universiti Sains Malaysia (USM) telah memperoleh kejayaan berganda apabila dua kumpulan yang menyertai Konvensyen Kumpulan Inovatif & Kreatif (KIK) USM 2020 mendapat Naib Johan dalam kategori masing-masing.

Pada konvensyen kali ini, IPPT menghantar dua kumpulan untuk mempersembahkan idea inovasi dan kreativiti mereka. Kumpulan Fast bagi Kategori Teknikal manakala penyertaan sulung Kumpulan Dito bagi Kategori Pengurusan.

Menurut ketua kumpulan Dito, Dr Ramzalinda Abd Rahman, mereka tidak menyangka penyertaan sulung ini memberi kejayaan dengan penarafan emas kepada kumpulan mereka yang masih baru dalam penyertaan KIK dan tidak pernah menyertai apa-apa pertandingan lain sebelum ini.

“Pada awalnya, terdapat pelbagai cabaran dan halangan dalam menjayakan projek kami kerana kekangan masa dengan kerja hakiki. Kami hampir sahaja patah semangat dan berasa mahu menarik diri



daripada menyertai Konvensyen KIK pada tahun ini,” katanya.

“Namun, atas dorongan fasilitator kumpulan kami, kami bangkit dan meneruskan perjuangan. Alhamdulillah, kami berjaya mendapat pengiktirafan emas pada hari ini yang sangat memberikan kepuasan kepada kami,” tambahnya lagi.

“Pada awalnya, terdapat pelbagai cabaran dan halangan

dalam menjayakan projek kami kerana kekangan masa dengan kerja hakiki. Kami hampir sahaja patah semangat dan berasa mahu menarik diri daripada menyertai Konvensyen KIK pada tahun ini,” katanya.

“Namun, atas dorongan fasilitator kumpulan kami, kami bangkit dan meneruskan perjuangan. Alhamdulillah, kami berjaya mendapat pengiktirafan emas pada hari ini yang sangat memberikan kepuasan kepada kami,” tambahnya lagi.

Kumpulan Dito melaksanakan projek sistem buku temujanji bagi pesakit yang memerlukan rawatan gigi palsu yang lebih sistematik, kemas dan mudah untuk diurus.

Bagi kumpulan Fast pula, mereka mempertaruhkan projek C-Savior sebagai projek inovasi mereka.

C-Savior adalah satu inovasi yang direka khas untuk menyejukkan kulit kepala untuk merendahkan suhu di kawasan kepala dengan menggunakan gel yang telah disejukkan bagi mengekalkan suhu 12-20 darjah celsius di dalam topi selama 3 jam.



Gambar Hiasan

Pesakit disarankan untuk memakai C-Savior selama 30 minit sebelum, semasa dan selepas rawatan kemoterapi dijalankan. Keadaan ini akan mengurangkan aliran darah ke folikel rambut yang boleh menghalang atau meminimumkan keguguran rambut berlaku semasa rawatan kemoterapi. Ia dibuat daripada bahan terpakai seperti ais substitute, bahan buangan 'coldchain' makmal dan kain payung terpakai.

Untuk rekod, Kumpulan FAST pernah memenangi Anugerah Emas 5 Bintang dalam Annual Productivity and Innovation Conference and Exposition (APIC) 2019 yang diadakan di Sunway Pyramid Convention Centre pada tahun lalu. Menerusi produk inovasi C-Savior ini, mereka juga tersenarai dalam 20 Kumpulan Terbaik Sektor Awam Persekutuan.

Berikut adalah keputusan penuh bagi penyertaan Kumpulan KIK IPPT:

Kumpulan FAST

- Penarafan Emas
- Persembahan Terbaik
- Naib Johan Kategori Teknikal

Kumpulan DITO

- Penarafan Emas
- Naib Johan Kategori Pengurusan



Konvensyen ini diadakan secara atas talian 'online' bersama kumpulan-kumpulan lain yang bertanding dari USM Kampus Kesihatan Kubang Kerian, USM Kampus Kejuruteraan Nibong Tebal, IPPT dan Perbadanan Produktiviti Malaysia (MPC) sebagai juri.

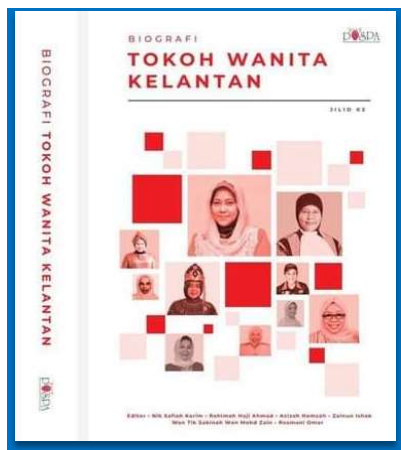
Pendaftar USM, Dr. Musa Ali turut menyampaikan ucapan aluan secara atas talian kepada semua peserta dalam konvensyen anjuran Pusat Transformasi Insan (PTI) USM ini.

Pendaftar USM, Dr. Musa Ali



**Profesor
Dr Narazah Mohd Yusoff**

Oleh: Narazah Mohd Yusuf – 19 September 2020



PETALING JAYA, SELANGOR, September 19 2020 -

TAHNIAH Profesor Dr Narazah Mohd Yusoff di atas pengurniaan **TOKOH WANITA KELANTAN** oleh Persatuan Kemajuan Wanita Kelantan di Kuala Lumpur dan Selangor (PUSPA).

Majlis yang telah berlangsung pada 19 September 2020 telah disempurnakan oleh Puan Engku Temenggung Kelantan Yang Teramat Mulia Tunku Puan Sri Dato' Hajah Noor Hayati Binti Almarhum Tunku Abdul Rahman Putra di Dewan Melati, TH Hotel Kelana Jaya, Petaling Jaya Selangor. Majlis di adakan sempena PELANCARAN BUKU BIOGRAFI TOKOH WANITA KELANTAN JILID 02. Profesor Dr. Narazah telah banyak menyumbang kepada universiti dan masyarakat sebagai doktor pakar dalam perkhidmatan hematologi dan genetik klinikal, pengajaran dan penyelidikan.

Untuk makluman, PUSPA ditubuhkan pada 16.10.2007 bagi tujuan untuk mengumpulkan masyarakat anak-anak Kelantan di Kuala Lumpur dan Selangor bagi kegiatan bersifat hubungan silaturrahim, menyusun kegiatan bagi kemajuan wanita Kelantan di Kuala Lumpur, Selangor dan Kelantan, terutama bagi golongan wanita dan remaja.

HyBirt: USM Temui Teknik Terbaharu Sembuh Kanser Lidah

Oleh: Mohd Azrul Mohd Azhar – 29 Mei 2020



Barisan Pakar IPPT

BERTAM, May 29 2020 –

Universiti Sains Malaysia (USM) terus mengorak langkah dalam inovasi sains dan teknologi apabila berjaya mencipta teknik terbaharu merawat kanser lidah, iaitu HyBIRT yang berupaya menyembuh tanpa memerlukan pembedahan atau pemetongan bahagian yang dijangkiti.

HyBIRT atau 'Hybrid Brachytherapy-Intensity Modulated Radiotherapy' ciptaan sekumpulan pakar multi-disiplin kanser dari Institut Perubatan dan Pergigian Termaju (IPPT), USM merupakan teknik modifikasi yang dilakukan terhadap dua kaedah rawatan kanser lidah sedia ada iaitu External Radiotherapy (IMRT) dan Brachytherapy.

Dr. Gokula Kumar A/L Appalanaido, Dr. Muhamad Yusri Musa dan Dr. Mohd Zahri Abdul Aziz merupakan perintis kepada penemuan teknik rawatan ini telah berjaya menyembuhkan dua pesakit pertama menghidap kanser lidah yang menjalani teknik rawatan HyBIRT selama 6 bulan dengan fungsi lidah hampir kembali pulih sepenuhnya seperti sedia kala (melalui pemeriksaan Magnetic Resonance Imaging, MRI).

Pengarah IPPT USM, Prof. Dr. Syed Azhar Syed Sulaiman berkata, kaedah ini ditawarkan sebagai alternatif buat pesakit yang tidak mahu dibedah atau tidak sesuai dibedah atas pelbagai faktor perubatan dan ia berpotensi memberi pilihan yang lebih baik buat pesakit berbanding kaedah radioterapi sedia ada.

Teknik ini merupakan satu-satunya ciptaan terbaharu USM dan tinjauan telah dilakukan menunjukkan bahawa teknik rawatan sedemikian masih belum diguna oleh mana-mana pusat perubatan di dunia seperti apa yang ditemui oleh USM," katanya.

Menurutnya, berbanding dengan teknik rawatan kanser lidah yang lazim diamalkan sekarang, HyBIRT didapati lebih berkesan kerana mampu menyembuh sepenuhnya organ lidah, dan fungsi lidah itu sendiri hampir kembali seperti keadaan sedia kala.

"Ini kerana rawatan sedia ada yang diamalkan memerlukan sebahagian atau keseluruhan lidah dipotong bagi mengelakkan penularan kanser terbit dan ini menyebabkan pesakit menarik diri daripada meneruskan rawatan kerana enggan dibedah seterusnya memudaratkan lagi kesihatan pesakit.

"Jadi, HyBIRT memberi satu alternatif buat pesakit yang membolehkan kanser tersebut dirawat dengan kesan morbiditi yang lebih baik," jelas beliau lagi.

Tambah Syed Azhar lagi, penyelidikan rawatan ini telah dijalankan selama 2 tahun oleh para penyelidik terbit dan mula diimplimentasi di IPPT pada tahun 2017.

"Sehingga tahun ini IPPT telah menerima sejumlah 10 orang pesakit kanser lidah yang sedang dirawat menggunakan rawatan kebiasaan iaitu Brachytherapy dan ini merupakan permulaan yang baik buat USM bagi memperluaskan teknik rawatan HyBIRT di negara ini agar potensi kesembuhan pesakit kanser lidah dapat ditingkatkan pada masa akan datang," jelas beliau lagi.

Walau bagaimanapun Syed Azhar berkata, bukan semua kanser lidah sesuai dirawat dengan teknik HyBIRT dan pesakit perlu berjumpa dengan doktor pakar terlebih dahulu bagi mendapatkan pandangan menggunakan rawatan tersebut.

Orang ramai yang ingin mendapatkan maklumat lanjut berkenaan rawatan ini, sila hubungi di talian: +604-5622203/2201 atau h/p: +60111-6278810 atau e-mel: klinikonkologiippt@usm.my.

Conferment As Fellow

By: Noor Akidah Ubaidillah – 13 July 2020

IPPT, BERTAM, July 13 2020 -

Dr Teoh Soo Huat, as a Medical Lecturer & Family Physicians at Advanced Medical and Dental Institute has been conferred as fellow Australasian Society of Lifestyle Medicine (ASLM) from The Community of Universiti Sains Malaysia.

According to him, Australasian Society of Lifestyle Medicine fellowship helps him to practice LM proactively, to appreciate the fundamental of family medicine (patient-centered care), and to manage patients with obesity comprehensively.



USM Diiktiraf Sebagai Pusat Pengajaran dan Latihan Brakiterapi Global Pertama di Malaysia

Oleh: Muhammad Sallehuddin Abdul Hamid – 29 Mei 2020

BERTAM, May 29 2020 - Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia (USM) telah diiktiraf oleh Nucletron Operations (Elekta), Veenendaal, Netherlands sebagai pusat pengajaran dan latihan brakiterapi global yang pertama di Malaysia untuk teknik brakiterapi ginekologi, hati, kepala dan leher, prostat dan esofagus dengan pengkhususan khas pada kanser hati primer dan sekunder dan juga kanser kepala dan leher.

Nucletron, yang beribu pejabat di Veenendaal, Netherlands merupakan sebuah syarikat dalam bidang onkologi sinaran yang menawarkan penyelesaian untuk meningkatkan kualiti rawatan pesakit kanser.

Menurut Pengarah IPPT, Profesor Dr. Syed Azhar Syed Sulaiman, pada bulan April 2020 yang lalu, IPPT USM telah menandatangani Memorandum Perjanjian (MoA) dengan Nucletron sekaligus menjadikan IPPT sebagai pusat pengajaran dan latihan brakiterapi global pertama di Malaysia yang akan mempromosi rawatan radioterapi dan brakiterapi secara berkala bagi pihak Nucletron.

“IPPT akan berperanan membantu dari segi demonstrasi produk Nucletron serta menjadi tempat lawatan yang akan menerima pelawat dari dalam dan luar negara untuk produk Elekta brakiterapi dan juga teknik brakiterapi 3D. Hal ini kerana IPPT dilengkapi dengan fasiliti rawatan kanser yang canggih dan terkini,”
katanya.

Tambah beliau lagi, selain daripada memberi tunjuk ajar dan kepakaran dalam bidang brakiterapi, IPPT USM juga melakukan pemindahan ilmu dari semasa ke semasa dengan mengadakan bengkel klinikal untuk ahli onkologi-radiasi, ahli fizik perubatan, pakar bedah fraternti, radiologis, pakar bedah otorinolaringologi, pakar bedah mulut dan maksilofasial (OMF) serta pakar bedah umum mengenai brakiterapi dan penggunaannya dalam rawatan kanser.



IPPT USM mempunyai Pakar Onkologi Radiasi iaitu Dr. Gokula Kumar Appalanaido yang pernah bertugas di Melbourne Prostate Institute, Australia.

Beliau mempunyai pengalaman luas dalam prosedur brakiterapi prostat kadar dos rendah (LDR) dan kadar dos tinggi (HDR). Selain itu beliau juga pernah menjalani latihan brakiterapi ginekologi di Hospital Chulalongkorn, Bangkok.

IPPT USM adalah merupakan satu-satunya pusat rujukan kanser wilayah utara di bawah Kementerian Pengajian Tinggi yang menawarkan perkhidmatan rawatan kanser dan perubatan nuklear terapeutik serta diagnostik.

Ia mempunyai kemudahan brakiterapi yang lengkap dan pasukan brakiterapi khusus yang terdiri daripada 2 ahli onkologi-radiasi, 6 ahli fizik, 3 ahli radiologi, 1 pakar bedah otorinolaringologi, 2 pakar bedah onco-plastik payudara, 1 pakar bedah hepatobiliari, 1 pakar urologi serta pakar pergigian khusus yang terlibat secara aktif dan membantu dalam prosedur brakiterapi.

Perancangan rawatan brakiterapi di IPPT USM adalah berasaskan imej 3D CT atau melalui pemeriksaan Magnetic Resonance Imaging (MRI) dan ia diakui sebagai pusat kepakaran brakiterapi di rantau ini.

Sumber: Dr. Mohd Zahri Abdul Aziz, Dr. Gokula Kumar A/L Appalanaido

Dr. Rafidah Zainon Co-Investigator of Prestigious KSA International Collaboration Grant

By: Muhammad Sallehuddin Abdul Hamid – 29 May 2020

IPPT,BERTAM, May 13 2020 - **A Medical Physics lecturer at the Advanced Medical and Dental Institute (IPPT), Universiti Sains Malaysia (USM),Dr. Rafidah Zainon, has been announced as one of the co-investigators of a prestigious Kingdom of Saudi Arabia International Collaboration Grant.**

Apart from USM, the other two institutions in this three (3)-year collaborative partnership are Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia (led by Principal Investigator, Dr. Mahbubunnabi Tamal) and Katholieke Universiteit Leuven (KU Leuven), Belgium.

The total amount of this international grant is \$1.68 million where USM will receive RM522,044.30 for the said project, which commenced in February 2020 following a signing ceremony between all the parties involved held in Saudi Arabia (USM was not



Dr. Rafidah Zainon

The transdisciplinary research project focuses on an integrated approach with in vivo molecular imaging and machine learning to characterise tissue microenvironment for accurate diagnosis and prognosis of infection, inflammation and cancer.

The grant was offered by the Research and Development Office of the Saudi Arabia Ministry of Education with the aim to strengthen the research capacity via joint international research collaborations.

When contacted recently, Rafidah said, “I am grateful and delighted to be part of the team members and have the opportunity to work together with multidisciplinary researchers from Imam Abdulrahman bin Faisal University; King Faisal Specialist Hospital and Research Centre, Riyadh and KU Leuven, Belgium on this project. We aim to develop and validate image-based biomarker for preclinical studies.”

She also said that this project provides a unique opportunity for research students (MSc and PhD) to further their study at USM with full scholarship and monthly stipend.

“Furthermore, it offers a highly dynamic research environment where students will have an opportunity to collaborate internationally with Saudi Arabia and Belgium universities and research centres”.

“We hope the integration of artificial intelligence in medical imaging in this project will help us to improve and recognise patterns of disease features that will give added value to the multidisciplinary teams,” added Rafidah, who heads the IPPT Oncological and Radiological Sciences Cluster. - PRO IPPT

Source: Dr. Rafidah Zainon / Editing: Tan Ewe Hoe

Dr. Fatanah Pensyarah USM Pertama Terima Anugerah EMBS

Oleh: Muhammad Sallehuddin Abdul Hamid – 6 Mei 2020

BERTAM, May 6 2020 - Pensyarah Kanan Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia (USM), Dr. Fatanah Mohamad Suhaimi telah melakar sejarahnya tersendiri apabila berjaya mendapat anugerah Early Career Achievement Award 2019 daripada IEEE Engineering in Medicine & Biology Society (EMBS) Malaysia Chapter.

Lebih menarik lagi ini adalah merupakan kali pertama EMBS memperkenalkan anugerah tersebut dan bagi kategori Early Career Achievement Award 2019, Fatanah adalah merupakan penerima pertama bagi kategori tersebut dan juga yang pertama di USM.

Anugerah ini dinobatkan berdasarkan rekod kerjaya beliau yang sangat cemerlang dalam bidang Kejuruteraan Bioperubatan sepanjang tempoh kerjaya setelah tamat PhD.

Majlis penganugerahan yang dijadualkan pada bulan April terpaksa ditangguhkan penganjur eroran daripada wabak pandemik COVID-19 dan Perintah Kawalan Pergerakan (PKP).

Namun EMBS memaklumkan bahawa majlis penganugerahan tersebut akan dijadualkan semula selepas berakhirnya PKP nanti.

Beliau akan menerima sijil penghargaan serta plak dan akan dijemput untuk membentangkan kertas penyelidikan dalam Chapter's Flagship Regional Conference yang dijadualkan pada tahun 2021.



Dr. Fatanah Mohamad Suhaimi

Fatanah, 35, mula berkhidmat dengan USM pada tahun 2012 sebagai pensyarah. Beliau berkelulusan Ijazah Sarjana Muda Kejuruteraan (Kepujian) dalam bidang Kejuruteraan Mekatronik dari Universiti Islam Antarabangsa Malaysia (UIAM) pada tahun 2008. Kemudiannya, pada tahun 2012, beliau dianugerahkan Doktor Falsafah (PhD) dalam bidang Kejuruteraan Mekanikal dari University of Canterbury, New Zealand.

Ketika ditanya mengenai perasaan beliau setelah mendapat berita diumumkan sebagai pemenang anugerah, beliau menzahirkan rasa syukur atas pengiktirafan tersebut dan sama sekali tidak menyangka akan terpilih untuk memenangnya memandangkan penyelidikan dalam bidang Kejuruteraan Bioperubatan semakin bertambah.

“Kejayaan ini pastinya memberi suntikan motivasi dan lonjakan semangat kepada diri saya untuk bekerja lebih keras lagi dan terus memberi sumbangan kepada masyarakat umum dalam bidang penyelidikan yang amat saya minati ini,” katanya.

Bidang penelidikannya merangkumi pemodelan komputasi sistem biologi, elektronik perubatan dan instrumentasi dalam bidang kejuruteraan bioperubatan, kawalan dan automasi, dan kecerdasan buatan.

Antara projek penyelidikan lain yang sedang dijalankan ialah aplikasi laser dalam perubatan dan pergigian, model kawalan glisemik terhadap pesakit ICU, pembangunan peralatan perubatan (medical device) untuk rehabilitasi pertuturan serta pembangunan model sepsis dan sistem pengesanan awal sepsis.

Beliau merupakan ahli senior Institute of Electrical and Electronics Engineers (IEEE) dan ahli aktif The Institution of Engineers, Malaysia (IEM).

Fatanah telah menerima sejumlah 6 geran penyelidikan sebagai penyelidik utama di peringkat universiti dan kebangsaan, selain menerbitkan lebih daripada 30 artikel jurnal dan 50 artikel persidangan sebagai pengarang utama dan pengarang bersama.

Beliau terlibat secara aktif dalam kolaborasi penyelidikan di peringkat nasional dan antarabangsa, antaranya di Malaysia, New Zealand dan Turki.

Pada tahun 2019, beliau telah dianugerahkan fellowship penyelidikan oleh Presidency for Turks Abroad and Related Communities of Turkey.

Beliau turut terlibat secara aktif dalam projek komuniti dan industri. Antara aktiviti perundingannya merangkumi aplikasi penggunaan laser dalam industri.



USM Surgeons Successfully Performed the IPPT First Liver Resection Surgery

By: Hafiz Meah Ghouse Meah – 9 April 2020

BERTAM, April 9 2020 - For the first time, the Surgical Unit, Advanced Medical and Dental Institute, Universiti Sains Malaysia (USM) has successfully performed the Left Lateral Sectionectomy of Liver in a breast cancer patient whose cancer has spread to the liver, on the last 7th of April.

The surgical team consists of two surgeons; led by Dr. Leow Voon Meng (Hepato-pankreato-biliari (HPB) Consultant and General Surgeon) assisted by Dr. Fitreena Anis Amran (General Surgeon).

In addition, the team also included two anesthesiologist, Dr. Zainab Abdul Ghaffar (Consultant Anesthesiologist) and Dr. Chong Soon Eu (Anesthesiologist), two Medical Officers of Anesthesiology Department, two Chief Nurses, six Nurses and one Health Care Assistant.

The decision to perform the surgery was made after a detailed and thorough discussion of the patient's condition between the Radiotherapy and Oncology Unit, Imagery Unit, and Surgical Unit.

The surgery followed the patient's consent after the surgical procedure and complications were explained. The surgery was performed under general anesthesia and took 2 hours and 30 minutes.

The surgery found the tumor at the left side of the patient's liver (segment II and segment III) which was located in an important blood vessel as shown on a CT scan performed prior to the surgery.

A portion of the patient's left lobe was removed and two cancerous nodules (tumors) were also removed; i) in the lining between the stomach and left heart (gastrohepatic ligament), and ii) in the Common Hepatic Artery.

Following the successful surgery, the patient was in stable

condition and placed in the Intensive Care Unit, AMDI form monitoring.

The surgery was successfully carried out in collaboration with the Ministry of Health Malaysia (MOH) through Hospital Sultanah Bahiyah which has provided the necessary equipment for HPB surgery as the AMDI Surgical Unit was not fully equipped to enable liver surgery in AMDI.

Dr. Leow and his team successfully established the Surgical Unit in 2014 and the Endoscopy services in 2016 in AMDI. Besides, Dr Leow has been actively contributing his expertise and clinical studies at the HPB Unit, Department of Surgery, Hospital Sultanah Bahiyah, Alor Setar, since 2013.

In addition, he is also involved in liver and kidney procurement and liver transplantation surgeries from time to time at Selayang Hospital.

He is a reference specialist in surgical and endoscopy (ERCP) elective and emergency cases for liver, pancreas and bile from MOH hospitals in the northern part of Peninsular Malaysia (Perlis, Perak, and Penang).

He has been a monthly visiting expert at the Department of Surgery, School of Medical Sciences, Hospital Universiti Sains Malaysia (HUSM), Kubang Kerian, Kelantan, since 2015 to set up the HPB Unit, which conducts clinical studies, teaching and trainings of surgeons and M. Med students.

Dr. Leow has also helped establish the Association of Hepato-Pancreato-Biliary Surgeons Malaysia in 2019, and was elected the association's treasurer.

He has chaired the 3rd International HPB Symposium in 2018 and held National Hands-on Laparoscopic Cholecystectomy workshops for Malaysian's young surgeons at Hospital Sultanah Bahiyah

and Basic Surgical Skills for graduate doctors particularly from the northern region of Peninsular Malaysia at AMDI, USM. Based on the expertise and the capabilities of the existing staffs, it would be a great loss if AMDI did not take the opportunity to expand the service in hepatobiliary surgery. This is because AMDI only needs to add a few more surgical equipment to complete this unit.

Besides, AMDI will be able to offer sub-specialty studies in the field of HPB and specialized research on HPB cancer disease if its Surgical Unit is fully equipped.

At present, not many medical centers in our country are actively attending HPB cases as they require highly trained medical personnel to perform the procedures. Only four hospitals are able to perform the operation successfully and they are Hospital Selayang (Selangor), Hospital Sultanah Bahiyah (Kedah), Hospital Sultanah Aminah (Johor), and Hospital Umum Kuching (Sarawak).

Source : Dr. Anis Amran (IPPT)

Dr. Zarina Zainudeen First USM Scientist Appointed as APSID Junior Members Working Party (Co-Chairperson)

By: Marziana Mohamed Alias – 5 March 2020

BERTAM, March 5 2020 - Dr. Zarina Thasneem Zainudeen created history with her appointment as the first female scientist from Universiti Sains Malaysia (USM) to become the Co-Chairperson (Junior members working party) of the Asia-Pacific Society for Immunodeficiencies (APSID).

As an academic who lectures at the USM Advanced Medical and Dental Institute (IPPT) she said, such appointments would commonly come from a pool of physicians.

“I was thrilled to be among the scientists chosen to be part of the core of the working party (Junior Member) of APSID and hoped that I could bring about impactful contributions and benefits to USM and the society at large,” she said when contacted recently.

Zarina also said, the appointment has provided an opportunity for her to build networks for collaboration and in the exchange of ideas and inputs on related matters through platforms on case study discussions, attachments and training as well as collaboration with members of APSID throughout the Asia-Pacific region.

Zarina added, she will represent the APSID Junior Member in Malaysia and she will also be actively involved as the next APSID Congress is scheduled to take place in Kuala Lumpur in 2022.



Dr. Zarina Zainudeen

Meanwhile, APSID, which was inaugurated on April 2016, is a group of over 60 Asian paediatricians and scientists who are interested in the field of Primary Immunodeficiency.

Previously, they met in Osaka, Japan in April 2015 and pledged to establish the Asia-Pacific Society for Immunodeficiencies with a mission to care and cure patients with primary immunodeficiency (PID).

Beside being a platform to share their PID experiences so as to promote collaboration and education and improve PID management through an understanding of genetics and

pathogenesis, APSID is also aimed to advocate and advance the care of PID patients through engagements with the government sector, patient organisations and the industry.

APSID also promotes networking with professional societies on immunology, infectious diseases or related disciplines in Asia-Pacific.

Warga IPPT Sertai Kempen Jom Baca Bersama 2020

Oleh: Mohamed Hafiz Mansor – 23 April 2020

IPPT, BERTAM, April 23 2020 - Warga Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia telah mengambil peluang untuk menyertai **"Kempen Jom Baca Bersama 2020"** peringkat kebangsaan sempena Hari Buku dan Hakcipta Sedunia. Kempen ini diadakan serentak di seluruh Malaysia dan telah mendapat kerjasama baik daripada pelbagai pihak.

Walaupun negara masih di dalam tempoh Perintah Kawalan Pergerakan (PKP) yang dikuatkuasakan kerajaan ketika ini, warga IPPT tidak melepaskan peluang bersama-sama menyertai dan menyambut baik kempen yang diadakan.

Menerusi penyertaan ini, para peserta juga berpeluang berkongsi gambar dan video aktiviti membaca di rumah dengan memuat naik secara terus ke media sosial dan meletakkan hashtag jombacabersama.

Kempen Jom Baca Bersama ini merupakan anjuran Perpustakaan Negara Malaysia, Majlis Pengarah-Pengarah Perpustakaan Awam serta Kementerian Pendidikan Malaysia yang bertujuan memberikan kesedaran umum terhadap amalan membaca tanpa mengira taraf sosial dan status ekonomi dalam masyarakat kita pada masa kini.



Congratulations! Recipients of Research Grants 2020

1	Dr. Ooi Jer Ping	Geran Antarabangsa
2	Dr. Kumitaa a/p Theva Das	Geran Universiti (RUI)
3	Dr. Noorfatimah Yahaya	Geran Penyelidikan Pembangunan Prototaip (PRGS)
4	Dr. Siti Razila Abdul Razak	Geran Universiti (RUI)
5	Dr. Intan Juliana Abd Hamid	Geran Penyelidikan Tajaan Agensi Luar (Kebangsaan)
6	Dr. Mohd Afifuddin Mohamad	Geran Universiti (Jangka Pendek)
7	Profesor Madya Dr. Norehan Mokhtar	Geran Penyelidikan Pembangunan Prototaip (PRGS)
8	Dr. Sa'adiyah Shahabudin	Geran Universiti (RUI)
9	Dr. Fatanah Mohamad Suhaimi	Geran Antarabangsa
10	Dr. Salina Sany	Geran Universiti (Jangka Pendek)
11	Profesor Madya Dr. Md Azman PKM Seeni Mohamed	Geran Penyelidikan Tajaan Agensi Luar (Kebangsaan)
	Dr. Anis Farhan Kamaruddin	
	Dr. Fatanah Mohamad Suhaimi	
	Dr. Ilie Fadzilah Hashim	
	Dr. Kumitaa a/p Theva Das	
12	Dr. Muhammad Amir Yunus	Fundamental Research Grant Scheme 1/2020
	Dr. Nozlina Abdul Samad	
	Dr. Ooi Jer Ping	
	Dr. Siti Mardhiana Mohamad	
	Dr. Zarina Thasneem Zainudeen	

Source: AMDI Research and Networking Division

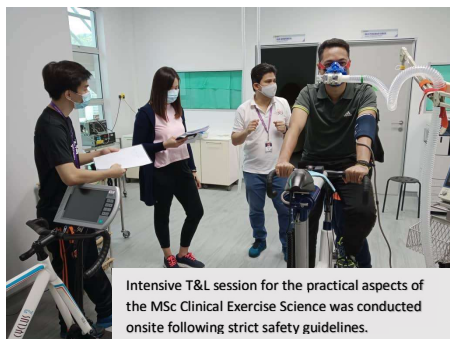
Educating future healthcare scientists and clinicians at AMDI despite the pandemic: Embracing education technology

By: Mohd Hafiz Mohd Zin – 28 December 2020

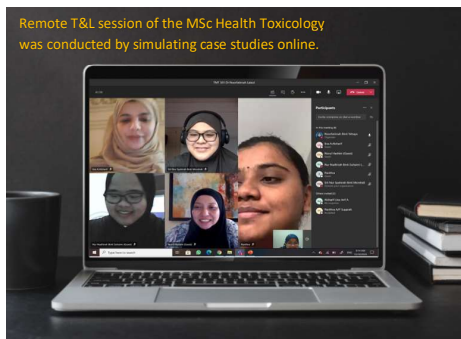
Bertam, IPPT -

2020 has seen the most rapid changes to the methods for the teaching and learning (T&L) activities since the history of tertiary education. March 2020 saw a country-wide suspension of T&L activities in universities to control the outbreak of COVID-19 in Malaysia. However, the taught academic programmes in AMDI USM were quick to respond by switching to the remote learning method and the rearrangement of the T&L activities that requires on-campus facilities to a later time in the semester.

Lecturers worked hard to gain the necessary competencies in remote teaching by attending related training courses whilst transitioning to the online T&L activities, utilising existing teaching technology and online meeting tools. The academic and international division did pulse checking few weeks into the remote T&L and the students' feedback was communicated to all lecturers. Common concerns reported include the quality of the internet streaming of the online T&L sessions and the effectiveness of the session.

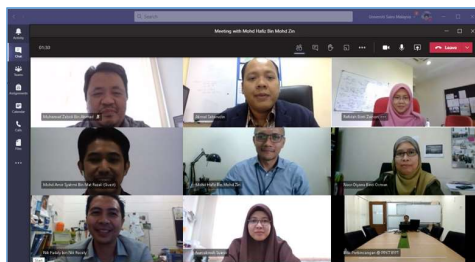


Intensive T&L session for the practical aspects of the MSc Clinical Exercise Science was conducted onsite following strict safety guidelines.



Remote T&L session of the MSc Health Toxicology was conducted by simulating case studies online.

University management was also quick to react by offering necessary modification to the academic calendar and assessment method to accommodate the disruptions. AMDI also monitored student's wellbeing closely during the movement control order (MCO) period. Research activities for the research mode students were resumed after a couple of months of freeze, following strict safety guidelines for COVID-19 prevention http://tiny.cc/RE_safetySOP. The viva voce examinations for the Master and PhD by research were also conducted on online meeting platform without jeopardising the quality of the examination. AMDI managed to ensure continuation of the T&L and research activities of the students despite the fact that the world being disrupted in a way that we never imagined.



A screen shot of a viva voce examination for the Master by Research conducted using MS Team platform

During this most unprecedented year in history, a total of 52 students have completed their studies in which 19 are research mode students. It was fortunate that none of our students contracted the virus during the period. This success would not have been possible without the determination of the staff from the academic and international division of USM that has worked hard to make sure that the flow of the administrative processes involved is not affected.

AMDI would like to congratulate all graduates this year for their success, as well as their fantastic efforts to cope with the fluid situation. The experience has helped AMDI understand how we can continue using this different way of T&L during this uncertain period and the future.



The Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia is the only medical postgraduate institute in Malaysia. Through our national and international research network and clinical partnership, we offer taught and research postgraduate programmes in niche medical, dental and health care related areas. The Master of Science (MSc), Master of Medicine (MMed) and Doctor of Philosophy (PhD) programmes in AMDI are designed to train scientists and clinicians that produce innovative scientific and clinical discoveries towards sustainable and holistic healthcare deliveries. Enroll now <https://www.amdi.usm.my/study>

Congratulations! List of AMDI students that have completed their studies in 2020

Doctor of Philosophy

1. Dr Boon Yih Hui
2. Dr Harris Kamal Bin Kamaruddin
3. Dr Kaggal Lakshmana Rao Gururajaprasad
4. Dr Nithya A/P Ravichantar
5. Dr Noor Al'Shah Binti Othman
6. Dr Pam Kaneng Victoria
7. Dr Syazana Binti Jumaan
8. Dr Siti Aminah Binti Ahmed

Master by Research

1. Nurul Hakimah Binti Mohd Salim
2. Siti Maisura Binti Azmi
3. Khor Kang Zi
4. Zuraida Binti Ramli
5. Izaz Ul Haq
6. Nurul Islam Binti Rosmera
7. Kasturi A/P Gopal
8. Nor Aniisah Binti Husin
9. Bahoudela Nahwan Kamal Abdurraheem Mohammed
10. Siti Shahanis Binti Md Sharif
11. Ros Amizah Binti Abdullah

Master of Medicine (Transfusion Medicine)

1. Dr Firdaus bin Che Ros
2. Dr Jernih bin Abdul Rahman
3. Dr Rosaina Binti Senan
4. Dr Syahirah binti Mohamed Yusoff
5. Dr Tan Pei Pei

Master of Medicine (Nuclear Medicine)

1. Dr Gouri a/p V. G. Kumar Das
2. Dr Muhammad Adib bin Abdul Onny
3. Dr Mohammad Fitri bin Khalil
4. Dr Nisa Kamila Binti Ab Rashid
5. Dr Zuffazarina Binti Zulkapli

MSc (Medical Research)

1. Kumaran a/l Ramasamy
2. Logeswaran a/l Mani Maran
3. Mohd Nazzary Bin Mamat @ Yusof

MSc (Transfusion Science)

1. Bashaer Hassan Omar Al-Amoudi
2. Mohamad Shahrir Bin Saidin
3. Nur Dalila Nabihan Binti Ahmad Tajuddin

MSc (Health Toxicology)

1. Heba Akram Sharif Salhab
2. Nik Najwa Farhana Binti Shaifful Idris

MSc (Clinical Exercise Science)

1. Alimul Imam
2. Chong Miin Yi
3. Dasataran a/l V Subramaniam
4. Didora Lesti Apri Seliasa
5. Ilham Fatria
6. Mohamad Hafiz Bin Abu Seman
7. Muhammad Mokhzani Bin Ismail
8. Ng Sin Sian
9. Nur Atiqah Bt Abd Karnain
10. Nur Fatin Nabilah Binti Md Zemberi
11. Nur Haida Binti Che Mat Ariffin
12. Raja Shuzana Binti Raja Jamaludin
13. Ronnachai a/l Som Chai
14. Teddy Lee Yi Yong
15. Wan Muhammad Ihsan Bin Wan Nawi

Source by: Academic and International Division

Joint Regional Seminar “Preclinical & Clinical Studies For Drug Development”

By: Nor Azlina Khalil – 28 October 2020



AMDI Director and staff

National Primate Research Center of Thailand, Chulalongkorn University and Advanced Medical and Dental Institute – Universiti Sains Malaysia, October 28 2020 -

In conjunction with the signing of MOA between the National Primate Research Center of Thailand - Chulalongkorn University (NPRCT-CU) and IPPT-USM, a joint virtual seminar between the two facilities was held on the 28th October 2020. The focus of the seminar was on drug development with an emphasis on preclinical and clinical studies. Six speakers presented IPPT at the event and five speakers were from Thailand.

This seminar also officiated the MOA whereby the objectives of the cooperation shall encompass the mutual strengthening of both Parties capabilities for the competence in the knowledge, skill, experience, and technology, in delivering OECD GLP preclinical studies.



Representative of Chulalongkorn University, Thailand



AMDI Director and Deputy Director of Research and Networking

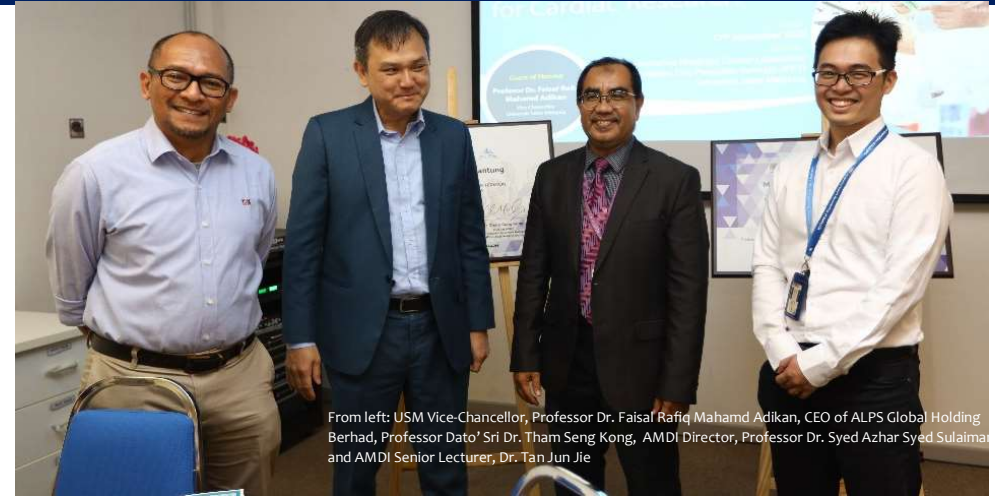
In addition to that, the seminar addressed the national aspiration, industry needs and community expectation of medical innovation through optimizing the integration of resources among existing members of APUCEN.

The MOA also aimed to encourage, promote, and facilitate the research collaboration between both Parties. Activities of collaborations may include mobility for academic, research and professional development, postgraduate academic teaching, learning, and supervision. Additionally, the

MOA targeted the cooperation in acquisition, execution, and reporting of research funds, authorship in the scientific publications, and both Parties' participation in the community and industry engagement activities. Finally, the MOA supports professional services in the development of new products, solutions, and networking in the promotion of institution products and services.

USM-ALPS Joint Laboratory a Major Boost for Cardiac Research

By: Tan Ewe Hoe – 17 September 2020



From left: USM Vice-Chancellor, Professor Dr. Faisal Rafiq Mahamd Adikan, CEO of ALPS Global Holding Berhad, Professor Dato' Sri Dr. Tham Seng Kong, AMDI Director, Professor Dr. Syed Azhar Syed Sulaiman and AMDI Senior Lecturer, Dr. Tan Jun Jie

BERTAM, September 17 2020 -

Universiti Sains Malaysia (USM) Advanced Medical and Dental Institute (IPPT) received a major boost for cardiac research with the setting up of a joint-laboratory in collaboration with ALPS Global Holding Berhad, a fully-integrated biotechnology research, medical and wellness services company.

According to Dr. Tan Jun Jie, a senior lecturer at IPPT and visiting scientific consultant specialist to ALPS Global Holding Bhd, the USM-ALPS Joint Laboratory for Cardiac Research is the result of two research collaboration agreements (CA) signed a year ago with the biotechnology company.

“The idea of having this joint laboratory with ALPS is that, amid the financial limitations we face and with a shortage of funds for equipment, ALPS will station their high-end equipments in IPPT and in return, IPPT helps them to build profiles relating to heart research.

“Several state-of-the-art equipments with an estimated cost of RM1 million have been identified to be placed at the joint laboratory, and this will surely provide help to enhance cancer research at a much greater pace,” said Tan, who played a prominent role in the setting up of the laboratory.

He added that such collaboration provides an excellent platform for industrial players and our academics to work together by matching and consolidating all resources which both sides have in common to achieve more with less, in order to innovate treatments for this killer disease.

The USM-ALPS Joint Laboratory for Cardiac Research was launched on 17 September 2020 by the USM Vice-Chancellor, Professor Dr. Faisal Rafiq Mahamd Adikan, in a simple ceremony that was also attended by the CEO of ALPS Global Holding Berhad, Professor Dato' Sri Dr. Tham Seng Kong and IPPT Director, Professor Dr. Syed Azhar Syed Sulaiman.

“We are grateful to ALPS Global Holding for positioning their high-end equipment at the joint laboratory to facilitate this research, and hence accelerating translational research that would benefit all of society,” he said.

Currently, ALPS Global Holding has moved in a Zeiss Fast Speed Live Cell Fluorescence Imaging Microscope valued at RM345,000; an inverted light microscope valued at RM25,000 and awarded an industrial research project grant worth RM108,650 to Tan.

Tan said, “More equipment will be coming to us as stated in the agreement, though the process may be slow due to the impact of COVID-19.”

On another related matter, USM is in discussions with Institut Jantung Negara (IJN, National Heart Institute) to further explore the opportunity of forming a smart partnership to set up a cardiac specialist centre in the northern region.

The proposed cardiac centre, to be located at IPPT, can leverage on the existing expertise, state-of-the-art facilities and vast experiences of the specialists and personnel in successfully handling cardiac-related surgeries at IPPT and Hospital USM (Kubang Kerian) and the best cardiac expertise and advanced cardiac/cardiovascular technology offered by IJN.

If the collaboration materialises, the centre would meet the needs of the people in the Northern Peninsula

including Penang who require treatment for heart diseases, for they no longer need to travel to IJN, which is located in the Klang Valley for treatment.

Furthermore, the centre would also help in promoting the nation's medical tourism sector with the influx of people from neighbouring countries, especially Indonesia and Thailand, to seek treatment.

IJN Ke Utara, Kolaborasi Bersama USM

Oleh: Hafiz Meah Ghouse Meah – 23 September 2020



Perjumpaan Khas Universiti Sains Malaysia (USM) dan Institut Jantung Negara (IJN)

KUALA LUMPUR, September 23 2020 -

Delegasi Universiti Sains Malaysia (USM) yang diketuai Naib Canselornya, Profesor Dr. Faisal Rafiq Mahamd Adikan hari ini mengadakan perjumpaan khas bersama Institut Jantung Negara (IJN) Holdings Sdn. Bhd. bagi merangka kolaborasi antara kedua-dua pihak di utara tanah air.

IJN Holdings Sdn. Bhd. yang diwakili oleh Ketua Pegawai Eksekutif Kumpulannya, Datuk Dr. Aizai Azan Abdul Rahim menyifatkan kolaborasi itu dapat memberi manfaat kepada kedua-dua pihak untuk masa hadapan dalam bidang kesihatan dan perubatan berkaitan jantung.

Menurut beliau lagi, IJN yang mula beroperasi sejak 1992 ingin terus mengorak langkah menerusi kepakaran dan bidang yang diterajunya selama ini untuk negara.

Perbincangan antara kedua-dua pihak lebih menjurus kepada kolaborasi IJN untuk membuka cawangannya di Institut Perubatan dan Pergigian Termaju (IPPT) di Bertam.

Faisal Rafiq yang mencadangkan supaya kolaborasi tersebut diadakan di IPPT kerana kelebihan yang dimiliki oleh IPPT dapat menampung keperluan IJN untuk membuka cawangan di sini dan kapasiti untuk memberi perkhidmatan yang terbaik kepada umum melalui perkongsian kepakaran antara kedua-dua pihak.

Dalam perjumpaan ini, delegasi USM turut diwakili oleh Pengarah Pembangunan Korporat Strategik, Hj. Muhamad Sabri Said; Bendahari USM, Kamarul Ariffin Ngah; dan Timbalan Pendaftar Pejabat Naib Canselor, Mohd Rashid Abdul Rejab.

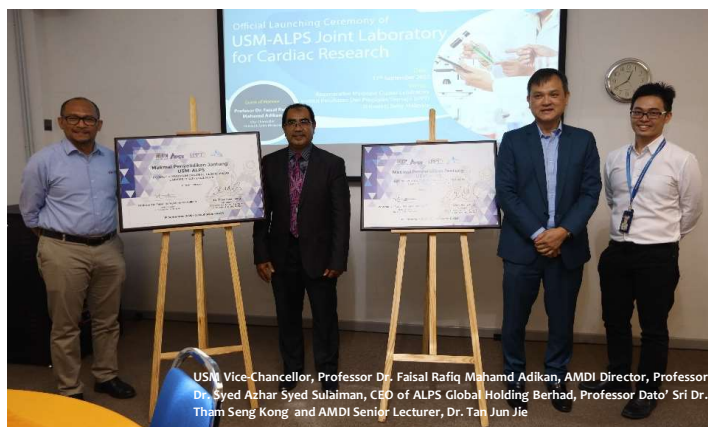
Terdahulu pada hari sebelumnya, Naib Canselor telah bertemu dengan Menteri Pengajian Tinggi, Dato' Dr. Noraini Ahmad di Putrajaya dan telah memaklumkan mengenai rancangan penubuhan fasiliti tersebut.

Data yang diperolehi turut menyatakan Pulau Pinang menjana RM500 juta hasil melalui pelancongan perubatan (medical tourism) Malaysia bagi tahun 2017 dan penduduk di utara Semenanjung berjumlah lebih 4 juta orang.

USM melalui IPPT turut memiliki makmal jantung (Cardiac Lab) berciri On-The-Go dan USM juga melalui Hospital USM telah mula mengoperasikan makmal jantung intervensinya (Phillips Biplane Coronary Angiography Azurion Series)

USM having a joint laboratory between industries

By: Nur Arzuar Abdul Rahim – 19 September 2020



Official Launching Ceremony of USM-ALPS Joint Laboratory for Cardiac Research. USM Vice-Chancellor, Professor Dr. Faisal Rafiq Mahamd Adikan, AMDI Director, Professor Dr. Syed Azhar Syed Sulaiman, CEO of ALPS Global Holding Berhad, Professor Dato' Sri Dr. Tham Seng Kong and AMDI Senior Lecturer, Dr. Tan Jun Jie

ARC, IPPT USM, September 19 2020 -

Universiti Sains Malaysia (USM) through the Advanced Medical and Dental Institute (IPPT) has collaborated with the industry in creating a laboratory that focuses on cardiovascular. The USM-ALPS Joint Laboratory for Cardiac Research, partnering with ALPS Global Holding Sdn Bhd in providing a superb platform for industrial players and IPPT academics to work together through consolidating all resources that could share in common to achieve more, with less, in order to innovate treatments for this killer disease, and hence accelerating translational research with next-generation advanced technology.

The opening ceremony of this laboratory, officiated by the Vice Chancellor of USM, Professor Dr. Faisal Rafiq Mahamd Adikan on Thursday, 17 September 2020 at 11.30 am at the Animal Research Complex, IPPT USM Bertam.

Cardiovascular is one of IPPT niche areas under the Regenerative Medicine Cluster. USM have also signed the MoA with Zhengzhou 7th People Hospital in China for exchanging experts and staff for training and research in basic and clinical cardiology.

Community Linkage Between IPPT, USM and Sabah Thalassemia Society



MoA Signing Ceremony

KOTA KINABALU, SABAH, August 29 2020 -

Universiti Sains Malaysia (USM) through Advanced Medical and Dental Institute (IPPT) has collaborated with Sabah Thalassemia Society to jointly investigate the spatial distribution patterns of thalassemia in Sabah and to help in improving thalassemia awareness among the public.

The MoA signing was held on Saturday, 29 August 2020 at The Palace Hotel, Kota Kinabalu Sabah during the society's strategic planning workshop. IPPT, USM was represented by **Dr. Ernest Mangantig**, the lead researcher from Regenerative Medicine Cluster.

Thalassemia is a significant public health problem in Malaysia and Sabah recorded the highest prevalence of thalassemia in the country. With the research collaboration between IPPT, USM and Sabah Thalassemia Society, it is hope that the society is a step closer towards achieving its vision of Zero Thalassemia Major in Sabah.



Presentation session by Dr. Ernest Mangantig

Keputusan Ujian COVID-19; berapakah Institut Perubatan dan Pergigian Termaju (IPPT), USM berperanan?

Oleh: Muhammad Amir Yunus – 14 September 2020

IPPT, 14 September 2020 -

Ramai yang tertanya-tanya tentang virus yang kini telah menjangkiti lebih dari 27 juta orang. Adakah virus ini bahaya kepada kita? Bagaimanakah untuk kita mengesahkan jika kita dijangkiti virus ini? Dari manakah datangnya virus ini? Bermula di 'ground zero' (pasar haiwan eksotik) Wuhan, Hubei negara China pada penghujung 2019, virus ini seterusnya menular sebagai epidemik di beberapa buah negara sehingga diisytiharkan sebagai pandemik global oleh WHO. Penularan jangkitan virus SARS-CoV-2 kali ini amat berbeza daripada apa yang dunia pernah alami ketika epidemik SARS dan MERS pada tahun 2002 dan 2012. Yang nyata ialah penularan virus daripada keluarga yang sama kali ini amat pantas dan sangat memberikan kesan dari segi ekonomi, psikologi



Barisan staf IPPT

Malaysia tidak terkecuali daripada kesan pandemik ini. Tindakan pantas dan tuntas oleh pihak berwajib dalam negara ini dengan panduan pakar-pakar tempatan dalam bidang ini telah berjaya mengesahkan penularan jangkitan virus korona ini daripada menjadi lebih parah.

Bagi kes SARS-Cov-2 ini, diagnosis piawai yang diterimapakai di peringkat antarabangsa ialah ujian berasaskan penggandaan bahan genetik virus korona yang bersasar atau lebih dikenali sebagai kaedah RT-PCR.

IPPT sebagai sebuah institusi perkhidmatan klinikal dan penyelidikan sememangnya mempunyai keupayaan untuk menawarkan perkhidmatan ini memandangkan kemudahan alatan dan fasiliti yang sudah tersedia. Menyadari hal ini, satu pasukan yang terdiri daripada penyelidik dalam bidang berkaitan, pakar perubatan, teknologis makmal (dari IPPT dan beberapa fakulti lain di USM) dan pihak kejuruteraan telah merangka pelan bagi pembentukan fasiliti yang bersesuaian dan dilengkapi dengan aspek-aspek teknikal bagi membolehkan penawaran perkhidmatan ujian COVID-19 di IPPT. Usaha keras ini bermula seawal hujung bulan Mac 2020 apabila perintah kawalan pergerakan dikuatkuasakan di Malaysia.

Setakat artikel ini ditulis (7 September 2020), pihak Makmal Molekular COVID-19 di IPPT telah menjalankan lebih 500 ujian ke atas sampel-sampel pesakit. Kebanyakan sampel-sampel ini adalah daripada hospital-hospital yang berdekatan dalam negeri Pulau Pinang dan juga daripada IPPT sendiri. Selain daripada ujian piawai berasaskan teknik RT-PCR, pihak IPPT juga menawarkan ujian kit pantas yang mengesan antigen dan antibodi bagi SARS-CoV-2 ini. Sesungguhnya usaha keras pasukan Makmal COVID-19 IPPT ini merupakan satu sumbangan institusi ini kepada komuniti dan universiti bagi mencapai objektif mengesahkan dan mengawal pandemik COVID-19. InsyaAllah usaha ini akan berterusan sehingga kita bebas daripada jangkitan SARS-Cov-2 ini sepenuhnya.

#kitajagakita#



Staf Makmal Molekular COVID-19, IPPT

Warga IPPT Gotong-Royong Laksana Ibadah Korban Dalam Norma Baru

Oleh: Mohd Faisal Jamaludin – 3 Ogos 2020

BERTAM, 3 Ogos 2020 -

Institut Perubatan dan Pergigian Termaju, Universiti Sains Malaysia hari ini telah mengadakan program ibadah korban dalam suasana yang berbeza bagi memenuhi arahan Prosedur Operasi Standard (SOP) yang dikeluarkan oleh kerajaan.



Sekitar Majlis Korban dan Akikah

Majlis Korban dan Akikah peringkat Institut Perubatan dan Pergigian Termaju, USM hari ini telah berjaya mengagihkan daging korban kepada lebih 350 orang penerima yang terdiri daripada fakir miskin dan warga IPPT sempena Hari Raya Aidiladha.

Sebanyak 7 ekor lembu telah disembelih dan kesemuanya adalah hasil daripada individu yang menyertai ibadah korban dan akikah bagi tahun ini.

Majlis Korban dan Akikah yang dijalankan ini adalah merupakan aktiviti tahunan sempena Hari Raya Aidiladha yang dilaksanakan secara bergotong-royong oleh staf IPPT sendiri dari pelbagai jawatan. Program ini telah diadakan di Perkarangan Bangunan Kejuruteraan IPPT dalam situasi amalan norma baru.

Kerja-kerja menyembelih, melapah dan membungkus daging lembu untuk diagihkan kepada warga IPPT dan orang awam bermula pada pukul 9 pagi dan berakhir tiga jam kemudian. Majlis sebegini dapat menggalakkan kerjasama dan mengeratkan lagi hubungan silaturrahim di antara warga IPPT.



Oleh: Hazwani Ahmad Yusof@Hanafi – 28 Julai 2020

BERTAM, 28 Julai 2020

Klinik Senaman, Institut Perubatan dan Pergigian Termaju, Universiti Sains Malaysia yang diwujudkan bertujuan membantu meningkatkan kecergasan pesakit dan sebagai usaha untuk mencegah penyakit tidak berjangkit seperti penyakit kencing manis dan darah tinggi di kalangan staf dan pelajar.

Menurut Ketua Perkhidmatan Senaman Klinikal, Dr. Hazwani Ahmad Yusof@Hanafi, Perkhidmatan Klinik Senaman yang pada mulanya beroperasi pada tahun 2017 ini telah diaktifkan semula pada 30 Jun 2020 selepas berpindah ke bangunan baru yang menempatkan gimnasium dan makmal Kluster Sains Gaya Hidup dan ruang kerja Seksyen Senaman dan Rehabilitasi.

“Sehingga Ogos 2020, perkhidmatan Klinik Senaman telah menerima seramai 25 pesakit dari kalangan staf IPPT yang kebanyakannya telah dikenalpasti menghadapi penyakit tidak berjangkit.

Klinik Senaman Bantu Kecergasan Penghidap Penyakit Tidak Berjangkit

“Bilangan ini dijangka akan terus bertambah dari masa ke masa,” katanya ketika menghadiri Majlis Pelancaran Klinik Senaman yang diadakan di Makmal Kecergasan, Kluster Sains Gaya Hidup di sini hari ini.

“Adalah menjadi hasrat kami di Unit Perkhidmatan Senaman Klinikal untuk memperluaskan perkhidmatan ini dengan membuka Klinik Senaman ini kepada komuniti luar dalam masa terdekat”, tambahnya.

Antara objektif penubuhan Klinik Senaman adalah untuk melahirkan masyarakat yang mempunyai tahap kesihatan dan kecergasan yang baik, mewujudkan kesedaran tentang kepentingan aktiviti fizikal terhadap tubuh badan serta kesihatan diri, memberi peluang kepada masyarakat untuk mengikuti aktiviti senaman yang dianjurkan, membina, memupuk dan melahirkan masyarakat yang kuat fizikal dan jati diri serta dapat mewujudkan sikap daya saing di kalangan staf.

Majlis Pelancaran Klinik Senaman ini telah disempurnakan oleh Prof. Dr Syed Azhar Syed Sulaiman, Pengarah IPPT. Dalam ucapannya, beliau meminta agar setiap warga IPPT mengamalkan cara hidup yang sihat dengan melakukan aktiviti fizikal merangkumi semua pergerakan badan yang menggunakan tenaga dalam kehidupan seharian seperti bekerja, berekreasi, bersenam dan bersukan.

“Penyakit seperti sakit jantung, diabetes, tekanan darah tinggi dan obesiti mampu menyerang sesiapa saja dan pada bila-bila masa tanpa mengira jantina, usia atau latar belakang. Jadi, langkah terbaik untuk kita mengelakkan diri daripada menjadi antara yang berisiko mendapat penyakit-penyakit ini adalah mengamalkan

gaya hidup sihat dengan menjaga pemakanan, bersenam dan tidak merokok,” katanya.

Majlis ringkas ini dihadiri oleh 50 orang warga IPPT termasuk pelajar dan pesakit Klinik Senaman. Majlis ini diakhiri dengan aktiviti “USMFit Walk” iaitu aktiviti berjalan sejauh 2 kilometer di dalam perkarangan kampus IPPT.

Majlis ini turut dihadiri oleh Timbalan Pengarah Penyelidikan dan Jaringan, Dr Hasni Arsad dan Ketua-ketua Kluster.

Klinik Senaman beroperasi pada hari Selasa dan Khamis setiap minggu. Bagi sesiapa yang ingin mendapatkan perkhidmatan yang terdapat di Klinik Senaman perlu melalui proses saringan terlebih dahulu di Klinik Sejahtera. Bagi sebarang pertanyaan boleh hubungi talian hotline Seksyen Senaman dan Rehabilitasi IPPT di 04-562 2362.



Foto diambil semasa program Seminar Meningkatkan Nilai Komersial Madu Melalui Ujian Kualiti yang diadakan Januari lalu.

USM Tawar Ujian Kualiti Madu, Bantu Pengusaha Madu Tempatan Komersialkan Produk

Oleh: Muhammad Sallehuddin Abdul Hamid
25 Jun 2020

BERTAM, 25 Jun 2020 - Secara umumnya kita mengetahui bahawa madu lebah mempunyai banyak khasiat dan sangat baik diamalkan sebagai makanan kesihatan.

Namun begitu, lambakan produk madu di pasaran menyebabkan pengguna tercari-cari dan sukar untuk mendapatkan madu yang betul-betul berkualiti dan tulen.

Manakala bagi pengusaha madu, mereka pula perlu membuktikannya secara saintifik bagi memberi keyakinan kepada pengguna untuk membeli produk mereka.

Hal ini kerana ia perlu menjalani ujian-ujian tertentu yang bertujuan untuk mengetahui kandungan komponen utama yang terdiri daripada kandungan air, protein, karbohidrat dan pH yang terdapat dalam madu.

Menyedari tentang hal ini, Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia (USM) mengorak langkah dengan menawarkan ujian kualiti madu bagi membantu pengusaha-pengusaha madu tempatan mengkomersialkan produk mereka.

Melalui ujian yang dijalankan ia dapat membantu meningkatkan kualiti madu yang dihasilkan oleh para pengusaha dan sekaligus memberi keyakinan kepada pengguna bahawa madu yang diambil adalah berkualiti dan tulen.

Menurut Pengarah IPPT, Profesor Dr. Syed Sulaiman, melalui kepakaran dan fasiliti makmal yang dimiliki IPPT buat masa ini, ia mampu untuk menawarkan ujian kualiti madu kerana makmal IPPT telah mendapat akreditasi daripada Jabatan Standard Malaysia di bawah Sistem Pengurusan Kualiti MS ISO 17025.

“Satu seminar telah diadakan pada awal tahun melibatkan pengusaha-pengusaha madu tempatan yang bertujuan untuk memberi pemahaman tentang kepentingan penjagaan kualiti madu dan piawaian-piawaian tertentu yang mereka perlu penuhi untuk mengekalkan kualiti madu,” katanya.

Tambah beliau, apabila madu yang dihasilkan adalah berkualiti dan dibuktikan pula secara saintifik ia dapat meningkatkan permintaan bukan sahaja dalam negara bahkan berpotensi untuk menembusi pasaran antarabangsa serta menjana pendapatan para pengusaha.

Justeru, Syed Azhar berharap lebih ramai pengusaha madu akan tampil untuk membuat ujian kualiti dan lama-kelamaan budaya pembuktian saintifik seperti ini dapat dipupuk dalam masyarakat supaya tidak hanya mendakwa itu dan ini tetapi sebaliknya mengemukakan fakta yang relevan,” katanya.

Bagi mendapatkan khidmat nasihat pakar dan ujian kualiti madu bolehlah menghubungi IPPT USM di talian 04-562 2310 atau 04-562 2525.

Pengerusi Lgu Tinjau Fasiliti Dan Kemudahan IPPT, Bangga Dengan Pencapaian Selama Ini

Oleh: Mohd Faisal Jamaludin - 9 Julai 2020

sangat penting kerana ia merupakan salah satu kaedah promosi kepakaran, perkhidmatan yang ada dan pada masa yang sama dapat membantu menjana pendapatan universiti,” jelasnya.

Apabila menyentuh tentang perancangan beliau untuk universiti, beliau berkata:

“USM dekat di hati saya, USM juga tempat pertama saya memulakan karier saya, jadi sudah tentulah saya ingin melihat USM sentiasa maju dan berjaya.”

Bagi memastikan USM sentiasa berada di landasan terbaik, beliau akan menubuhkan satu jawatankuasa khas yang akan melihat kemajuan dan pembangunan USM dari semasa ke semasa.

Dengan kata lain, jawatankuasa ini adalah bertujuan untuk memperkasakan dari segi pembangunan institusi, kelestarian kewangan, projek penajaan kewangan, peningkatan reputasi dan lain-lain lagi,” katanya lagi.

Turut bersama dalam lawatan tersebut ialah Timbalan Pengarah Klinikal, Dr. Noor Khairiah A. Karim; Timbalan Pengarah Akademik dan Antarabangsa, Dr. Mohd Hafiz Mohd Zin; Timbalan Pengarah Penyelidikan dan Jaringan, Dr. Hasni Arsad serta pengurusan tertinggi IPPT. - PRO IPPT

IPPT, BERTAM, July 9 2020 - Pengerusi Lembaga Gabenor Universiti Sains Malaysia (LGU) Dato’ Dr. Awang Adek Hussin yang baru dilantik ke jawatan tersebut telah mengadakan lawatan ke Institut Perubatan dan Pergigian Termaju (IPPT), USM bagi melihat dengan lebih dekat fasiliti sedia ada yang terdapat di sini semalam.

Beliau dibawa melihat sendiri kemudahan perubatan yang terdapat di Kompleks Klinikal seperti perkhidmatan radioterapi, brakiterapi serta peralatan perubatan lain yang terdapat di IPPT yang digunakan untuk tujuan merawat pesakit terutamanya pesakit kanser.

Dalam sesi lawatan itu juga, taklimat berkenaan IPPT telah disampaikan oleh Pengarah IPPT Profesor Dr. Syed Azhar Syed Sulaiman.

Awang Adek dalam ucapannya menzahirkan rasa bangga atas pencapaian yang telah dicapai oleh IPPT dari awal penubuhan hingga sekarang, namun menurut beliau pencapaian yang diperolehi mesti disebarkan kepada pengetahuan orang ramai supaya orang tahu kepakaran kita.

Tambahnya lagi, hubungan dengan pihak media hendaklah baik supaya mereka boleh membantu universiti untuk mewartakan kepakaran yang ada.

“Sebaran maklumat dan berita oleh pihak media

Covid-19: IPPT Receives Donation Of PPE And Face Shields from Western Digital

By: Mohd Faisal Jamaludin – 30 April 2020



PPE and face shields received by AMDI

IPPT, BERTAM, April 30 2020 - The Universiti Sains Malaysia (USM) Advanced Medical and Dental Institute (IPPT) recently received a donation comprising of personal protective equipment (PPE) and face shields from Western Digital (Malaysia) Sdn. Bhd.

The Director of IPPT, Professor Dr. Syed Azhar Syed Sulaiman said the contribution was timely as many health facilities across the country are now facing a shortage of PPE supplies, and what is more important, this supply will help to supplement the stock that IPPT has for its frontline personnel.

"The contribution is greatly appreciated by all of us at IPPT as it would help to protect and keep them safe from the COVID-19 infection.

"We are grateful to Western Digital for contributing some 1,000 units of PPE and 5,000 face shields for our frontliners," he said after receiving the items on behalf of IPPT at Kompleks Klinikal here.

Western Digital (Malaysia) Sdn. Bhd. was represented by its Vice-President, Mr. KL Bock who delivered the items personally to IPPT.

"It is a joint responsibility to assist IPPT in its efforts to curb the spread of the COVID-19 outbreak and it is hoped that the contribution will help to address the problem of a shortage of PPE and face shield, as these are essential disposable items that are used daily," he said.

Also present were the IPPT Deputy Director (Research and Networking), Dr. Hasni Arsad; IPPT Family Medicine Specialist (FMS), Dr. Mastura Mohd Sopian; and Western

Digital Business Excellence Manager, Noor Shafarina Mhd Hidzir.

For the record,

Western Digital (M) Sdn. Bhd. through its WD Caring Foundation (WDCF) programme, has contributed RM12,000 worth of medical support equipment to IPPT in 2014.

WDCF is one of WD's Corporate Social Responsibility (CSR) programmes, supported by its staff from various position levels in the organisation.

As announced by the Ministry of Health Malaysia (MOH), IPPT USM has been listed as among the ten selected laboratories at public universities (UA) nationwide to conduct COVID-19 diagnostic tests. - PRO IPPT

Covid-19: IPPT Received Intubation Box Contributed from Member of Parliament of Kepala Batas Service Center

By: Muhammad Sallehuddin Abdul Hamid
23 April 2020



Dr. Hasni Arsad received the contribution from Dato 'Ahmad Darus

BERTAM, April 23 2020 - Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia (USM) recently received Intubation Box contributed by the Member of Parliament Kepala Batas cum Minister of Youth and Sports, YB Dato' Sri Reezal Merican Naina Merican.

The contribution was presented by the Political Secretary, Dato 'Ahmad Darus, who represented the Minister of Youth and Sports to the Deputy

Director of Research and Networking Division, Dr. Hasni Arsad, representing the Director of AMDI. "This Intubation Box project is a special project by the Limonia Lakeside Bertam Residential Association (LARA) aimed at assisting front liners in dealing with the challenging situations today," Ahmad said, while handing the contribution.

According to Hasni, AMDI is very appreciative towards the contribution

as it helps the AMDI frontline staffs, especially during the treatment process and during surgical operations.

"AMDI is also one of the institutions selected by the Ministry of Health (MOH) to conduct the COVID-19 detection laboratory test," he said, when receiving the contribution.

Also present were LARA President, Mohd Taufik Abd Wahab, and UMNO Youth Chief, Ustaz Naim Salleh.



Covid-19: SAINS@BERTAM Becomes The Temporary Operation for HKB's Static Blood Donation Centre

By: Mohd Faisal Jamaluddin - 21 April 2020

IPPT, BERTAM, April 21 2020 - Al-Azhari Hall, at SAINS@BERTAM, Advanced Medical and Dental Institute (AMDI) has become the temporary blood donation center for Hospital Kepala Batas (HKB) following the COVID-19 outbreak.

The donation center began its operation yesterday, April 20, 2020 until further notice, depending on the current state of the country.

The Deputy Director of AMDI Research and Networking Division, Dr. Hasni Arsad said, "AMDI is glad to assist HKB to provide a place for blood donation activities."

"It is the responsibility of the AMDI to assist the community especially in the battle against the COVID-19 virus, and we are ready to help at all times," he said on behalf of the Director of AMDI.

According to the Deputy Director of Management HKB, Dr. Suhaila Ismail, the hospital is grateful to the AMDI USM for providing the hospital a place to host this Static Blood Donation Center.

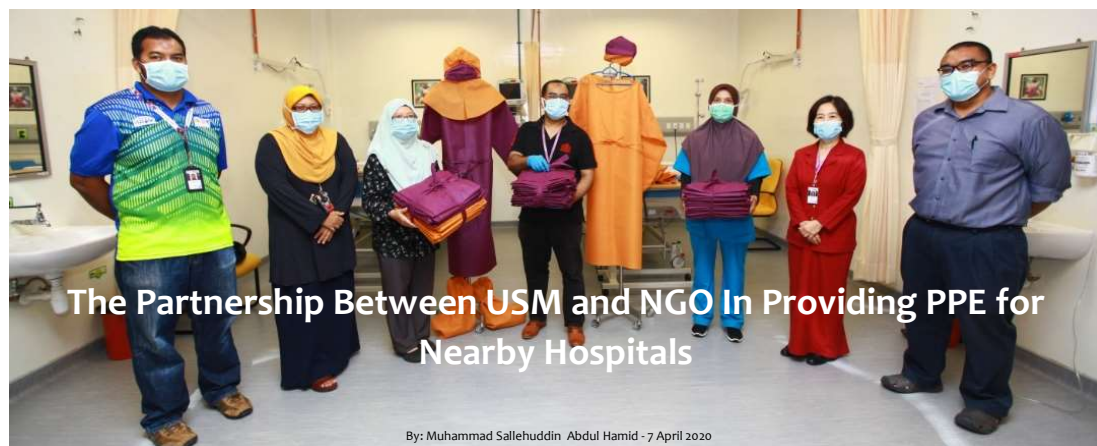
"AMDI's cooperation in this matter is greatly appreciated, and it helps to curb the spread of the COVID-19 outbreak. As of now, the public can come here to donate blood and do not need to go to HKB to avoid exposure to COVID-19 infection."

"Meanwhile, donors are reminded to practice social distancing as recommended," she said when attending the blood donation center here today.

For information, for those who wish to donate blood, the HKB's Static Blood Donation Center at the Al-Azhari Hall at Sains@Bertam operates from 9.00 am to 3.30 pm from Monday to Thursday, and 9.00 am to 1.00 pm on Friday.

Donors can fill in the blood donation trip slip which is accessible via the following link <https://forms.gle/eSdcnyag1yKGMoa25>.

Hopefully, through this joint initiative, we will be able to overcome the blood supply shortage faced by Hospital Kepala Batas while ensuring public confidence to come to donate blood in safe premises. - PRO IPPT



By: Muhammad Sallehuddin Abdul Hamid - 7 April 2020

BERTAM, April 7 2020 - Advanced Medical and Dental Institute (AMDI), Universiti Sains Malaysia (USM) has taken the initiative to provide Personal Protective Equipment (PPE) to meet the demand to equip front liners at nearby medical facilities.

The project has attracted the cooperation and supports from several non-governmental organizations (NGOs) such as Persatuan Gerakan Amal Bersama (GRAB), Pertubuhan Kebajikan Ikhlas Utara Malaysia, Pertubuhan IKRAM Negeri Pulau Pinang, business entity StruggleDotCom and residents of Bertam, Tasek Gelugor, Sungai Dua, Seberang Jaya, Kulim, and others.

According to the Director of AMDI, Professor Dr. Syed Azhar Syed Sulaiman, there is an urgent need for nearby medical facilities to obtain this PPE supply as the stocks from many suppliers are almost exhausted.

"Since AMDI USM also provides clinical services, the AMDI staffs themselves are exposed to the danger of the COVID-19, so some of the PPE produced are also used to meet their in-house needs."

"In addition, AMDI is always ready and prepared to assist Hospital Kepala Batas if the pandemic outbreak continues or gets worse," Syed Azhar said. He added, "Alhamdulillah, today we donated 100 pairs of isolation gowns, 50 hijabs and 50 pairs of boot covers to Hospital Kepala Batas and Seberang Perai Utara District Health Office."

According to the AMDI PPE Operational Room Coordinator, Associate Professor Dr. Bakiah Shaharuddin, about 485 pairs of isolation gowns, 200 boot covers, 155 hijabs and 70 head covers were produced from 1,200 meters of non-woven material through the project, most of which will be donated to hospitals and health clinics under the Ministry of Health Malaysia (MOH) which are in dire needs of PPE.

"The AMDI along with all the NGOs involved have worked together to prepare the PPE through the delegation of tasks such as measuring, sewing patterns, runner, sewing, and folding," she said.

The AMDI USM and Hospital USM have been listed by the MOH as COVID-19 diagnostic testing lab using the quantitative reverse transcription polymerase chain reaction technique.

USM's involvement in the conduct of the diagnostic test is to support MOH's aim to achieve 16,000 tests a week. We hope this effort will help prevent the spread of COVID-19 in the country.



Penularan Covid-19, Masyarakat Perlu Lebih Peka

Oleh: Mohd Faisal Jamaludin - 19 Februari 2020

BERTAM, February 19 2020 - Masyarakat dunia hari ini telah dikejutkan dengan penularan koronavirus yang boleh membawa maut. Paling membimbangkan, penularan koronavirus ini tersebar dengan begitu cepat ke seluruh dunia dengan jumlah kes kematian dan jangkitan terus meningkat setiap hari.

Koronavirus baru yang dikenali sebagai Coronavirus 2019 (COVID-19) telah mula dilaporkan di Wuhan, China pada Disember 2019 dan sehingga hari ini jangkitannya menjangkau 28 negara termasuk Malaysia.

Menurut Saintis Virologi Institut Perubatan dan Pergigian Termaju (IPPT) Universiti Sains Malaysia (USM), Dr. Muhammad Amir Yunus, COVID-19 tersebar luas dengan cepat adalah kerana faktor mobiliti, dan mereka yang dijangkiti bergerak ke seluruh dunia.

"Mereka yang dijangkiti COVID-19 biasanya akan mempunyai simptom selsema, demam dan batuk yang sama dengan simptom virus biasa. Namun, ada juga yang tidak mempunyai simptom langsung tetapi dijangkiti COVID-19. Inilah puncanya virus ini tersebar dengan pantas dan meluas," katanya.

"Koronavirus ini sebenarnya adalah jangkitan zoonosis yang sememangnya terdapat pada haiwan liar seperti kelawar.

Apabila manusia yang mempunyai imun rendah berkontak secara langsung dengan haiwan ini, virus tersebut akan bermutasi kepada manusia," jelasnya lagi.

Bagi Pakar Pediatrik/Kanak-kanak IPPT, Dr. Nur Arzuar Abdul Rahim pula, beliau berpendapat bahawa ibu bapa perlu memainkan peranan yang penting dalam memastikan anak-anak mendapatkan rawatan awal sekiranya terdapat tanda-tanda jangkitan virus.

"Antara tanda-tanda jangkitan virus dalam kalangan kanak-kanak ialah batuk, selsema dan sakit tekak. Virus secara umumnya akan menyerang bahagian paru-paru dan akan mengganggu sistem pernafasan. Perhatikan anak-anak anda, sekiranya cara pernafasan berubah, muka kelihatan pucat, segera dapatkan rawatan di hospital," katanya.

"Mereka yang berisiko diserang virus adalah seperti bayi di bawah umur 5 tahun, orang dewasa berumur 65 ke atas, pesakit kronik dan mereka yang

mempunyai imunitas rendah seperti pesakit kurang daya imun (PID), pesakit kanser dan mereka yang mengambil ubat seperti steroid," jelasnya lagi.

Mereka berkata demikian dalam satu forum 'Professional Talk Series' anjuran Unit Hal Ehwal Islam (UHEIS), IPPT USM bertajuk "Selamatkah Anak-anak Kita dengan Penularan Jangkitan Virus?", yang berlangsung pada 14 Februari lalu, dengan pensyarah Kluster

Sains Gaya Hidup IPPT, Dr. Mohd Afifuddin Mohamad sebagai moderatornya.

Hampir 200 orang hadir dalam program ini yang turut dibuka kepada orang awam.

Program ini diadakan bermatlamat untuk memberikan maklumat dan pencerahan mengenai virus yang mampu memberi kesan buruk kepada manusia terutamanya Coronavirus 2019 (COVID-19) serta langkah-langkah pencegahan jangkitan untuk diri dan keluarga.

Sementara itu, Pengarah IPPT, Profesor Dr. Syed Azhar Syed Sulaiman berkata, IPPT bukan sahaja institusi pendidikan dan perubatan malah merupakan institusi penyelidikan yang mampu menjadi platform untuk menyebarkan ilmu pengetahuan.

"Melalui program ini, IPPT dapat dijadikan sebagai wadah pertemuan antara warga IPPT dan komuniti setempat untuk lebih memahami dan membantu dari aspek kesihatan," katanya ketika berucap di program berkenaan.

Para hadirin turut didedahkan dengan langkah-langkah pencegahan jangkitan seperti penggunaan penutup mulut dan hidung (face mask), amalan kebersihan diri dan demonstrasi 7 langkah membasuh tangan yang betul menggunakan air dan sabun atau hand sanitizer oleh jururawat-jururawat IPPT turut hadir dalam program ini ialah Timbalan Pengarah Penyelidikan dan Jaringan IPPT, Dr. Hasni Arshad. - PRO IPPT

Produk DACE Bantu Lindungi Penularan Covid-19 Barisan Hadapan

Oleh: Fatanah Mohamad Suhaimi – 3 November 2020



KEPALA BATAS, November 3 2020 -

Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia (USM) telah berjaya menghasilkan alat pelindungan diri untuk mencegah penularan wabak COVID-19 dikalangan petugas pergigian di Malaysia. Produk yang dinamakan sebagai Dental Aerosol Containment Equipment (DACE).

Produk ini dibangunkan menerusi projek dibawah peruntukan geran antarabangsa daripada IEEE Humanitarian Activities Committee & IEEE Special Interest Group on Humanitarian Technology (SIGHT). Projek ini diketuai oleh Dr. Fatanah Mohamad Suhaimi bersama Dr. Husniyati Roslan dari Kluster Sains Kraniofasial dan Biobahan, IPPT.

Menurut Fatanah, DACE berfungsi seperti 'personal protective equipment' (PPE), dan digunakan semasa doktor gigi merawat pesakit.

"Kebanyakan prosedur pergigian yang dijalankan menyebabkan terhasilnya air liur dan percikan air liur pesakit. Sebagai contoh sewaktu 'drill', banyak percikan akan terhasil. **Jadi fungsi DACE ini adalah sebagai pelindung supaya air liur tidak terpercik kepada doktor dan jururawat yang menjalankan prosedur tersebut**", katanya.

Projek yang telah diuji penggunaannya oleh beberapa orang pakar pergigian ini projek yang mereka hasilkan ini telah disumbangkan kepada klinik-klinik pergigian di sekitar utara semenanjung Malaysia. Seramai 20 orang sukarelawan yang merupakan staf IPPT sendiri termasuklah Pensyarah Pergigian, Juruteknologi Pergigian, Jururawat dan Pegawai Sains terlibat dalam projek ini.

Kumpulan ini telah berjaya menyumbangkan sebanyak 27 unit DACE di tiga Pejabat Kesihatan Pergigian. Antaranya ialah 20 unit di Pejabat Kesihatan Pergigian Kuala Muda/Sik dan 2 unit di Klinik Pergigian Pendang, Kedah. Manakala 5 unit lagi

disumbangkan kepada Klinik Pergigian Kepala Batas, Pulau Pinang.

Sumbangan ini mendapat sambutan dan maklumbalas yang sangat baik daripada ketiga-tiga klinik pergigian tersebut. Hal ini kerana, peralatan ini dapat membantu mereka untuk mencegah penularan wabak COVID-19 dikalangan petugas pergigian yang mempunyai risiko yang tinggi semasa menjalankan sesi rawatan.

Menurut Dr. Siti Rohayu Hamidi, wakil dari Klinik Pergigian Kepala Batas, sumbangan ini akan dapat mengurangkan risiko penularan wabak COVID-19 dikalangan petugas pergigian di sini.

"Memandangkan Klinik Kesihatan Kepala Batas merupakan salah satu klinik kesihatan yang menjalankan ujian saringan pesakit COVID-19 dan menjadi tumpuan pesakit mendapatkan rawatan, penggunaan produk ini amat berguna kepada petugas-petugas kami," katanya.

Selain itu, Dr. Rubiah wakil dari Klinik Pergigian Pendang menyambut baik hasil sumbangan ini kerana ia membantu mengurangkan kos penyediaan peralatan yang perlu ditanggung oleh pihak klinik.

"Pihak kami amat berbesar hati menerima sumbangan peralatan ini kerana ia dapat menjimatkan kos perbelanjaan klinik untuk menghasilkan alat pelindungan diri bagi mencegah penularan wabak COVID-19 di Klinik Pergigian Pendang ini selain menjimatkan masa petugas kami," katanya.

Pihak IPPT berharap semoga sumbangan ini dapat memberikan manfaat kepada petugas di klinik pergigian, khususnya untuk memerangi ancaman wabak COVID-19 dikalangan petugas barisan hadapan. Semoga usaha ini akan dapat membantu mencegah penularan COVID-19 di negara ini.



Sumbangan DACE di Pendang dan Kuala Muda

EXPERT CONTRIBUTION

How hard-hit was university healthcare workers in the face of the COVID-19 pandemic? How about after the end of the movement lockdown?

By: Mohammad Farris Iman Leong Abdullah
24 December 2020



Dr. Mohammad Farris Iman Leong Abdullah

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection or better known as the coronavirus disease 2019 (COVID-19) which began in China and has now spread to 218 countries and territories around the globe was the main issue which dominated the news globally since it was declared as a global pandemic in March 2020. Since January 2020, numerous studies have investigated on the impact of the COVID-19 on not only the physical health, but also the mental health of people around the world. Besides the general population, the mental health of healthcare workers has been greatly affected as a result of their frequent exposure to COVID-19 positive patients and their risk of contracting the infection. Recently, a group of researchers from Advanced Medical and Dental Institute, Universiti Sains Malaysia and Department of Psychiatry, Universiti Kebangsaan Malaysia Medical Centre has conducted an online study to investigate the mental health status of a cohort of 399 university healthcare workers from the Klang Valley in the central of Peninsular Malaysia and the states of Penang and Kelantan. University healthcare workers were selected due to the multitasking nature of their work scope (the need to provide healthcare services and to carried out academic duties), which was suitable group of the population to study for mental health status during this uncertain time of the COVID-19 pandemic.

They found that the prevalence of depression, anxiety and stress were still elevated at 21.8%, 31.6% and 29.1%, respectively even after the movement lockdown was lifted. Being single or divorced, fear of frequent exposure to COVID-19 patients, area of living had a high prevalence of COVID-19 cases, uncertainty regarding the prevalence of COVID-19 cases in the area of living, and a history of pre-existing psychiatric illnesses predisposed to higher odds of depression, anxiety, and stress.

While having more than three children and greater perceived friend support were protective against depression, anxiety, and stress. Although several COVID-19 related stressors were investigated in this study, such as loss of daily routine during the pandemic, annual leave being frozen during the pandemic, longer working hours, history of having physical symptoms which resembled the COVID-19 infection (cough, flu and fever) and history of quarantine after coming into close contact with COVID-19-positive cases, these stressors were not worrying as they did not predispose to worsening of mental health among healthcare workers. Interestingly, this study highlighted that the fear which arise from the COVID-19 pandemic itself may posed a threat to the mental health of healthcare workers independent of movement lockdown. Another important finding to take note of was that of the pivotal role of high level of social support from friends which maintained the mental well-being among healthcare workers. Hence, creating a supportive environment among healthcare workers working within the same hospital may safeguard their mental well-being. The researchers also recommended several strategies to improve the mental health of healthcare workers based on the findings and also pinpointed a few recommendations to be included for future studies on the psychological impact of COVID 19 pandemic.

The findings were published in Clinical Toxicology and could be accessed through the link below:

Woon, L. -C.; Sidi, H.; Nik Jaafar, N.R.; Leong Bin Abdullah, M.F.I. *Mental Health Status of University Healthcare Workers during the COVID-19 Pandemic: A Post-Movement Lockdown Assessment*. *Int. J. Environ. Res. Public Health* 2020, 17, 9155 doi:10.3390/ijerph17249155



GE DoseWatch Software: Insights from Dr. Noor Diyana Osman

By: Noor Diyana Osman – 16 September 2020

GE HEALTHCARE ASEAN, September 16 2020 – This is a testimonial shared by Dr. Noor Diyana Osman on her experience using Dosewatch™ software for GE Healthcare ASEAN marketing communication. DoseWatch™ is a dose management software that helps dose-team in diagnostic radiology at a hospital to manage radiation and achieve dose excellence. At AMDI USM, the dose-team involves medical physicists, radiologists, and radiographers that work as a team to ensure the dose optimisation and justification of imaging practice.



Dr. Noor Diyana

We have been leveraging the DoseWatch™ software at our centre, Imaging Unit, Advanced Medical and Dental Institute, Universiti Sains Malaysia, Penang since December 2018. We are very honoured to have been given the opportunity by GE Healthcare ASEAN to conduct the software trial at AMDI USM. This offer has fostered research collaboration with GE Healthcare ASEAN as well as improvement in our local imaging practice.

DoseWatch™ is an innovative dose management solution that enables us to monitor and review our patient's radiation exposure by automatically collecting and analysing radiation dose involving large patient database from picture archiving and communication system (PACS).

This software also enables us to evaluate our current imaging practice and improve local radiation safety program. Before the commencement of DoseWatch™ trial, our previous published work in establishment of local Dose Reference Levels (DRLs) for computed tomography (CT) examination at AMDI, all the dose data retrieval were done manually, that was a tedious time-consuming process.

However, based on our initial experience of leveraging DoseWatch™, our workflow in monitoring the radiation dose delivered to patients has improved remarkably and the software has assisted us in ensuring that the delivered doses are constantly kept at 'As low as reasonably achievable (ALARA)' and provide better patient care. Besides, this software also allows our team to identify unusual dose that exceeded the reference dose levels during the dose audit.

Northern region industrial & dental network program

By: Anis Farhan Kamaruddin – 12 September 2020



SEMINAR ROOM, ANIMAL RESEARCH CENTRE, September 12 2020 –

BERTAM, 12TH AUGUST 2020: Advanced Medical & Dental Institute (AMDI), Universiti Sains Malaysia (USM) has hosted an industry and dental network programme between USM and the dental supplier in the northern region. In conjunction with COVID-19 safety measures, this programme was held in a closed ceremony at the Advanced Research Centre, AMDI.

This event was the first dental-industry collaboration programme, jointly organized by Division of Industry & Community Network (BJIM USM), AMDI Craniofacial & Biomaterial Sciences Cluster, and AMDI FBS and SR, AMDI.

The director of AMDI, Prof. Dr Syed Azhar Syed Sulaiman, did the honour to officiate the event. It was also attended by the director of BJIM USM, Assoc. Prof. Dr Yeoh Fei Yee, Mr Hong Jia Huh (School of Materials & Minerals, USM) and representatives from the industry, Mr Keyur Patel and Mr Timothy Thum of Bio3D Asia company, as well as dental officers from around the state.

The first communication session was commenced with a briefing on Public-Private Research Network funding, which was delivered by Assoc. Prof. Dr Yeoh Fei Yee. The session was continued with talks in three respective fields in Dentistry, featuring three lecturers from Craniofacial & Biomaterial Sciences Cluster. The Head of Cluster, Assoc. Prof. Dr Siti Noor Fazliah Mohd Noor highlighted her research discovery on the application of dental pulp stem cells and Bioglass material in

This material has the potential for bone substitution and anti-inflammatory property. Dr Fatanah Mohd Suhaimi delivered a detailed explanation on the application of different types of laser in dentistry. Eventually, Dr Anis Farhan Kamaruddin spoke about the current trend and future development of reinforcing the properties of orthodontic archwires.

The next communication session was carried on with the briefing from the industry counterpart. Mr Hong Jia Huh supplied the audience with the information on the 3D application in dentistry. Bio3d Asia representative, Mr Keyur Patel, has further explained the concept of applying digital dentistry in diagnostics, planning treatment, to the printing of devices.

The program ended with an exciting live demonstration on the use of intraoral scanner by Mr Timothy Thum. Participants were given opportunities to experience the use of the intraoral scanner. The use of this scanner is not only restricted to producing digital images which could save materials and storage, but the wow factor is its caries detection programme.

This unique programme eliminates the need for dental radiographs in detecting caries and subsequently the radiation exposure to the dental staff and patients. The event was concluded at around noon.



Participants of programme

USM, PULAU PINANG, MALAYSIA, September 1 2020 -

Kratom (*Mitragyna speciosa* Korth.) is a traditional herb remedy for treatment of various illnesses and has been used as an energy boosting agent in Malaysia and neighbor Thailand for centuries. Recently, it has received enormous attention from around the world due to its potential to treat opioid dependence and its antidepressant and anxiolytic effects. Nevertheless, finding from in vitro exposure of myocardial cells to mitragynine (the most abundant alkaloid in kratom extract) indicated that it may be cardiotoxic as it inhibits the potassium channels of myocardial cells increasing the risk of prolonged QTc interval and torsades de pointes. Despite this finding, kratom cardiotoxicity has not been investigated in human subjects and the question of whether consumption of kratom on a regular basis could induced cardiotoxicity remains to be answered.

A team of researchers from Universiti Sains Malaysia led by Dr. Mohammad Farris Iman Leong Bin Abdullah conducted the first study to investigate cardiotoxicity of kratom in human subjects by comparing the resting electrocardiogram (ECG) findings of 100 regular kratom users with that of 100 non-kratom using control subjects. All the selected subjects underwent strict screening of their health status to ensure that they were free from any medical and mental illnesses as well as to ensure that those who had history of other illicit drug use were excluded.

The team found that there were no differences in the ECG findings between regular kratom users and control subjects except for higher odds of sinus tachycardia among the kratom users. In term of the findings of the QTc intervals, regular kratom users regardless of their duration of kratom use, quantity of daily kratom use, age of first kratom use, and the time of last kratom use prior to ECG examination, exhibited higher odds of borderline QTc intervals (431 to 450 ms) compared with control subjects.



First study on the cardiotoxicity of kratom in human subjects

By: Mohammad Farris Iman Leong Bin Abdullah
1 September 2020

On the contrary, there were no differences in the odds of developing prolonged QTc interval (> 450 ms) between regular kratom users and control subjects. This denotes that regular kratom use only contribute to increased QTc interval but to the extent of inducing prolonged QTc interval. The team concluded that regular kratom use (equivalent to a daily dose of 434.28 mg of mitragynine) does not lead to cardiotoxicity. In addition, the findings also confirmed the report of the in vitro study that the effect of mitragynine on the QTc interval is dose dependent.

The findings were published in Clinical Toxicology and could be accessed through the link below:

Mohammad Farris Iman Leong Bin Abdullah, Kok Leng Tan, Suresh Narayanan, Novline Yuvashnee, Nelson Jeng Yeou Chear, Darshan Singh, Oliver Grundmann & Jack E. Henningfield (2020). Is kratom (*Mitragyna speciosa* Korth.) use associated with ECG abnormalities? Electrocardiogram comparisons between regular kratom users and controls, Clinical Toxicology, DOI: [10.1080/15563650.2020.1812627](https://doi.org/10.1080/15563650.2020.1812627)

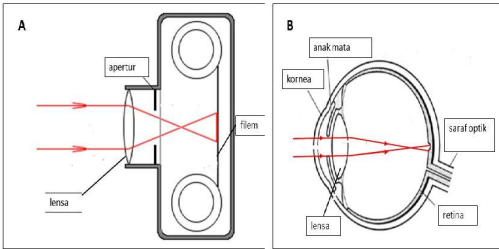
10 Fakta Tentang Katarak Anda Perlu Tahu

Oleh: Bakiah Shaharuddin
Dr. Bakiah binti Shaharuddin (Kluster Perubatan Regeneratif, Institut Perubatan dan Pergigian Termaju, USM)
23 Disember 2020

Apabila penglihatan anda menjadi kabur dan silau, salah satu penyebabnya mungkin adalah katarak. Katarak adalah kekeruhan lensa mata yang terjadi secara semula jadi akibat beberapa faktor, terutamanya disebabkan usia lanjut. Lensa mata terletak di belakang kornea dan fungsinya serupa dengan lensa kamera.



Imej dari Google



Kedudukan dan fungsi lensa kamera (A) adalah lebih kurang seperti lensa manusia (B). Cahaya yang masuk melalui apertur kamera boleh di 'zoom' atau difokus oleh lensa, dan imej akan terbentuk pada film. Di dalam mata, cahaya masuk melalui kornea, anak mata dan lensa, seterusnya membentuk imej pada retina. Maklumat ini dihantar melalui saraf optik ke otak untuk ditafsir.

Pembedahan katarak adalah antara jenis pembedahan yang sangat lazim dilakukan.

Di Malaysia, sebanyak 60,000 pembedahan katarak dilakukan dalam setahun di hospital kerajaan di bawah Kementerian Kesihatan Malaysia (KKM). Jumlah yang sama juga dianggarkan dilakukan di fasiliti swasta dan hospital universiti.

Berikut adalah 10 fakta tentang katarak yang anda perlu tahu:

1) Adakah katarak hanya terdapat pada orang tua?

Sebilangan besar katarak terjadi secara perlahan-lahan dan mula terjadi pada usia lebih dari 50 tahun. Kadang-kadang bayi juga boleh mendapat katarak sejak lahir. Ini biasanya terjadi akibat komplikasi jangkitan semasa mengandung atau penyakit keturunan.

2) Bolehkah katarak dielakkan?

Katarak adalah proses penuaan semulajadi dan secara beransur-ansur membuat penglihatan makin kabur. Diet yang kaya dengan vitamin E dan C, lemak omega-3, lutein, dan zeaxanthin, boleh membantu kesihatan mata. Selain itu, penyakit diabetes dan beberapa penyakit kronik dan keradangan boleh menyebabkan katarak terjadi lebih awal. Tabiat merokok dan pengambilan alkohol yang berlebihan juga boleh mempengaruhi kejadian katarak.

3) Bagaimana katarak dirawat?

Rawatan katarak adalah secara pembedahan. Teknik moden iaitu 'phacoemulsification' adalah pembedahan mikro dengan incision yang kecil tanpa jahitan. Lensa asal dikeluarkan dan kemudian diganti dengan implan lensa intraokular (IOL) untuk memulihkan penglihatan. Dalam kebanyakan kes, mata sembuh dengan cepat selepas pembedahan tanpa jahitan.

4) Adakah pembedahan satu-satunya rawatan katarak?

Pada masa ini dan untuk masa yang akan datang pembedahan adalah satu-satunya rawatan untuk katarak. Walaupun diet yang sihat dan perubahan gaya hidup dapat membantu mencegah katarak, namun ia tidak dapat membalikkan katarak setelah ia terjadi. Para penyelidik sedang mengkaji sama ada kemungkinan terdapat ubat titis mata yang dapat mencegah atau menyembuhkan katarak, tetapi kajian ini berada pada tahap awal. Sukar untuk meramalkan bila rawatan tersebut boleh dipraktis atau adakah ia akan berkesan seperti pembedahan katarak.

5) Adakah pembedahan katarak serius?

Semua pembedahan melibatkan beberapa risiko, jadi ya, memang serius. Walau bagaimanapun, pembedahan katarak adalah jenis pembedahan yang paling kerap dilakukan. Ramai pakar bedah katarak adalah sangat berpengalaman dan ini akan mengurangkan risiko komplikasi terjadi.

6) Doktor mengatakan saya ada katarak, tetapi dia mahu saya menunggu dahulu sebelum membuat pembedahan. Kenapa?

Katarak peringkat awal menyebabkan sedikit gangguan penglihatan. Doktor anda mungkin mahu mengawasi perkembangan katarak adakah menjadi semakin matang dan lebih menjejaskan penglihatan dan gaya hidup anda sebelum mengesyorkan pembedahan.

Sebilangan katarak tidak sampai ke tahap di mana ia perlu dikeluarkan. Tetapi jika katarak anda bertambah buruk dan anda mula menghadapi masalah untuk melihat dengan jelas semasa memandu dan melakukan tugas seharian yang lain, mungkin sudah tiba masanya untuk pembedahan katarak.

7) Adakah saya terjaga semasa pembedahan katarak?

Ya, biasanya pesakit dalam keadaan terjaga (sedar) semasa pembedahan katarak kerana menggunakan bius setempat sahaja. Ini bagi mengurangkan risiko yang berkaitan dengan bius am (general anaesthesia). Di bawah bius setempat, pakar bedah katarak boleh berkomunikasi dengan pesakit semasa pembedahan berjalan.

8) Adakah saya perlu cermin mata selepas pembedahan katarak?

Bergantung kepada jenis implan IOL - sekiranya anda memilih implan biasa, kemungkinan anda memerlukan cermin membaca, atau 'power' yang rendah untuk jarak jauh, ini bergantung kepada keperluan visual anda. Ramai juga pesakit yang tidak memerlukan cermin mata. Pembedahan katarak dengan lensa premium seperti IOL multifokal dapat memberikan hasil yang sangat baik dan membolehkan ramai pesakit bebas tanpa cermin mata.

9) Berapakah kos pembedahan katarak?

Kos pembedahan katarak berbeza bergantung kepada jenis prosedur, jenis lensa intraokular dan fasiliti kerajaan atau swasta yang dipilih. Pada masa kini, pembedahan katarak (untuk satu mata) di hospital kerajaan di bawah Kementerian Kesihatan Malaysia menelan belanja lebih kurang RM900.00 bagi jenis IOL biasa. Kos IOL jenis khas boleh menelan kos tambahan RM1,000 ke RM3,000. Pembedahan di hospital swasta adalah bergantung kepada pusat rawatan yang dipilih.

10) Apa yang berlaku sekiranya katarak dibiarkan tanpa rawatan?

Dalam kebanyakan kes, katarak akan semakin menebal dari masa ke masa, menyebabkan penglihatan semakin berkurang secara berterusan. Ini boleh menjejaskan gaya hidup seperti tidak boleh memandu atau melakukan tugas harian. Katarak yang terlalu masak atau terlalu tebal menyukarkan prosedur pembedahan, bahkan boleh menyebabkan kebutaan total jika dibiarkan lama. Walaubagaimana pun, agak mustahil untuk meramalkan dengan tepat bila katarak akan bertambah teruk dalam setiap individu.

Jika anda mempunyai masalah penglihatan sila berjumpa doktor untuk pemeriksaan lanjut dan mendapatkan rawatan.



The role of Computed Tomography Calcium Scoring in early screening of Coronary Artery Disease

By: Noor Khairiah A. Karim
Dr. Noor Khairiah Binti A. Karim - (Kluster Perubatan Regeneratif, Institut Perubatan dan Pergigian Termaju, USM)
16 Disember 2020

What is Coronary Artery Disease?

Coronary Artery Disease or Coronary Arterial Disease (CAD) is caused by damage to the main blood vessels that supply oxygen and nutrients to the heart. The formation of cholesterol plaques on the walls of the arteries will eventually reduce the size of the arterial diameter and in turn results in a reduction in blood flow to the heart.

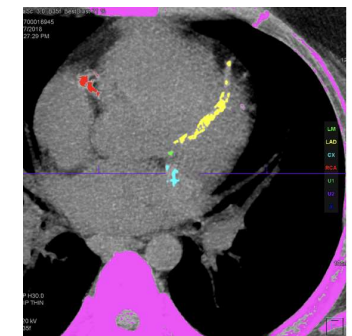
Decreased blood supply to the heart can lead to chest pain (angina), shortness of breath as well as other symptoms of coronary heart disease. If the coronary artery is completely blocked, then the individual with affected vessel can get a heart attack. As the narrowing of the arteries takes a long time, usually an individual will only realise it when a heart attack occurs.

Risk Factors

There are various factors that contribute to this coronary artery damage. These include age, gender, family history, smoking habit, high blood pressure, dyslipidaemia, diabetes mellitus, overweight, lack of exercise, stress and consuming unhealthy diet.

Role of Computed Tomography Calcium Scoring

Usually a physician will recommend a calcium scoring examination to patients at risk of getting CAD. Calcium scoring is a non-invasive examination that uses a computed tomography (CT) scan. In this examination, information related to the presence, position and burden of plaques in the coronary arteries can be identified to determine the level and risk a person is likely to have CAD. The CT scanning process only takes less than 5 minutes without the need to administer contrast agent. In this examination, the level of calcium in the heart's blood vessels will be measured and the percentage of plaque will be calculated electronically.



Calcium in each heart blood vessel and its location is identified using different colors

In general, the results of calcium scoring will be classified as below:

Calcium Score	Diagnosis	Description
0	No identifiable atherosclerotic plaque. Very low cardiovascular disease risk.	A 'negative' test. Greater than 95% chance for absence of CAD.
1-10	Minimal plaque burden.	'Significant' CAD very unlikely.
11-100	Mild plaque burden.	Likely mild or minimal coronary stenosis.
101-400	Moderate plaque burden.	Moderate non-obstructive CAD highly likely.
Over 400	High (extensive plaque burden).	Higher likelihood of at least one 'significant' coronary stenosis (>50% diameter).

For negative readings and those with minimal calcium score, the probability of getting CAD is very low over the next 2 to 5 years. Patients with mild and moderate calcium scores are usually advised to adopt a healthy lifestyle in terms of food intake as well as daily activities to reduce the risk of getting CAD. For patients with high plaque burden, further treatment and examination such as coronary angiography are usually required as the likelihood of coronary artery stenosis and the risk of heart attack is very high. At this point, the doctor will prescribe the medications that need to be taken as well as the preventive measures that the patient needs to take such as eating healthy diet and performing regular exercise. Regular visits to the doctor, especially for patients with high risk are very important to ensure the effectiveness of medications, intervention or procedures taken.

(1) Following the standard operating procedure implemented during the Restricted Movement Control Order (RMCO), would it possible to make people contracting OCD as they are advised to keep washing their hands or use hand sanitiser?

Response: Yes, there is a possibility that people who are exposed to too much media coverage and information regarding the high mortality rate and the negative impact of COVID-19, having an intense fear of getting infected, and their strong belief that COVID-19 can be prevented by frequent hand washing, social distancing, and frequent use of hand sanitiser will lead to constant fear and anxiety which may aggravate some people to develop OCD, especially with symptoms like obsessive contamination (repeated thoughts of being dirty, the surrounding is full of germs and viruses, and having high risk of being infected) and compulsive hand washing or repeated taking bath or cleaning body (repeated hand washing which they are compelled to perform due to the anxiety develop from the obsessive thoughts of contamination). In addition, those who are at high risk of worsening of OCD symptoms due to COVID-19 are those who already have OCD before the start of COVID-19. Even OCD patients who have recovered from OCD symptoms due to treatment are also at high risk of recurrence of OCD due to COVID-19 and MCO.

(2) Parents put too much pressure on their children to study, especially when they cannot go out during the MCO period, and they still have to study and face their computer every day. Will that leads to increase risk of OCD in their children? How do we recognise the early symptoms of OCD?

Response: No. Restricting children to go out and force them to study during MCO will not increase the risk of OCD. As I have mentioned in response to question 1, the risk factors are those who focused too much onto information on COVID-19, intense fear of being infected, those who are obsessed with the needs of frequent hand washing, need for good hygiene, and the need for frequent use of sanitiser. However, if the child already suffering from OCD before COVID-19 started, then the child is at risk of worsening of OCD symptoms or having a recurrence of OCD if the child gets too stressful as a result of being forced by parents to stay at home to study and do nothing else.

OCD is characterised by (a) obsessive thoughts (like repeated thoughts of feeling dirty, himself/herself and the surrounding is full of germs or repeated doubts that doors are not closed, gas is not shut off, etc. or repeated thoughts that objects are not placed in the right position or repeated urges/mind images to do something bad) and (b) compulsion (repeated hand washing/taking bath or repeated checking for doors/gas or repeated praying/counting/saying some words silently to distract the bad urges/mind images). In the context of COVID-19, the common OCD symptoms will be repeated thoughts of feeling dirty, himself/herself and the surrounding is full of germs followed by repeated hand washing/taking a bath or rubbing hands with sanitisers.

(3) Because of COVID-19, working at home is stressful. Can this also cause OCD? How do we know if we have OCD?

Response: Again the answer is the same as question 2. No risk for OCD for those who do not have OCD before in their life even if they are stress working at home. But those who already have OCD before COVID, yes, stress working at home will increase their risk of worsening of OCD symptoms or recurrence of OCD for those who have recovered. The risk factors for those who are normal to develop OCD during COVID are those who focus too much onto information on COVID-19, intense fear of being infected, those who are obsessed with the needs of frequent hand washing, need for good hygiene, and the need of frequent use of sanitizer. In the context of COVID-19, the common OCD symptoms will be repeated thoughts of feeling dirty, himself/herself and surrounding is full of germs followed by repeated hand washing/taking bath or rubbing hands with sanitisers. As a result of COVID-19, some people may also develop an intense fear of shortage of basic goods like food, water, medication, protective tools like mask and gloves may lead to hoarding disorder which is closely related to OCD in which the person will collect and accumulate all these basic goods in the house until there is no more space to put other things or belongings. This may be seen in some people who panicky to buy things and goods in the supermarket at the start of MCO.

(4) During the RMCO, patients with OCD worry about being infected and difficult to feel relaxed. Will the symptoms of repeated hand washing be more serious?

Response: Yes, OCD patients can have worsening of symptoms like worsening of repeated hand washing if their fear of getting infected and difficulty to feel relaxed become worsened during MCO. Even those OCD patients who had different OCD symptoms (like obsessive doubts and compulsive checking) before COVID-19, can also develop obsessive contamination and compulsive hand washing during MCO due to fear of getting infected.

(5) Nowadays, because people are worried about their safety wherever they go to and expose to strangers, will it cause many people to have an increased risk of OCD? Will this cause them to pay attention to disinfection, wash their hands, and wipe alcohol wipes all the time?

Response: Again, the risk factors to develop OCD during COVID-19 are those who focus too much onto information on COVID-19, intense fear of being infected, those who are obsessed with the needs of frequent hand washing, need for good hygiene, and the need of frequent use of sanitiser. In addition, patient with pre-existing OCD also have a high risk of recurrence or worsening of OCD symptoms. If anyone has these risk factors, then their chances of acquiring OCD during the COVID-19 pandemic will increase.



By: Mohammad Farris Iman Leong Bin Abdullah
 Dr. Mohammad Farris Iman Leong Bin Abdullah (Kluster Sains Gaya
 Hidup, Institut Perubatan dan Pergigian Termaju, USM)
 4 September 2020

Obsessive-Compulsive Disorder (Ocd) And Covid-19 Pandemic

COVID-19 caused by infection with the SARS CoV-2 virus has become a major infection pandemic since March 2020 which resulting in more than 25 million people infected worldwide and leads to more than 800,000 deaths. A few of the preventive measures to prevent the spread of infection and to break the chain of infection include frequent hand washing, social distancing, frequent use of hand sanitiser, and home quarantine. These precautionary and preventive measures to combat COVID-19 are not without negative impact on the mental health of the general population. One of the common symptoms of obsessive-compulsive disorder (OCD) is repetitive obsessive contamination and compulsive hand washing. Interview with Dr. Mohammad Farris Iman Leong Bin Abdullah, Consultant Psychiatrist, Institut Perubatan dan Pergigian Termaju, Universiti Sains Malaysia will get you informed regarding the risk of OCD during COVID-19:

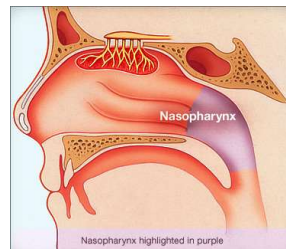
(6) Most celebrities suffer from OCD, depression, and eventually suicidal or anorexia symptoms. Are celebrities prone to develop OCD, depression and eventually suicide and anorexia?

Response: OCD and depression are associated with environmental factors, such as if people experience tremendous stress and unable to cope with it effectively, if they allowed the uncontrolled stress to be prolonged without asking for expert help to curb this, they will be prone for OCD and depression. In fact, OCD with co-morbid depression is common in many patients. Celebrities, on the other hand, are at constant stress due to the nature of their work and prolonged uncontrolled stress will lead to depression and OCD. Of course, if depression gets more severe and if untreated, will result in suicidal behaviour, which is the most severe symptom of depression. In fact, OCD with co-morbid depression is also a risk to develop suicidal behaviour. While for anorexia, be it anorexia nervosa or anorexia bulimia, for celebrities due to the nature of their work which needs to be good-looking and have a beautiful body are prone to and at risk of anorexia.



5 Perkara Yang Anda Patut Tahu Tentang Kanser Nasofarinks (Kanser Belakang Hidung)

Oleh: Muhamad Yusri Musa
Dr. Muhamad Yusri Bin Musa (Kluster Sains Onkologi dan Radiologi,
Institut Perubatan dan Pergigian Termaju, USM)
22 Julai 2020



Kanser nasofarinks atau Nasopharyngeal Carcinoma (NPC) adalah kanser yang tumbuh atau bermula di kawasan yang dipanggil nasopharynx atau belakang hidung (Imej 1).

Kanser ini merupakan kanser kepala dan leher yang paling kerap berlaku dan antara 5 kanser paling kerap berlaku bagi kaum lelaki di Malaysia.

1. Apakah FAKTOR RISIKO kanser nasofarinks?

- Genetik - kanser ini paling kerap berlaku dalam kalangan mereka yang berketurunan Cina (49%), diikuti kaum Bidayuh di Sarawak dan lain-lain kaum pribumi Sabah dan Sarawak, dan orang Melayu juga direkodkan memiliki kekerapan yang tinggi. Kanser ini sangat jarang ditemui dalam kaum India. (Clinical Practice Guidelines, KKM).
- Jangkitan virus Epstein Barr (EBV)
- Sejarah ahli keluarga pernah mengidap NPC atau kanser.
- Faktor gaya hidup dan persekitaran seperti merokok, pengambilan diet ikan masin, pendedahan kepada bahan kimia dan industri yang berpanjangan (melebihi 10 tahun) juga menjadi faktor risiko untuk kanser nasofarinks ini.

2. Apakah GEJALA (Symptoms) yang dikaitkan dengan kanser ini?

- Bengkak / benjolan di leher melebihi 2 minggu dan semakin membesar (rujuk imej 2)
- Hidung berdarah, tersumbat, mengeluarkan cecair berlendir bercampur darah.
- Kurang pendengaran, telinga berdengung (kebiasaannya sebelah).
- Sakit kepala, belakang mata atau muka.
- Pandangan kabur atau berganda (double vision).
- Lain-lain gejala umum seperti kurang sihat, demam berpanjangan, sukar menelan, kurang selera makan dan berat badan menurun.



Imej 2

3. Bagaimana DIAGNOSIS dilakukan jika mengalami gejala yang berkaitan?

- Pengesahan diagnosis boleh dilakukan dengan pemeriksaan endoskopi ke dalam rongga hidung dan tisu untuk pemeriksaan histopatologi diambil daripada kawasan nasofarinks yang disyaki ada ketumbuhan.
- Penyiasatan pengimejan seperti Magnetic Resonance Imaging, MRI dan Computed Tomography, CT scan juga akan dilakukan untuk membantu diagnosis.

4. Apakah RAWATAN yang boleh dilakukan?

- Antara rawatan terkini yang boleh dilakukan adalah gabungan Radioterapi dan Kemoterapi (Concurrent Chemoradiotherapy, CCRT) dan menggunakan teknologi Intensity Modulated Radiotherapy (IMRT) untuk radioterapi. Pengalaman penulis di Institut Perubatan dan Pergigian Termaju (IPPT) USM Bertam sejak memulakan perkhidmatan radioterapi pada 2015 telah merawat lebih 100 pesakit kanser nasofarinks dengan kadar penyembuhan dianggarkan melebihi 70 peratus (tertakluk kepada tahap). Namun begitu, terdapat pelbagai kaedah lain atau gabungan protokol rawatan yang pelbagai bergantung kepada keupayaan kepakaran dan teknologi yang ada di institusi perubatan tersebut, tahap penyakit dan pesakit.
- Kebanyakan pusat-pusat rawatan onkologi dan radioterapi di seluruh negara mampu memberikan rawatan yang tepat untuk kanser nasofarinks. Pesakit tidak perlu bimbang dan risau tentang kaedah rawatan dan komplikasi kerana rawatan dan sokongan yang berterusan akan diberikan kepada pesakit agar mereka dapat menyelesaikan rawatan dengan sempurna dan kembali pulih.

5. Apakah peluang untuk SEMBUH?

- Kanser ini merupakan antara kanser yang memiliki kadar kesembuhan yang tinggi berbanding kanser-kanser yang lain. Anggaran kadar penyembuhan yang dilaporkan oleh pelbagai jurnal dan badan antarabangsa adalah pada tahap melebihi 80 peratus untuk kanser tahap 1 dan 2.

Secara rumusannya kanser nasofarinks ini boleh dirawat dengan berkesan serta mempunyai peluang kesembuhan yang amat cerah jika dapat dikesan pada tahap awal (1 dan 2) dan melalui semua proses pemeriksaan dan rawatan yang disediakan. Malahan, pesakit tahap 3 dan 4 juga berpotensi untuk mendapat kesembuhan yang sepenuhnya jika berupaya melalui proses rawatan dengan sempurna.

RUJUKAN

- Clinical Practice Guidelines (CPG), Ministry of Health Malaysia.
- Nasopharyngeal cancer: EHS-ESMO-ESTRO Clinical Practice Guidelines for diagnosis, treatment and follow-up

List of Q1 & Q2 AMDI Journal Publications 2020

Noor Diyana binti Osman Ibrahim Lutfi bin Shuaib		Abdulkadir, M. K., Rahim, N. A. Y. M., Mazlan, N. S., Daud, N. M., Shuaib, I. L., & Osman, N. D. (2020). Dose optimisation in paediatric CT examination: Assessment on current scanning protocols associated with radiation dose. <i>Radiation Physics and Chemistry</i> , 171, 108740.	Q1
Nur Nadhirah binti Mohamad Zain		Hui, B. Y., Zain, N. N. M., Mohamad, S., Varanusupakul, P., Osman, H., & Raoo, M. (2020). Poly (cyclodextrin-ionic liquid) based ferrofluid: A new class of magnetic colloid for dispersive liquid phase microextraction of polycyclic aromatic hydrocarbons from food samples prior to GC-FID analysis. <i>Food Chemistry</i> , 126214.	Q1
Ng Siew Kit Marimuthu Tang Thean Hock	Citartan a/l	Tan, L. L., Ahmed, S. A., Ng, S. K., Citartan, M., Raabe, C. A., Rozhdestvensky, T. S., & Tang, T. H. (2020). Rapid detection of porcine DNA in processed food samples using a streamlined DNA extraction method combined with the SYBR Green real-time PCR assay. <i>Food chemistry</i> , 309, 125654.	Q1
Lim Vuanghou Mohamed	Rafeezul bin	Manogaran, M., Vuanghao, L., & Mohamed, R. (2020). Gynura procumbens ethanol extract and its fractions inhibit macrophage derived foam cell formation. <i>Journal of Ethnopharmacology</i> , 249, 112410.	Q1
Bakiah binti Shahrudin		Ang, S. L., Shahrudin, B., Chuah, J. A., & Sudesh, K. (2020). Electrospun poly (3-hydroxybutyrate-co-3-hydroxyhexanoate)/silk fibroin film is a promising scaffold for bone tissue engineering. <i>International Journal of Biological Macromolecules</i> , 145, 173-188.	Q1
Sharifah Azdiana binti Tuan Din Siti Mardhiana binti Mohamad		Dahalan, N. H., Din, S. A. T., & Mohamad, S. M. B. (2020). Association of ABO blood groups with allergic diseases: a scoping review. <i>BMJ open</i> , 10(2).	Q2
Mohd Hafiz bin Mohd Zin		Bradley, D. A., Zubair, H. T., Oresgun, A., Louay, G. T., Zin, H. M., Ung, N. M., & Abdul-Rashid, H. A. (2020). Time-resolved dose measurements of linear accelerator pulses using a fibre optic sensor: Applications and challenges. <i>Radiation Physics and Chemistry</i> , 167, 108212.	Q1
Kumitaa a/p Theva Das		Kalidasan, V., & Theva Das, K. (2020). Lessons Learned From Failures and Success Stories of HIV Breakthroughs: Are We Getting Closer to an HIV Cure?. <i>Frontiers in Microbiology</i> , 11, 46.	Q2
Ch'ng Ewe Seng a/l Marimuthu Tang Thean Hock	Citartan	Jayasingam, S. D., Citartan, M., Thang, T. H., Zin, A. A. M., Ang, K. C., & Ch'ng, E. S. (2019). Evaluating the Polarization of Tumor-Associated Macrophages Into M1 and M2 Phenotypes in Human Cancer Tissue: Technicalities and Challenges in Routine Clinical Practice. <i>Frontiers in Oncology</i> , 9.	Q2
Rafidah binti Zainon		Amin, N. B., Abualroos, N. J., & Zainon, R. (2020). Fabrication of anthropomorphic thyroid-neck phantom for dosimetry study in nuclear medicine. <i>Radiation Physics and Chemistry</i> , 166, 108462.	Q1
Noor Diyana binti Osman Ibrahim Lutfi bin Shuaib		Roslee, M. A. A. M., Shuaib, I. L., Napi, A. F. M., Razali, M. A. S. M., & Osman, N. D. (2020). Cumulative organ dose and effective dose in adult population underwent repeated or multiple head CT examination. <i>Radiation Physics and Chemistry</i> , 166, 108465.	Q1
Noorfatimah Yahaya Lim Vuanghou binti Abd Kadir	Erazuliana	Chiu, H. I., Ayub, A. D., Yusuf, M., Aishah, S. N., Yahaya, N., Abbd Kadir, E., & Lim, V. (2020). Docetaxel-Loaded Disulfide Cross-Linked Nanoparticles Derived from Thiolated Sodium Alginate for Colon Cancer Drug Delivery. <i>Pharmaceutics</i> , 12(1), 38.	Q1
Hazlin binti Hashim		Rohani, M. F. M., Nawi, N. M., Shamim, S. E., Sohaimi, W. F. W., Zainon, W. M. N. W., Musarudin, M., ... & Hashim, H. (2019). Maximum standardized uptake value from quantitative bone single-photon emission computed tomography/computed tomography in differentiating metastatic and degenerative joint disease of the spine in prostate cancer patients. <i>Annals of nuclear medicine</i> , 1-10.	Q2
Lim Vuanghou		Lim, V., Gorji, S. G., Daygon, V. D., & Fitzgerald, M. (2020). Untargeted and Targeted Metabolomic Profiling of Australian Indigenous Fruits. <i>Metabolites</i> , 10(3), 114.	Q2
Lim Vuanghou Nur Nadhirah Mohamad Zain		Mohd Narawi, M., Chiu, H. I., Zain, M., Nadhirah, N., Ramachandran, M. R., Samsurrijal, S. F., & Lim, V. (2020). Biocompatible nutmeg oil-loaded nanoemulsion as phyto-repellent. <i>Frontiers in Pharmacology</i> , 11, 214.	Q1

Source : AMDI Library (Data updated as at 14 January 2021)

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Lim Vuanghou Nur Nadhirah Mohamad Zain		Mohd Narawi, M., Chiu, H. I., Zain, M., Nadhirah, N., Ramachandran, M. R., Samsurrijal, S. F., & Lim, V. (2020). Biocompatible nutmeg oil-loaded nanoemulsion as phyto-repellent. <i>Frontiers in Pharmacology</i> , 11, 214.	Q1
Mohd Hafiz bin Mohd Zin		Mustaqim, A. S., Yahaya, N. Z., Razak, N. N. A., & Zin, H. (2020). The dose enhancement of MAGAT gel dosimeter doped with zinc oxide at 6 MV photon beam. <i>Radiation Physics and Chemistry</i> , 172, 108739.	Q1
Mohd Zahri bin Abdul Aziz		Zakaria, Z., Aziz, M. A., Ishak, N. H., Suppliah, S., Bradley, D. A., & Noor, N. M. (2020). Advanced thermoluminescence dosimetric characterization of fabricated Ge-Doped optical fibres (FGDOFs) for electron beams dosimetry. <i>Radiation Physics and Chemistry</i> , 166, 108487.	Q1
Noorfatimah Yahaya		Aris, N. I. F., Rahman, N. A., Wahid, M. H., Yahaya, N., Abdul Keyon, A. S., & Kamaruzaman, S. (2020). Superhydrophilic graphene oxide/electrospun cellulose nanofibre for efficient adsorption of organophosphorus pesticides from environmental samples. <i>Royal Society Open Science</i> , 7(3), 192050.	Q2
Nur Nadhirah Mohamad Zain Noorfatimah Yahaya		Saad, S. M., Aling, N. A., Miskam, M., Saaid, M., Mohamad Zain, N. N., Kamaruzaman, S., ... & Yahaya, N. (2020). Magnetic nanoparticles assisted dispersive liquid-liquid microextraction of chloramphenicol in water samples. <i>Royal Society Open Science</i> , 7(4), 200143.	Q2
Ng Mei Li		Sukocheva, O. A., Furuya, H., Ng, M. L., Friedemann, M., Menschikowski, M., Tarasov, V. V., ... Bishayee, A. (2020, March 1). Sphingosine kinase and sphingosine-1-phosphate receptor signaling pathway in inflammatory gastrointestinal disease and cancers: A novel therapeutic target. <i>Pharmacology and Therapeutics</i> . Elsevier Inc. https://doi.org/10.1016/j.pharmthera.2019.107464	Q1
Nur Nadhirah Mohamad Zain Hasni Arsd Nik Nur Syazni Nik Mohamed Kamal		Ismail, N. Z., Md Toha, Z., Muhamad, M., Nik Mohamed Kamal, N. N. S., Mohamad Zain, N. N., & Arsd, H. (2020). Antioxidant Effects, Antiproliferative Effects, and Molecular Docking of Clinacanthus nutans Leaf Extracts. <i>Molecules</i> , 25(9), 2067.	Q2
Lim Vuanghou		Redox-sensitive linear and cross-linked cystamine-based polymers for colon-targeted drug delivery: Design, synthesis, and characterisation	Q1
Nur Nadhirah binti Mohamad Zain Lim Vuanghou Noorfatimah Yahaya Nozlena Abdul Samad		Gopal, K., Al deeb, I., Raaov, M., Suah, F. B. M., Samad, N. A., Yahaya, N., Lim, V., & Zain, N. N. M. (2020). Supramolecular solvent combined with dispersive solid phase extraction based magnetic silicone surfactant activated charcoal adsorbent for extraction of phenolic compounds from industrial wastewater. <i>Microchemical Journal</i> , 157. https://doi.org/10.1016/j.microc.2020.105110	Q1
Citartan a/l Marimuthu Tang Thean Hock		Thevendran, R., Navien, T. N., Meng, X., Wen, K., Lin, Q., Sarah, S., Tang, T.-H., & Citartan, M. (2020). Mathematical Approaches in Estimating Aptamer Target Binding Affinity. <i>Analytical Biochemistry</i> , 113742. https://doi.org/10.1016/j.ab.2020.113742	Q2
Mohamad Syamsul Reza Harun		Harun, M. S. R., Taylor, M., Zhu, X. Q., & Elsheikha, H. M. (2020). Transcriptome profiling of toxoplasma gondii-infected human cerebrovascular endothelial cell response to treatment with monensin. <i>Microorganisms</i> , 8(6). https://doi.org/10.3390/microorganisms8060842	Q2
Tan Jun Jie		Binti Kamaruddin, N. A., Fong, L. Y., Tan, J. J., Abdullah, M. N. H., Singh Cheema, M., Bin Yakop, F., & Yong, Y. K. (2020). Cytoprotective Role of Omentin Against Oxidative Stress-Induced Vascular Endothelial Cells Injury. <i>Molecules (Basel, Switzerland)</i> , 25(11). https://doi.org/10.3390/molecules25112534	Q2
Mohammad Farris Iman Leong bin Abdullah		Woon, L. S. C., Sidi, H. Bin, Ravindran, A., Gosse, P. J., Mainland, R. L., Kaunismaa, E. S., Hatta, N. H., Arnawati, P., Zulkifli, A. Y., Mustafa, N., & Leong Bin Abdullah, M. F. I. (2020). Depression, anxiety, and associated factors in patients with diabetes: evidence from the anxiety, depression, and personality traits in diabetes mellitus (ADAPT-DM) study. <i>BMC Psychiatry</i> , 20(1), 227. https://doi.org/10.1186/s12888-020-02615-y	Q2
Mohd Yusmaide bin Aziz		Tahziz, A., Haron, D. E. M., & Aziz, M. Y. (2020). Liquid chromatographic tandem mass spectrometric (LC-MS/MS) determination of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in the yolk of poultry eggs in Malaysia. <i>Molecules</i> , 25(10). https://doi.org/10.3390/molecules25102335	Q2
Ahmad Naqib Bin Shuid		Shuid, A. N., Jayusman, P. A., Shuid, N., Ismail, J., Nor, N. K., & Mohamed, I. N. (2020). Update on atypicalities of central nervous system in autism spectrum disorder. <i>In Brain Sciences (Vol. 10, Issue 5)</i> . MDPI AG. https://doi.org/10.3390/brainsci10050309	Q2

Source : AMDI Library (Data updated as at 14 January 2021)

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List of Q1 & Q2 AMDI Journal Publications 2020

Hasni bin Arsad	Adebayo, I. A., Arsad, H., Kamal, N. N. S. B. N. M., & Samian, M. R. (2020). The hexane fraction of the Moringa oleifera Lam seed extract induces apoptosis, causes cell cycle arrest, and modulates expression of HSP60, NPM, PGK1, RCN1, and PDIA1 in MCF7 cells. <i>South African Journal of Botany</i> , 129, 379–387. https://doi.org/10.1016/j.sajb.2019.09.001	Q2
Mohd Zahri bin Abdul Aziz	Samson, D. O., Mat Jaffri, M. Z., Hashim, R., Sulaiman, O., Aziz, M. Z. A., Yusof, M. F. M., & Shukri, A. (2020). Rhizophora spp. Particleboards incorporating defatted soy flour bonded with NaOH/IA-PAE: Towards a water equivalent phantom material. <i>Radiation Physics and Chemistry</i> , 176. https://doi.org/10.1016/j.radphyschem.2020.109057	Q1
Nor Hazwani binti Ahmad Lim Vuanghou	Azhar, N. A., Ghozali, S. Z., Abu Bakar, S. A., Lim, V., & Ahmad, N. H. (2020). Suppressing growth, migration, and invasion of human hepatocellular carcinoma HepG2 cells by Catharanthus roseus-silver nanoparticles. <i>Toxicology in Vitro</i> , 67. https://doi.org/10.1016/j.tiv.2020.104910	Q2
Ooi Jer Ping	Albitar, O., Ballouze, R., Ooi, J. P., & Sheikh Ghadzi, S. M. (2020). Risk factors for mortality among COVID-19 patients. <i>Diabetes Research and Clinical Practice</i> , 166. https://doi.org/10.1016/j.diabres.2020.108293	Q1
Tan Jun Jie	Wang, M., Ling, K. H., Tan, J. J., & Lu, C. B. (2020). Development and Differentiation of Midbrain Dopaminergic Neuron: From Bench to Bedside. In <i>Cells</i> (Vol. 9, Issue 6). NLM (Medline). https://doi.org/10.3390/cells9061489	Q2
Rabiatul Basria binti S.M.N.Mydin Md Azman bin PKM Seeni Mohamed	Harun, N. H., Mydin, R. B. S. M. N., Mydin, R. B. S. M. N., Sreekantan, S., Saharudin, K. A., Saharudin, K. A., Basiron, N., Aris, F., Zain, W. N. W. M., Seeni, A., & Seeni, A. (2020). Bactericidal Capacity of a Heterogeneous TiO ₂ /ZnO Nanocomposite against Multidrug-Resistant and Non-Multidrug-Resistant Bacterial Strains Associated with Nosocomial Infections. <i>ACS Omega</i> , 5(21), 12027–12034. https://doi.org/10.1021/acsomega.0c00213	Q2
Eshaifol Azam bin Omar	Asem, N., Abdul Gapar, N. A., Abd Hapit, N. H., & Omar, E. A. (2019). Correlation between total phenolic and flavonoid contents with antioxidant activity of Malaysian stingless bee propolis extract. <i>Journal of Apicultural Research</i> , 59(4), 437–442. https://doi.org/10.1080/00218839.2019.1684050	Q2
Siti Hawa binti Ngalm Lim Vuanghou	Devasvaran, K., Jairaman, S., Yahaya, N. A., Jaganath, I. B. S., Khung, Y. L., Lim, V., & Ngalm, S. H. (2020). PEG-b-PLGA Nanoparticles Loaded with Geraniin from Phyllanthus Watsonii Extract as a Phytochemical Delivery Model. <i>Applied Sciences</i> , 10(14), 4891.	Q2
Mohammad Farris Iman Leong bin Abdullah Salbiah binti Isa Tan Kok Leng	Abdullah, M. F. I. L. B., Tan, K. L., Isa, S. M., Yusoff, N. S., Chear, N. J. Y., & Singh, D. (2020). Lipid profile of regular kratom (<i>Mitragyna speciosa</i> Korth.) users in the community setting. <i>PLoS one</i> , 15(6).	Q2
Bakiah binti Shahrudin Tan Jun Jie Rafeezul bin Mohamed	Azmi, S. M., Salih, M., Abdelrazeg, S., Roslan, F. F., Mohamed, R., Jie, T. J., & Shahrudin, B. (2020). Human umbilical cord-mesenchymal stem cells: a promising strategy for corneal epithelial regeneration. <i>Regenerative Medicine</i> , 15(3), 1381–1397.	Q2
Md Azman bin PKM Seeni Mohamed	Murtey, M. Das, & Seeni, A. (2020). The phytochemical analysis and pharmacological potentials of husk and straw as paddy waste products. <i>Journal of the Science of Food and Agriculture</i> , 12(1), 4347–4352. https://doi.org/10.1002/jsfa.10406	Q1
Md Azman bin PKM Seeni Mohamed	Ahmed, Q. U., Nippun, T. S., Hillas, A., Jalal, T. K., Kek, T. L., Salleh, M. Z., ... & Wahab, R. A. (2020). Determination of toxic effects of Hystrix <i>Brachyura</i> Bezoar extracts using cancer cell lines and embryo zebrafish (<i>Danio rerio</i>) models and identification of active principles through GC-MS analysis. <i>Journal of Ethnopharmacology</i> , 113138.	Q1
Noorfatimah Yahaya	Abdullah, W. N. W., Ali, S. N. N., Shukri, N. M., Mokhtar, W. N. A. W., Yahaya, N., & Rosid, S. J. M. (2020). Catalytic Chelation Technique for the Removal of Heavy Metal from <i>Clarius</i> <i>Batrachus</i> (<i>C. Batrachus</i>). <i>Journal of Environmental Chemical Engineering</i> , 104165.	Q1
Syed Azhar bin Syed Sulaiman	Zawiah, M. H., Al-Ashwal, F. Y., Saeed, R. M., Kubas, M., Saeed, S., Khan, A. H., ... & ABDULJABBAR, R. (2020). Assessment of healthcare system capabilities and preparedness in Yemen to confront the novel coronavirus 2019 (COVID-19) outbreak: A perspective of healthcare workers. <i>Frontiers in Public Health</i> , 8, 419.	Q2
Gokula Kumar a/l Appalanaido	Whole-lung Low Dose Irradiation for SARS-Cov2 Induced Pneumonia in the Geriatric Population: An Old Effective Treatment for a New Disease? Recommendation of the International Geriatric Radiotherapy Group	Q1
Bakiah binti Shahrudin	Ang, S. L., Sivashankari, R., Shahrudin, B., Chuah, J. A., Tsuge, T., Abe, H., & Sudesh, K. (2020). Potential Applications of Polyhydroxyalkanoates as a Biomaterial for the Aging Population. <i>Polymer Degradation and Stability</i> , 181. https://doi.org/10.1016/j.polydegradstab.2020.109371	Q1

Source : AMDI Library (Data updated as at 14 January 2021)

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List of Q1 & Q2 AMDI Journal Publications 2020

Intan Juliana binti Abd Hamid	Van Rostenberghe, H., Ho, J. J., Lim, C. H., & Abd Hamid, I. J. (2020). Use of reflective materials during phototherapy for newborn infants with unconjugated hyperbilirubinaemia. <i>Cochrane Database of Systematic Reviews</i> , (7).	Q1
Nozlana Abdul Samad	Rahman, H. S., Othman, H. H., Hammadi, N. I., Yeap, S. K., Amin, K. M., Samad, N. A., & Alitheen, N. B. (2020). Novel Drug Delivery Systems for Loading of Natural Plant Extracts and Their Biomedical Applications. <i>International Journal of Nanomedicine</i> , 15, 2439.	Q1
Siti Razila Binti Abdul Razak	Mathialagan, R. D., Abd Hamid, Z., Ng, Q. M., Rajab, N. F., Shuib, S., & Binti Abdul Razak, S. R. (2020). Bone Marrow Oxidative Stress and Acquired Lineage-Specific Genotoxicity in Hematopoietic Stem/Progenitor Cells Exposed to 1, 4-Benzoquinone. <i>International Journal of Environmental Research and Public Health</i> , 17(16), 5865.	Q1
Rafidah binti Zainon	Jamal AbuAlRoos, N., Azman, M. N., Baharul Amin, N. A., & Zainon, R. (2020). Tungsten-based material as promising new lead-free gamma radiation shielding material in nuclear medicine. <i>Physica Medica</i> , 78, 48–57. https://doi.org/10.1016/j.ejmp.2020.08.017	Q2
Md Azman bin PKM Seeni Mohamed Rabiatul Basria binti S.M.N.Mydin	Harun, N. H., Mydin, R. B. S. M. N., Sreekantan, S., Saharudin, K. A., Basiron, N., & Seeni, A. (2020). The bactericidal potential of LLPE with TiO ₂ /ZnO nanocomposites against multidrug resistant pathogens associated with hospital acquired infections. <i>Journal of Biomaterials Science, Polymer Edition</i> , 31(14), 1757–1769. https://doi.org/10.1080/09205063.2020.1775759	Q2
Noorfatimah Yahaya Lim Vuanghou Nur Nadhirah binti Mohamad Zain	Subuhi, N. E. A. M., Saad, S. M., Zain, N. N. M., Lim, V., Miskam, M., Kamaruzaman, S., Raovv, M., & Yahaya, N. (2020). An efficient biosorption-based dispersive liquid-liquid microextraction with extractant removal by magnetic nanoparticles for quantification of bisphenol A in water samples by gas chromatography-mass spectrometry detection. <i>Journal of Separation Science</i> , 43(16), 3294–3303. https://doi.org/10.1002/jssc.201901194	Q2
Nik Nur Syazni binti Nik Mohamed Kamal Nur Nadhirah binti Mohamad Zain I Noorfatimah Yahaya	Zulkifli, N. I., Muhamad, M., Mohamad Zain, N. N., Tan, W. N., Yahaya, N., Bustami, Y., Abdul Aziz, A., & Nik Mohamed Kamal, N. N. S. (2020). A Bottom-Up Synthesis Approach to Silver Nanoparticles Induces Anti-Proliferative and Apoptotic Activities Against MCF-7, MCF-7/TAMR-1 and MCF-10A Human Breast Cell Lines. <i>Molecules</i> (Basel, Switzerland), 25(18). https://doi.org/10.3390/molecules25184332	Q2
Intan Juliana binti Abd Hamid Fadzilah binti Hashim Thasneem bt Zainudeen Manganting	Ilie Zarina Ernest Abd Hamid, I. J., Azman, N. A., Hashim, I. F., Manganting, E., Gennery, A. R., & Zainudeen, Z. T. (2020). Systematic review of Primary Immunodeficiency Diseases in Malaysia: 1979–2020. <i>Frontiers in Immunology</i> , 11, 1923.	Q1
Siti Mardhiana binti Mohamad	Lawless, D., Mohamad, S. M. B., Engelhardt, K. R., Doody, G. M., Shrimpton, J., Rensing-Ehl, A., ... & Mikulasova, A. (2020). Germline TET2 Loss-Of-Function Causes Childhood Immunodeficiency And Lymphoma. <i>Blood</i> .	Q1
Tang Thean Hock Citartan a/l Marimuthu	Prabu, S. S., Ch'ng, E. S., Woon, P. Y., Chen, J.-H., Tang, T.-H., & Citartan, M. (2020). Unravelling the diagnostic and therapeutic potentialities of a novel RNA aptamer isolated against human pituitary tumour transforming gene 1 (PTTG1) protein. <i>Analytica Chimica Acta</i> , 1138, 181–190. https://doi.org/10.1016/j.aca.2020.09.038	Q1
Nor Shuhada Mansor	Mansor, N. S., Chow, C. M., & Halaki, M. (2020). Cognitive effects of video games in older adults and their moderators: a systematic review with meta-analysis and meta-regression. <i>Aging and Mental Health</i> , 24(6), 841–856. https://doi.org/10.1080/13607863.2019.1574710	Q1
Teoh Soo Huat	Waqas, A., Teoh, S. H., Lapão, L. V., Messina, L. A., & Correia, J. C. (2020). Harnessing Telemedicine for the Provision of Health Care: Bibliometric and Scientometric Analysis. <i>Journal of Medical Internet Research</i> , 22(10), e18835. https://doi.org/10.2196/18835	Q1
Mohd Yusmaidie Aziz	Ansar, F. H. Z., Latifah, S. Y., Wan Kamal, W. H. B., Khong, K. C., Ng, Y., Foong, J. N., Gopalsamy, B., Ng, W. K., How, C. W., Ong, Y. S., Abdullah, R., & Aziz, M. Y. (2020). Pharmacokinetics and biodistribution of thymoquinone-loaded nanostructured lipid carrier after oral and intravenous administration into rats. <i>International Journal of Nanomedicine</i> , 15, 7703–7717. https://doi.org/10.2147/IJN.S262395	Q1
Gokula Kumar a/l Appalanaido	Nguyen, N. P., Vinh-Hung, V., Baumert, B., Zamagni, A., Arenas, M., Motta, M., Lara, P. C., Myint, A. S., Bonet, M., Popescu, T., Vuong, T., Appalanaido, G. K., Trigo, L., Karlsson, U., & Thariat, J. (2020). Older cancer patients during the COVID-19 epidemic: Practice proposal of the international geriatric radiotherapy group. <i>Cancers</i> , 12(5), 1–10. https://doi.org/10.3390/cancers12051287	Q1

Source : AMDI Library (Data updated as at 14 January 2021)

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List of Q1 & Q2 AMDI Journal Publications 2020

Ahmad Munir bin Che Muhamed	Tan, B., Philipp, M., Hill, S., Che Muhamed, A. M., & Mündel, T. (2020). Pain Across the Menstrual Cycle: Considerations of Hydration. <i>Frontiers in Physiology</i> , 11. https://doi.org/10.3389/fphys.2020.585667	Q1
Nor Hazwani Ahmad	Zhou, X., Li, Y., Wang, W., Wang, S., Hou, J., Zhang, A., Lv, B., Gao, C., Yan, Z., Pang, D., Lu, K., Ahmad, N. H., Wang, L., Zhu, J., Zhang, L., Zhuang, T., & Li, X. (2020). Regulation of Hippo/YAP signaling and Esophageal Squamous Carcinoma progression by an E3 ubiquitin ligase PARK2. <i>Theranostics</i> , 10(21), 9443–9457. https://doi.org/10.7150/tno.46078	Q1
Hasni Arsad	Adebayo, I. A., Usman, A. I., Shittu, F. B., Ismail, N. Z., Arsad, H., Muftaudeen, T. K., & Samian, M. R. (2020). Boswellia dalzielii-Mediated Silver Nanoparticles Inhibited Acute Myeloid Leukemia (AML) Kasumi-1 Cells by Inducing Cell Cycle Arrest. <i>Bioinorganic Chemistry and Applications</i> , 2020. https://doi.org/10.1155/2020/8898360	Q1
Ng Mei Li	Aji, Gulibositan, et al. "Regulation of Hepatic Insulin Signaling and Glucose Homeostasis by Sphingosine Kinase 2." <i>Proceedings of the National Academy of Sciences of the United States of America</i> , vol. 117, no. 39, 2020, pp. 24434–42, doi:10.1073/pnas.2007856117.	Q1
Mohammad Farris Iman Leong bin Abdullah	Woon, Luke Sy Cherng, et al. "Mental Health Status of University Healthcare Workers during the Covid-19 Pandemic: A Post-Movement Lockdown Assessment." <i>International Journal of Environmental Research and Public Health</i> , vol. 17, no. 24, 2020, pp. 1–20, doi:10.3390/ijerph17249155.	Q1
Syed Azhar bin Syed Sulaiman	Al-Ashwal, F. Y., et al. "Healthcare Workers' Knowledge, Preparedness, Counseling Practices, and Perceived Barriers to Confront COVID-19: A Cross-Sectional Study from a War-Torn Country, Yemen." <i>PLoS ONE</i> , vol. 15, no. 12 December, 2020, doi:10.1371/journal.pone.0243962.	Q2
Nik Nur Syazni binti Nik Mohamed Kamal	Tan, Wen-Nee, et al. "Sesquiterpenes Rich Essential Oil from <i>Garcinia celebica</i> L. and Its Cytotoxic and Antimicrobial Activities." <i>Natural Product Research</i> , vol. 34, no. 23, 2020, pp. 3404–08, doi:10.1080/14786419.2019.1569012.	Q2

Source : AMDI Library (Data updated as at 14 January 2021)

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Nur Nadhirah binti Mohamad Zain	Hui, B. Y., Zain, N. N. M., Mohamad, S., Prabu, S., Osman, H., & Raoov, M. (2020). A comprehensive molecular insight into host-guest interaction of Phenanthrene with native and ionic liquid modified β -cyclodextrins: Preparation and characterization in aqueous medium and solid state. <i>Journal of Molecular Structure</i> , 127675.
Siti Noor Fazliah binti Mohd Noor	Hilmi, B., Mohd Najman, N. S., Azhar, D. D., Mohd Noor, S. N. F., & Abdul Hamid, Z. A. (2020). Eco-friendly denture adhesives (EFDAs) filled with different types of natural starches: mechanical and biological performance evaluation. <i>Journal of Adhesion Science and Technology</i> , 34(1), 76-90.
Norehan binti Mokhtar	Rao, G. K. L., Iskandar, Y. H. P., & Mokhtar, N. (2019). Understanding the nuances of E-learning in orthodontic education. <i>Education and Information Technologies</i> , 1-22.
Tan Jun Jie Chong Soon Eu	Tan, Kok Leng, et al. "Iron Deficiency in Heart Failure Patients with Reduced Ejection Fraction and the Correlation with Left Ventricular Ejection Fraction." <i>Malaysian Journal of Medicine and Health Sciences</i> , vol. 16, no. 1, 2020, pp. 126–30, https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079244747&partnerID=40&md5=038afe41d56f806b75fab1e752e6e58 .
Gokula Kumar a/l Appalanaido	Tseng, M., Vellayappan, B., Choong, R., Appalanaido, G. K., & Soon, Y. Y. (2020). Post mastectomy radiotherapy for elderly patients with intermediate risk (T1-2N1 OR T3N0) breast cancer: a systematic review and meta-analysis. <i>TRANSLATIONAL CANCER RESEARCH</i> , 9, S23+.
Teoh Soo Huat	Teoh, S. H., Ng, Y. L., Anuar, N., & Kamaludin, R. (2020). A case of Gilbert's syndrome diagnosis during pregnancy. <i>Bangladesh Journal of Medical Science</i> , 19(2), 333-335.
Noorfatimah Yahaya	Agarose-chitosan-integrated multiwalled carbon nanotubes film solid phase microextraction combined with high performance liquid chromatography for the determination of tricyclic antidepressant drugs in aqueous samples [(File agarosa-kitosan bersepadu nanotub karbon berbilang dinding pengestrakan mikro fasa pepejal digabungkan dengan kromatografi cecair prestasi tinggi-pengesanan ultralembayung untuk penentuan anti-murung trisiklik di dalam sampel akuueus)]
Hasni bin Arsad	Ahmad, S. N. A., Sulaiman, S., Baseri, D. F. H., Ang, L. S., Yahaya, N. Z., Arsad, H., & Watanabe, I. (2020). Density Functional Theory Studies of Muon Stopping Sites and Hyperfine Interaction in [Au25 (SR) 18] 0 Nanocluster. <i>Journal of the Physical Society of Japan</i> , 89(1), 014301.
Lim Vuanghou Nozlana Abd Samad Nor Adlin Yusoff	Effect of Annona muricata L. on Metabolic Parameters in Diabetes Mellitus: A Systematic Review
Sa'adiah Shahabudin Norehan Mokhtar.	Romli, R., Shahabudin, S. A., Saddki, N., & Mokhtar, N. (2020). Effectiveness of a Health Education Program to Improve Knowledge and Attitude Towards Cervical Cancer and Pap Smear: A Controlled Community Trial in Malaysia. <i>Asian Pacific Journal of Cancer Prevention</i> , 21(3), 853-859.
Fatanah binti Mohamad Suhaimi	Differences in dry-bulb temperature do not influence moderate-duration exercise performance in warm environments when vapor pressure is equivalent
Eshaifol Azam Omar Nik Nur Syazni Nik Mohamed Kamal Wan Adnan Wan Omar	Zainuddin, H. A. H., Omar, E. A., Nik Mohamed Kamal, N. N. S., & Omar, W. A. W. (2020). The Role of Nannochloropsis sp. Methanolic Extract in Reducing Hydrogen Peroxide-induced DNA Damage in L929 Cell Line. <i>Pertanika Journal of Tropical Agricultural Science</i> , 43(1).
Abdul Rahim bin Hussein Badrul Hisham bin Yahaya	Transcriptomic Profiles of MV4-11 and Kasumi 1 Acute Myeloid Leukemia Cell Lines Modulated by Epigenetic Modifiers Trichostatin A and 5-Azacytidine.
Wan Adnan Wan Omar	Mohd Zain, S. D., & Wan Omar, W. (2020). The effect of <i>Phyllanthus debilis</i> methanolic extract on DNA methylation of TAC1 gene in colorectal cancer cell line. <i>Pharmacognosy Magazine</i> , 16(67), 57. https://doi.org/10.4103/pm.pm.226.19
Norehan Mokhtar	Rao, G. K. L., Iskandar, Y. H. P., & Mokhtar, N. (2020). Uncovering the Correlations between Orthodontic Education and Technology-Enabled Learning: A Constructive Experience and Perspective. <i>International Medical Journal</i> , 27(2), 224-228.
Bakiah Shaharuddin Hasmah Hussin	Propolis Composition and Applications in Medicine and Health
Ooi Cheong Hwa Eshaifol Azam bin Omar Ng Siew Kit	Ooi, C. H., Ng, S. K., & Omar, E. A. (2020). Acute ingestion of hydrogen-rich water does not improve incremental treadmill running performance in endurance-trained athletes. <i>Applied Physiology, Nutrition, and Metabolism</i> , 45(5), 513-519.
Badrul Hisham bin Yahaya	MMS, M. S., Kamalaldin, N. A., Yahaya, B. H., & ZA, A. H. (2020). Osteoblasts migration, attachment and human bone marrow-mesenchymal stem cells osteogenic differentiation towards surface engineered and growth factors conjugated poly (lactic acid) microspheres. <i>Journal of Materials science. Materials in Medicine</i> , 31(5), 45-45.
Siti Razila binti Abdul Razak	Dewi, R., Hamid, Z. A., Rajab, N. F., Shuib, S., & Razak, S. A. (2019). Genetic, epigenetic, and lineage-directed mechanisms in benzene-induced malignancies and hematotoxicity targeting hematopoietic stem cells niche. <i>Human & Experimental Toxicology</i> , 0960327119895570.
Nur Nadhirah binti Mohamad Zain Noorfatimah Yahaya	Vortex-assisted supramolecular-based dispersive liquid phase microextraction for spectrophotometric determination of rhodamine b in chili powder

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Citartan a/ Marimuthu Tang Thean Hock	Thevendran, R., Sarah, S., Tang, T. H., & Citartan, M. (2020). Strategies to bioengineer aptamer-driven nanovehicles as exceptional molecular tools for targeted therapeutics: A review. In <i>Journal of Controlled Release</i> (Vol. 323, pp. 530–548). Elsevier B.V. https://doi.org/10.1016/j.jconrel.2020.04.051
Noor Diyana binti Osman Ibrahim Lutfi bin Shuaib Muhamad Zabidi bin Ahmad	Razali, M. A. S. M., Ahmad, M. Z., Shuaib, I. L., & Osman, N. D. (2020). Optimization of Radiation Dose in CT Imaging: Establishing the Institutional Diagnostic Reference Levels and Patient Dose Auditing. <i>Radiation Protection Dosimetry</i> , 188(2), 213–221. https://doi.org/10.1093/rpd/ncz278
Teoh Soo Huat	Pelvic Actinomycosis: A report of two cases with different presentations
Noorfatihah Yahaya	Yan, B., Huang, Z. A., Yahaya, N., & Chen, D. D. Y. (2020). Enantioselective analysis in complex matrices using capillary electrophoresis-mass spectrometry: A case study of the botanical drug Corydalis Rhizoma. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 1152. https://doi.org/10.1016/j.jchromb.2020.122216
Noor Khairiah binti A. Karim	Ramli, R., Idris, M. Y. I., Hasikin, K., Karim, N. K. A., Wahab, A. W. A., Ahmady, I., Ahmady, F., & Arof, H. (2020). Local descriptor for retinal fundus image registration. <i>IET Computer Vision</i> , 14(4), 144–153. https://doi.org/10.1049/iet-cvi.2019.0623
Emmanuel Jairaj Moses Rabiatiul Basria binti S.M.N.Mydin	Yik, M. Y., Mydin, R. B. S. M. N., Moses, E. J., Zaini, S. H. M., Azhari, A. R., & Yusoff, N. M. (2020). A case study of distinctive phenotypes arising from emanul syndrome in two karyotypically identical patients. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 78–80.
Siti Nurfatimah Mohd Shahpudin Sharlina binti Mohamad Doblin anak Sandai	Shahpudin, S. N. M., Sandai, D. A., & Mohamad, S. (2020). Regulation of plasmodium falciparum cell cycle involving cyclins and cyclin dependent kinases. In <i>Malaysian Journal of Medicine and Health Sciences</i> (Vol. 16, pp. 60–67). UPM Press.
Anis Farhan binti Kamaruddin Khoiruzariah binti Ismail Noor Ayuni Ahmad Shafai	Ismail, K., Kamaruddin, A. F., & Shafai, N. A. A. (2020). Lasers for prevention of white spot lesion: A scoping review. In <i>Malaysian Journal of Medicine and Health Sciences</i> (Vol. 16, pp. 68–74). UPM Press.
Nurulisa binti Zulkifle Siti Razila binti Abdul Razak	Abdollah, N. A., Zulkifle, N., & Razak, S. R. A. (2020). Computational prediction of miR130a target genes in cancer. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 51–59.
Khadijah binti Abdul Hamid	Hamid, K. A., & Md Shah, M. N. (2020). "Sub-superscan" in Bone Scan - An important feature of extensive bone metastases. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 75–77.
Nur Arzuar bin Abdul Rahim Hafizuddin bin Mohamed Fauzi Ernest Manganting	Pei, T. P., Fauzi, H. M., Manganting, E., Bahar, R., & Rahim, N. A. A. (2020). Validity and reliability of knowledge and perception of blood safety issues questionnaire among blood donors. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 9–14.
Khadijah binti Abdul Hamid Ibrahim Lutfi bin Shuaib	Hamid, K. A., Sarji, S. A., Md Shah, M. N., & Shuaib, I. L. (2020). SPECT-CT in differentiating metastatic and degenerative lesions of the spine. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 31–37.
Anis Farhan binti Kamaruddin Khoiruzariah binti Ismail	Alyassiri, H. A. A., Kamaruddin, A. F., Ismail, K., Shafai, N. A. A., Rahman, N. A., & Ahmad, W. M. A. (2020). Preliminary result of randomised controlled trial of three different coated archwires Part 1: Tooth alignment and coating loss. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 1–8.
Salbiah binti Isa Rohayu binti Hami	Isa, S., Hami, R., Hashim, H., Mohd Nizam, S., Harani, M. S., Sairi, S., & Salleh, M. J. M. (2020). Improvement of urgent tests laboratory turnaround time through laboratory lean management. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 15–21.
Jahangir bin Kamaldin	Jumaan, S., Kamaldin, J., Jajuli, R., & Hazmi, I. R. (2020). Introducing a technique in sustaining adult worker bees of heterotrigona itama (Cockerell, 1918) in laboratory to facilitate future health research on kelulut honey. In <i>Malaysian Journal of Medicine and Health Sciences</i> (Vol. 16, pp. 22–30). UPM Press.
Mohd Zahri bin Abdul Aziz	Azahari, A. N., Yusob, N. D. M., Saidun, H. A., Ali, N. K. Y., Abdullah, R., Hashim, R., Tajuddin, A. A., & Abdul Aziz, M. Z. (2020). Dosimetric study of Rhizophora spp. Particle board using gafchromic XHQ2 film. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 46–50.
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Ooi Jer Ping Jahangir bin Kamaldin	Abdelrasoul, M., Kamaldin, J. Bin, Ooi, J. P., El-Fattah, A. A., Kotry, G., Ramadan, O., & Kandil, S. (2020). An eight-week in vivo study on the clinical signs of systemic toxicity and bone regenerative performance of composites containing beta tricalcium phosphate, hydrogel and melatonin in adult New Zealand Rabbit (oryctolagus cuniculus). <i>Malaysian Journal of Medicine and Health Sciences</i> , 16, 38–45.
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Mohammad Farris Iman Leong bin Abdullah	Abdullah, M. F. I. L. Bin, Sidi, H., Ravindran, A., Gosse, P. J., Kaunismaa, E. S., Mainland, R. L., Mustafa, N., Hatta, N. H., Arnawati, P., Zulkifli, A. Y., & Woon, L. S. C. (2020). How Much Do We Know about the Biopsychosocial Predictors of Glycaemic Control? Age and Clinical Factors Predict Glycaemic Control, but Psychological Factors Do Not. <i>Journal of Diabetes Research</i> , 2020. https://doi.org/10.1155/2020/2654208

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Fatanah binti Mohamad Suhaimi	Razak, A. A., Abu-Samah, A., Razak, N. N. A., Jamaludin, U., Suhaimi, F., Ralib, A., Nor, M. B. M., Pretty, C., Knopp, J. L., & Chase, J. G. (2020). Assessment of glycemic control protocol (STAR) through compliance analysis amongst Malaysian ICU patients. <i>Medical Devices: Evidence and Research</i> , 13, 139–149. https://doi.org/10.2147/MDER.S231856	
Norehan binti Mokhtar	Kaggal Lakshmana Rao, G., P Iskandar, Y. H., & Mokhtar, N. (2020). Developing consensus in identifying challenges of undergraduate orthodontic education in Malaysian public universities using e-Delphi. <i>European Journal of Dental Education</i> , 24(3), 590–600. https://doi.org/10.1111/eje.12540	
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Md Azman bin PKM Seeni Mohamed	Bakhar, N. A., Othman, C. N., Jusoh, N. A. M., Othman, M. I., & Mohamed, A. S. (2020). Chemical composition and antiproliferative activity of Clinacanthus nutans extract on human cervical cancer cell lines (HeLa). <i>ASM Science Journal</i> , 13(SpecialIssue6), 7–13.	
Mohd Zahri bin Abdul Aziz	Samson, D. O., Shukri, A., Jafri, M. Z. M., Hashim, R., Aziz, M. Z. A., & Yusof, M. F. M. (2020). Fabrication and dosimetric characterization of novel bio-based tissue substitute phantom materials. <i>Journal of Critical Reviews</i> , 7(16), 862–872.	
Doblin anak Sandai	Anticancer effect of Psidium guajava (Guava) leaf extracts against colorectal cancer through inhibition of angiogenesis	
Nozlina Abdul Samad Vuanghao Jairaj Moses	Lim Emmanuel	The Cytotoxic Effects of Moringa oleifera Leaf Extract and Silver Nanoparticles on Human Kasumi-1 Cells
Lim Vuanghao Nor Hazwani Ahmad Doblin Sandai	Wan Nur	Mat Yusuf, S. N. A., Che Mood, C. N. A., Ahmad, N. H., Sandai, D., Lee, C. K., & Lim, V. (2020). Optimization of biogenic synthesis of silver nanoparticles from flavonoid-rich Clinacanthus nutans leaf and stem aqueous extracts. <i>Royal Society Open Science</i> , 7(7), 200065.
Wan Adnan Wan Omar	Wan Nur	Improvement of Trigeminal Neuralgia after Massage Therapy and Dry Needling
Noorfatihah Yahaya Adnan Wan Omar Nadhirah binti Mohamad Zain	Wan Nur	SOEUNG, R., SEMAIL, N. F., OMAR, W. A. W., MOHAMAD, N. N., ZAIN, M. M., WONG, Y. F., ... & RAOOV, M. (2020). Simple and Sensitive Electrokinetic Precharging in Capillary Electrophoresis for Online Preconcentration and Separation of Secbumeton in Water Samples. <i>Sains Malaysiana</i> , 49(5), 979–988.
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Mastura binti Mohd Soplan Sharifah Azdiana binti Tuan Din Teoh Soo Huat		Ms, M., Td, S. A., & Sh, T. (2020). Malaysia Experience in Tackling Covid19 : A Narrative Review. <i>Pakistan Journal of Medical & Health Science</i> , 14(3), 1354–1356.
Saadiah binti Shahabudin Noorsuzana binti Mohd Shariff Husniyati binti Roslan Hazwani binti Ahmad Yusof@Hanafi Rohayu binti Hami		Shahabudin, S. A., Shariff, N. M., Roslan, H., Yusof, H. A., & Hami, R. (2020). Oral Cancer Awareness and Knowledge among Marginalised Group in Sungai Petani, Kedah, Malaysia. <i>Archives of Orofacial Science</i> , 15(1).
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Hazwani binti Ahmad Yusof@Hanafi		Chew, S. K., Maizura, M., Hazwani, A. Y., & Tan, T. C. (2020). The effect of formulated natural sport drink containing sugarcane juice, calamansi juice, and fructooligosaccharide (FOS) on athletic gastrointestinal tolerance. <i>Sport Sciences for Health</i> , 16(3), 523–530. https://doi.org/10.1007/s11332-020-00642-6
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Anis Farhan binti Kamaruddin Basria binti S.M.N.Mydin	Rabiatiul	Abdulkader, Y. C., Kamaruddin, A. F., & Mydin, R. B. S. M. N. (2020). Effects of salivary pH on coating durability of two different aesthetic archwire coatings under a simulated intraoral environment. <i>Saudi Dental Journal</i> , 32(6), 306–313. https://doi.org/10.1016/j.sdentj.2019.09.010

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Nik Nur Syazni binti Nik Mohamed Kamal	Salum, K. A., Alidmat, M. M., Khairuldean, M., Kamal, N. N. S. N. M., & Muhammad, M. (2020). Design, synthesis, characterization, and cytotoxicity activity evaluation of mono-chalcones and new pyrazolines derivatives. <i>Journal of Applied Pharmaceutical Science</i> , 10(8), 20–36. https://doi.org/10.7324/JAPS.2020.10803
Muhamad Yusri bin Musa Rabiatul Basria binti S.M.N.Mydin	Okeka, S. I., Mydin, R. B. S. M. N., Ganeson, S., A/L Gopalan, S., & Musa, M. Y. (2020). The association between tea consumption and nasopharyngeal carcinoma: A systematic review and meta-analysis. <i>In Asian Pacific Journal of Cancer Prevention (Vol. 21, Issue 8, pp. 2183–2187)</i> . Asian Pacific Organization for Cancer Prevention. https://doi.org/10.31557/APJCP.2020.21.8.2183
Teoh Soo Huat	Ranimmed, R. A., Zakariammed, R., Teohimmed, S. H., Ismailimmed, S. B., & Nani Draman, M. M. E. D. (2020). Traditional and Complementary Medicine (T/CM) use and its associated factors among Type 2 Diabetic Mellitus patients in Kelantan, Malaysia. <i>Pakistan Journal of Medical and Health Sciences</i> , 14(2), 1015–1020.
Noorfatimah Yahaya Zainab binti Abdul Ghaffar Mohd Yusmaide bin Aziz Hafizuddin bin Mohamed Fauzi	Yahaya, N., Kamaruzaman, S., Sanagi, M. M., Wan Ibrahim, W. A., Mitome, T., Nishiyama, N., Nur, H., Abdul Ghaffar, Z., Aziz, M. Y., & Mohamed Fauzi, H. (2020). Vinyl-functionalized mesoporous carbon for dispersive micro-solid phase extraction of azole antifungal agents from aqueous matrices. <i>Separation Science and Technology (Philadelphia)</i> , 55(17), 3102–3112. https://doi.org/10.1080/101496395.2019.1675699
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Noorfatimah Yahaya Siti Salmah binti Noordin Nik Nur Syazni binti Nik Mohamed Kamal Nur Nadhirah binti Mohamad Zain	Semali, N. F., Abdul Keyon, A. S., Saad, B., Noordin, S. S., Nik Mohamed Kamal, N. N. S., Mohamad Zain, N. N., Azizi, J., Kamaruzaman, S., & Yahaya, N. (2020). Analytical method development and validation of anticancer agent, 5-fluorouracil, and its metabolites in biological matrices: An updated review. <i>Journal of Liquid Chromatography and Related Technologies</i> , 43(15–16), 562–579. https://doi.org/10.1080/10826076.2020.1781654
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Norehan binti Mokhtar Gokula Kumar a/l Appalanaido	Hussain, A. M., Rao, G. K. L., Khamis, M. F., Mokhtar, N. (2020). Comparison of dento-alveolar and skeletal changes between immediate and delayed placement of fixed appliances after twin block therapy. <i>Malaysian Journal of Medicine and Health Sciences</i> , 16(3), 231–237.
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