



newsletter

Institute for Medical Research

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Covid-19 Vaccine Research Updates to YB Deputy Minister of Health > PG 05



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Visit by IMR director and officers from Biomedical Museum, IMR to the National Heritage Department

> PG 04



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Collaboration between National Museum of Malaysia and the IMR Biomedical Museum

> PG 07

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Visit by the Delegates from Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP)

> PG 06



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Sharing of research experiences at IMR by Dr. Lim Boo Liat (former Head of Medical Ecology, IMR)

> PG 09



IMR DIRECTOR'S MESSAGE

Greetings!

In this third issue of the IMR Newsletter for 2020, I am glad to report that the IMR has accomplished many achievements during this challenging times with the COVID-19 pandemic. While adhering to the required SOPs, we were able to conduct several research activities, workshops and courses that contributed to the Ministry of Health's response to the COVID-19 pandemic. The IMR has provided consultation on COVID-19 forecasting for Malaysia, technical advice on COVID-19 diagnostics, conduct research on registered vaccines,

We are also proud to announce that collaboration with National Heritage Department has been initiated by the Biomedical Museum of IMR, marked by the upcoming signing of the Memorandum of Understanding (MoU) between the two agencies. In addition, we are glad to receive a visit of the delegates from Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP), on 6th August 2020, which was aimed to create the potential of collaboration in the Research and Development (R&D) in the field of medical and health sciences. Furthermore, National Museum of Malaysia (JMM) will be organizing Worldwide Pandemic Exhibition "Pameran Pandemi Sedunia" in October 2020, in congruent with the COVID-19 pandemic. We are glad to highlight that JMM has launched collaboration with the Biomedical Museum of IMR for the provision of technical support to ensure the exhibition a success.

Apart from that, The Biomedical Museum of IMR was proud to have a visit from Dr. Lim Boo Liat who was our former head of Medical Ecology Division from 1969-1973, to share his valuable insights about Medical Ecology and Zoology researches during IMR early years. Furthermore, a number of workshop and training have been successfully conducted which include the workshop on "Introduction to Bioinformatics", "Forecasting of infectious disease using statistical modelling with R", "Usage and Maintenance of Tissue Processor (Leica ASP300S)", and also "User Training of X-ray Micro-CT Scanner (SkyScan 1174, Bruker)" at BioRCF.

Despite of the Covid-19 pandemic, this shows that IMR has been able to carry out various kind of courses and classes as daily normal routine of its research function with the norm in the back of our mind. Together by adhering to the new guidelines and SOPs together we will beat the Covid-19 outbreak in our country. Once again I thank everyone for the brilliant work and effort.

Dr. Hj Tahir Aris

Director
Institute for Medical Research (IMR)



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EDITOR MESSAGE

Malaysia has entered into the Recovery Movement Control Order (RMCO) phase from 10th June 2020 with almost all economic sectors have been allowed to resume, subject to standard operating procedures (SOP).

While the world is still experiencing the pandemic, it is highly motivating to see numerous positive outcomes from our institute. Various collaborative activities, training and workshops have been conducted at IMR while adhering strictly to the SOPs.

In this issue, we highlighted numerous activities accomplished in the third quarter of 2020. Two main events are the presentation on the COVID-19 Vaccine research project to the YB Deputy Minister of Health, and also the collaboration between IMR Biomedical Museum and the National Heritage Department in order to expand the scope of the Museum services.

Once again, I convey my highest gratitude to everyone in IMR for their contribution in this Newsletter. Let us combat the COVID-19 pandemic with commitment, optimism, versatility and determination. We shall continue to translate innovative research into healthcare management and policy and shall always persevere.

Stay safe , stay healthy , stay well.

Dr. Heng Pei Pei

Biomedical Museum Unit,
Special Resource Centre (SRC)



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Visit to the National Heritage Department by IMR

10th August 2020

The IMR Director, Dr Tahir Aris, and officers from the Biomedical Museum visited the National Heritage Department on 10th of August 2020. This meeting was chaired by Tuan Haji Mesran bin Mohd Yusop, the Director General of the National Heritage Department and its Director of Heritage Registry (Pengarah Daftar Warisan) and Director of Conservation (Pengarah Konservasi). This visit was initiated by the IMR to establish a formal mechanism of cooperation between National Heritage Department and the IMR Biomedical Museum.

During the visit, representative from the IMR Biomedical Museum presented an introduction on the early history of the establishment of IMR Biomedical Museum, its exhibits and repository, outreach program and existing strategic plan. Both parties agreed to strengthen cooperation and collaboration between the two agencies through a Memorandum of Understanding (MoU).



Group photo taken during the visit by the IMR to the Department of National Heritage

The IMR Director receiving a souvenir from the Director General of the Department of National Heritage



Representatives of the IMR and the Department of National Heritage discussing potential future collaborations



IMR updates on COVID-19 Vaccine research to the Deputy Minister of Health 1

28th July 2020

As the world faces the Covid-19 pandemic, there is an urgent need for an effective vaccine to address the disease. Efforts are being made globally to conduct research in developing the Covid-19 vaccine. Malaysia is also actively involved in the research to develop the vaccine. Following this, the research team from IMR presented a COVID-19 vaccine research proposal to the Deputy Minister of Health 1, YB Datuk Dr Noor Azmi Ghazali on 28th July 2020, at the Ministry of Health in Jalan Cenderasari, Kuala Lumpur. The research team was headed by the IMR Director, accompanied by the IMR researchers and Centre Heads. During this meeting, IMR presented plans for research on the COVID-19 vaccine, where IMR in collaboration with Universiti Putra Malaysia (UPM) and Malaysian Institute of Pharmaceuticals and Nutraceuticals (IPharm) are currently conducting a research on inactivated COVID-19 vaccine.



YB Deputy Minister of Health 1 and the IMR research team



Research activities on vaccine

A visit by delegates from Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP)

06th August 2020

IMR Setia Alam was privileged to receive a visit by delegates from Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP), which was led by Prof Madya Dr Syed Rahim bin Syed Hamid, the Dean of Faculty of Medicine of UniKL RCMP on 6th August 2020. The delegation was welcomed by Dr Hj Tahir bin Aris, IMR Director. This visit aim to create potential collaborations in research and development in the field of medical and health sciences. UniKL RCMP delegates also presented and briefed on the various postgraduate programs offered by the University, including Master of Public Health, Doctor of Public Health, Master of Medical Sciences, PhD in Medical Sciences and Master of Pharmacy. The visit culminated in a visit to the Biomedical Research Core Facility (BioRCF) IMR.



Group photo of IMR representatives and the visiting delegates



Delegates from UniKL RCMP being briefed on the facilities and laboratory equipment available in the BioRCF IMR



The IMR Director receiving a souvenir from the Dean of the Faculty of Medicine, UniKL RCMP

Worldwide Pandemic Exhibition

24th July 2020

The National Museum of Malaysia will be organising a Worldwide Pandemic Exhibition (“Pameran Pandemik Sedunia”) in late 2020, to highlight the COVID-19 pandemic and to educate the general public on the various pandemics that have been recorded throughout history. The National Museum is collaborating with the IMR Biomedical Museum to obtain historical accounts of past pandemics and technical expertise for the exhibition. A preliminary meeting was held in June 2020 to outline the contents and topics of the exhibition. Subsequently, on 24th July 2020, the National Museum team consisting of curators and museum personnel visited the IMR Biomedical Museum with the aim of identifying materials and items in the IMR repository which are to be displayed during the exhibition.



Representatives of the National Museum Malaysia and IMR discussing the contents of exhibition



The National Museum team visiting the "Balai Sejarah" in Biomedical Museum





The team viewing the Biomedical equipment archives



Group photo of the visiting National Museum team and the Biomedical Museum staff



Sharing of past experiences by **Dr. Lim Boo Liat**, former Head of IMR Medical Ecology Division

28th May 2020

Institute for Medical Research was honoured to receive a visit from the late Dr. Lim Boo Liat on 28th May 2020. Dr. Lim shared valuable insights on Medical Ecology and Zoology research during IMR in the 1940s-1970s. He began his service in IMR as a laboratory assistant in 1947. He was subsequently promoted to the position of Zoologist and headed the Medical Ecology Division from 1969-1973. Dr. Lim was renowned in the field of zoology in Malaysia, his pioneering work focused on the biological diversity of Malaysia and he was a strong advocate for the conservation of the country's natural heritage. He was the first Southeast Asian to be awarded honorary membership by the American Society of Mammalogists. He was also a recipient of the Merdeka Award in 2013. Dr. Lim also served as Honorary Advisor on Zoology to the Department of Wildlife and National Parks of Peninsular Malaysia.



Dr. Lim providing valuable inputs for the "Bibliometric Analysis of Research Output on Snakes by Institute for Medical Research, Malaysia, 1959-2019" manuscript



Conservationist and zoologist Dr. Lim Boo Liat sharing his invaluable experiences to the IMR team

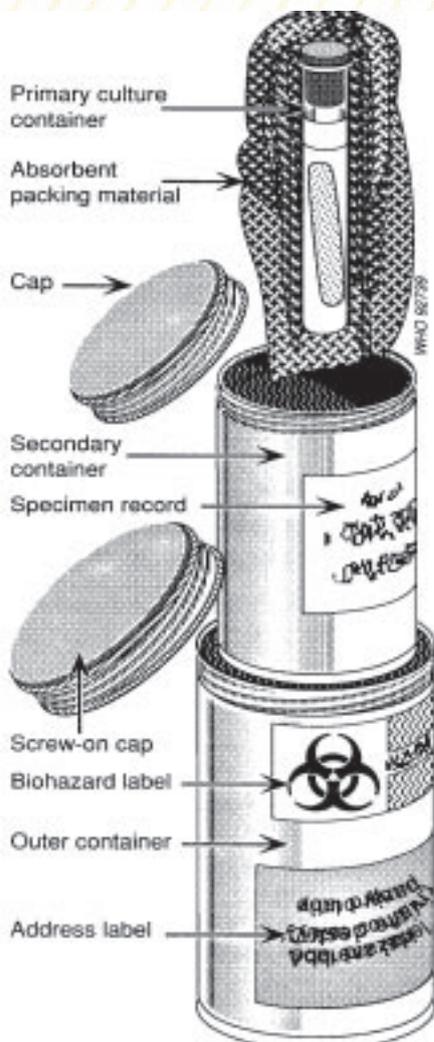


Keeping Our Laboratory Staff Safe

As of August 2020, the Institute for Medical Research has conducted more than 147,000 COVID-19 real time RT-PCR tests received from various hospitals, private laboratories and Health District Offices throughout Malaysia. With a capacity of 5,000 tests per day, IMR is the National Reference Laboratory for COVID-19 testing in the country. With the high number of samples being processed daily, the safety of all staff handling the specimens are a top priority.

All personnel involved in the current COVID-19 pandemic are enrolled in a medical surveillance programme in place since the outbreak began in February. Blood samples are collected from each staff prior to recruitment in the COVID-19 laboratory and after 3 months. The specimens are tested for the presence of SARS-CoV-2 antibodies. All staff are also tested for COVID-19 if they develop any symptoms such as fever, cough, runny nose and shortness of breath

TRIPLE LAYER PACKAGING



Only specimens with triple layer packaging are accepted



Warning signs in place in the laboratory



Standard Operating Procedure applied at the specimen reception counter



Sample processing conducted in IMR laboratory

Workshop on Statistical Modelling of Infectious Disease

A series of workshops were conducted in IMR Jalan Pahang on Modelling of Infectious Disease. The first workshop entitled "Forecasting of Infectious Disease Using Statistical Modelling with R" was conducted from 3rd to 6th August 2020, while the second workshop was from the 23rd to 24th September which was on "Forecasting Infectious Disease Using Deterministic Compartmental Model". Both workshops were conducted by the Biomedical Epidemiology Unit, Special Resource Centre. The lectures were delivered by Associate Professor Dr. Sarat Chandra Dass, from the School of Mathematical and Computer Sciences, Heriot Watt University Malaysia and also Mr. William Law Kian Boon from the Institute for Clinical Research (ICR), NIH.

These workshops were attended by officers from various NIH institutes. The objectives of the training were to introduce and develop the participants knowledge and skills in data management and advanced data analytics on infectious disease modelling using R. During the workshops, hands-on sessions were conducted with active engagement from participants.

Both workshops were successful in imparting new knowledge and skills.



Hands-on session during the workshops



Dr. Sarat Chandra Dass delivering an introductory lecture on R



Introduction of essential concepts and modelling techniques

User Training on the Usage and Maintenance of Leica ASP300S Tissue Processor

13th July 2020

A training session on the usage of Leica ASP300S Tissue Processor at the Histology Laboratory 1, Biomedical Research Core Facility (BioRCF), IMR Setia Alam was conducted on 13th July 2020. This training was conducted by the Toxicology & Pharmacology Unit, HMRC in collaboration with Histocenter (M) Sdn. Bhd. The aim of this training is to educate IMR laboratory staff on the principles of automated tissue processing, transfer of skills and knowledge to operate the automated tissue processor. A total of 15 IMR staff participated in this course. A lecture and hands-on session was conducted as participants learned how to operate the machine. All participants gained knowledge and skills to operate this equipment.



The Leica ASP300S tissue processor which is designed for routine clinical and research histopathology for paraffin infiltration of tissue



Demonstration session on operating the equipment

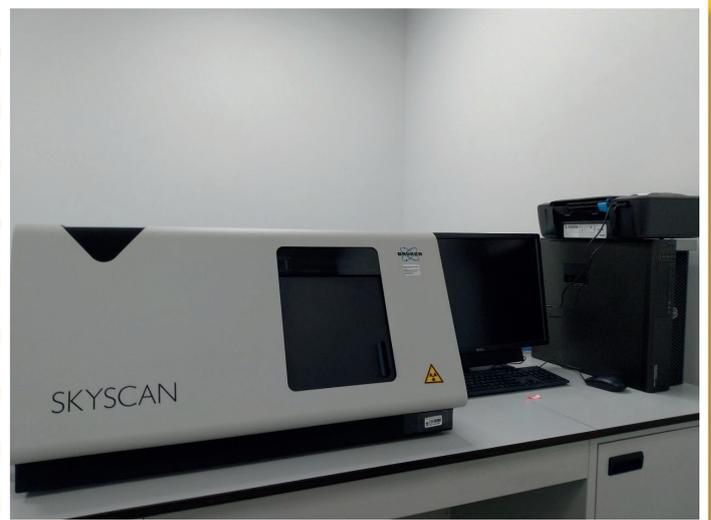


Representative from Histocenter (M) Sdn. Bhd. briefing IMR staff on the automated tissue processor

User Training on Bruker SkyScan X-ray Micro-CT Scanner 1174

07th August 2020

A user training session on the Bruker SkyScan X-ray Micro-CT Scanner 1174 was conducted at the Histology Microscopy Laboratory, IMR Setia Alam on 7th August 2020. Seven IMR staff were involved in the training session. This training was organised by the Toxicology & Pharmacology Unit, HMRC and conducted by personnel from Interscience (M) Sdn. Bhd, with the aim to introduce and train users in the operation of the Micro-CT Scanner. A lecture and hands-on session was conducted as participants learned how to operate the machine. Participants were able to operate this equipment after the training session.



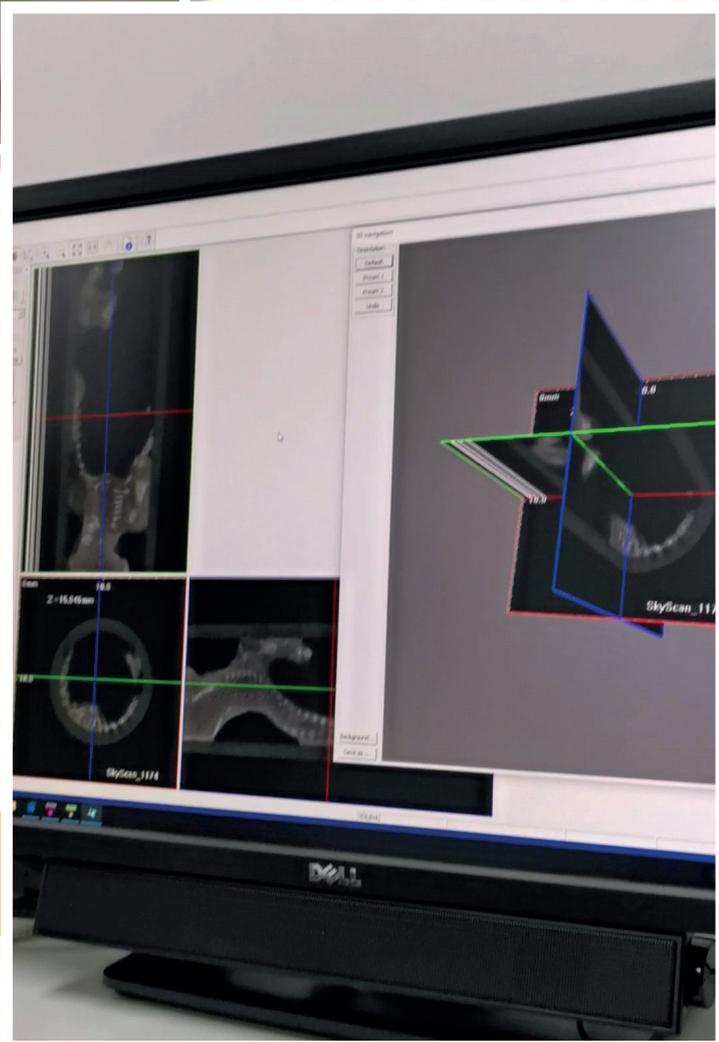
The SkyScan 1174, a compact X-ray micro-computed tomography machine designed for 2D/3D X-ray imaging



Representative from Interscience Sdn. Bhd briefing on the usage of equipment



Participants undergoing hands-on session on micro-CT scanner



2D/3D X-ray imaging of the sample generated by the equipment

Dialogue Session with IMR by Dr Hishamshah Mohd Ibrahim, Deputy Director General of Health (Research and Technical Support), MOH

11th September 2020

On 11th September 2020, a dialogue session was held with YBrs. Dr Hishamshah Mohd Ibrahim, Deputy Director General of Health (Research and Technical Support), MOH together with the Manager of the National Institutes of Health (NIH), IMR Director and Senior Officers of IMR at NIH Setia Alam. IMR appreciated the advice and insights shared by the Deputy DG (P&ST). This was followed by a fruitful discussion where several suggestions were shared to bring IMR to greater heights.



IMR Director and NIH Manager being briefed by TKPK



Discussions between deputy DG (P&ST) and IMR Director and Senior Officers