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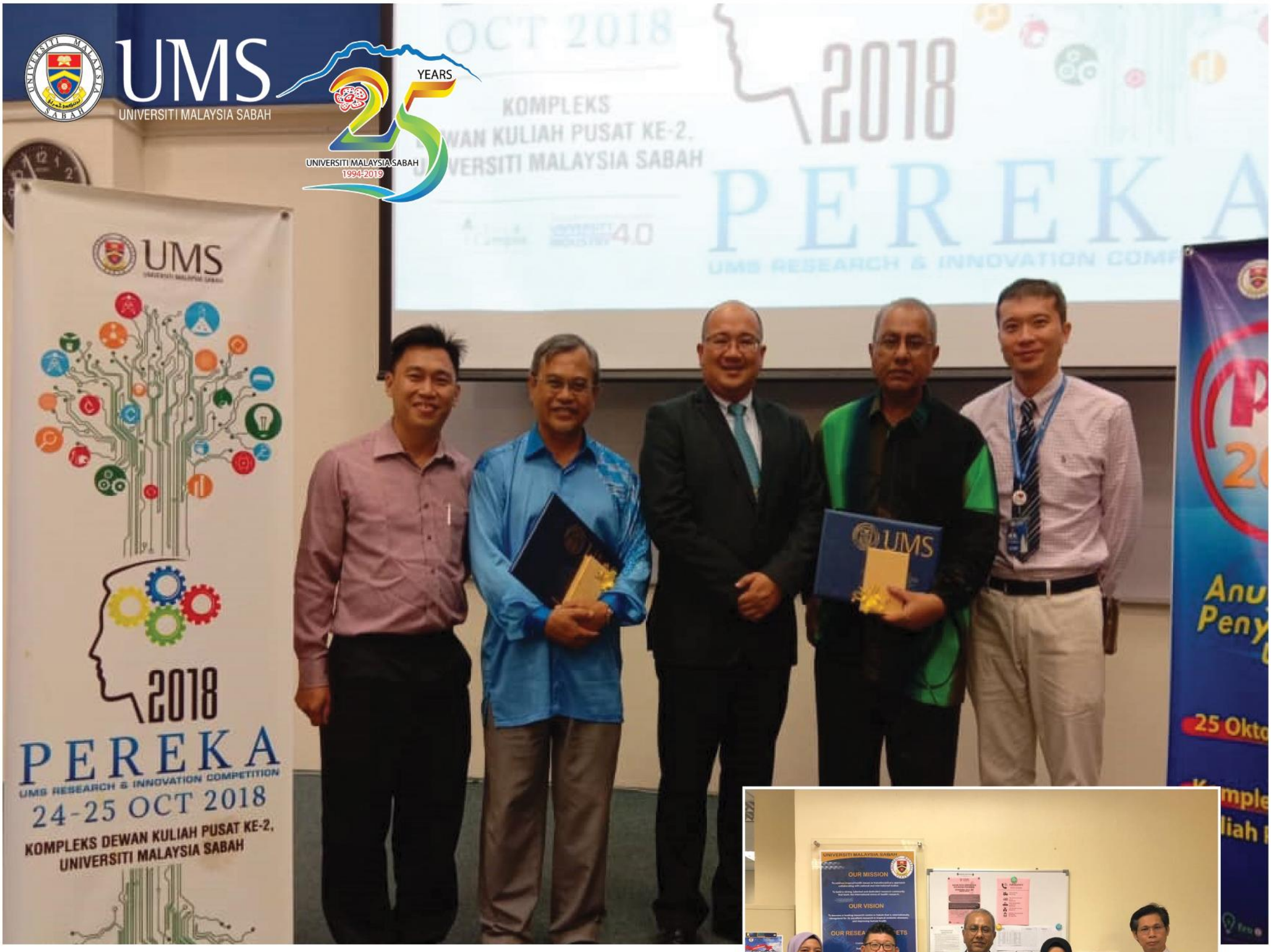
UNIVERSITI MALAYSIA SABAH

25 YEARS
UNIVERSITI MALAYSIA SABAH
1994-2019



BMHRC BULLETIN

2018

Eco Campus
Transforming Ideas into Reality

Transformation towards
UNIVERSITY INDUSTRY 4.0

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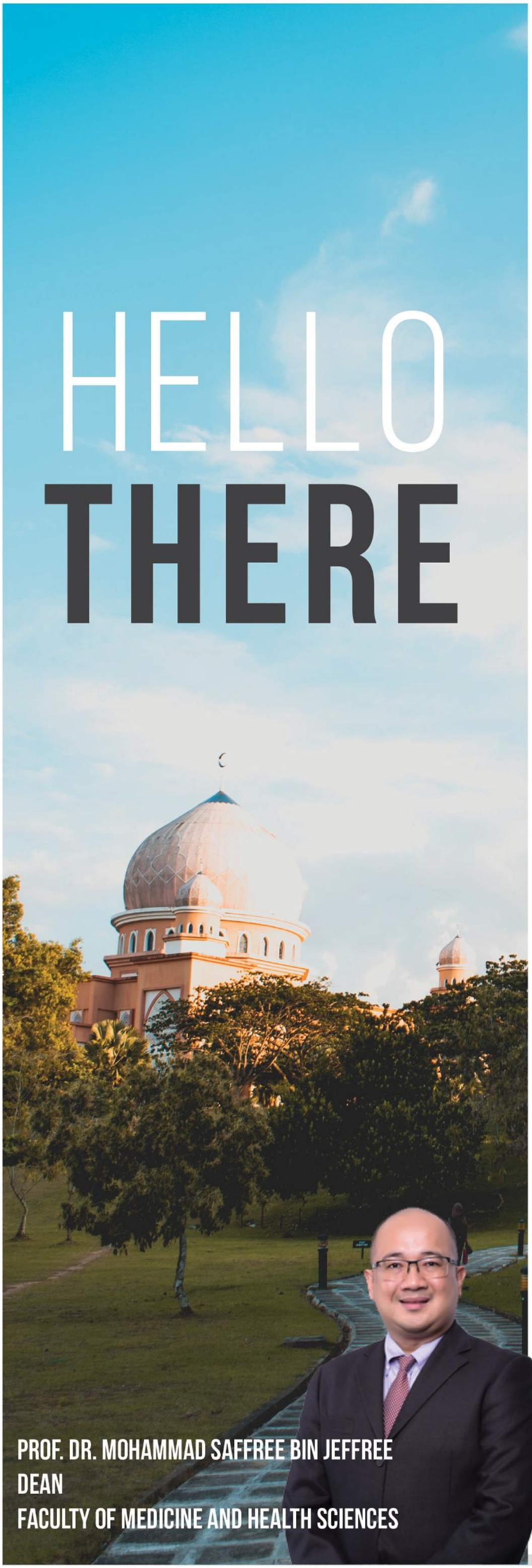


PROF. DR. MOHAMMAD SAFFREE BIN JEFFREE
DEAN
FACULTY OF MEDICINE AND HEALTH SCIENCES

EDITOR'S NOTE

The editorial board is delighted to introduce the first of BMHRC bulletin. The objectives of this bulletin are to maintain regular contactwith its members regarding its activities and to provide a mean for sharing news and information regarding developments related to the centre's niche areas. We aspired this bulletin to be vibrant,engaging and accessible. we would like to express our considerable appreciation to Prof. Dr. Mohammad Saffree Jeffree, dean of Faculty of Medicine and Health Sciences, for his support

MESSAGE FROM DEAN

On behalf of the Faculty of Medicine and Health Sciences (FMHS), Universiti Malaysia Sabah, I would like to congratulate Borneo Medical and Health Research Centre (BMHRC) for the success publishing this bulletin. I am personally grateful that BMHRC take a great care and effort in playing a vital role of tropical health issues and build a strong, talented and dedicated research community with international and local universities in order to achieve our research goals especially in communicable diaseases ,outbreak investigations and ethnomedicine.

We hope that students, staffs and researchers will get fruitful and value while reading this bulletin. we hope to get your sincere interest and support for the development of the BMHRC and at the same time for FMHS as well.

TABLE OF CONTENTS

SEMINAR SERIES I

HEALTH AND ENVIRONMENT:

THE LAST CENTURY IN JAPAN AND GLOBE

IN this seminar, experience in Japan in the last 4-5 decades regarding environmental issues was reviewed, focusing on the change that they have experienced during the period. Briefly, 1960s to early 1970s were the age of environmental pollution. Then 1990s - 2000s were characterized by emerging issues like ECDs, global warming and social determinants of health, which are still the topics of today.

THE current situations as well as the remaining problems together with the current global environmental health issues were discussed. Some of the ongoing projects in the National Institute for Environmental Studies, especially those related with health issues were introduced.

SPEAKER:

Prof. Dr. Choho Watanabe

OBJECTIVE :

To advance our knowledge regarding the relationship between environment and health

MOBILE phones now available whole over the world, and various information can be drawn from the use of mobile phones. CDR (call detailed record) is recorded by mobile network operator, and that includes the date, time and cell tower location when using a mobile phone.

WE can estimate the dynamics of population movements from CDR data and also specific activity range of people. In this seminar, CDR data analysis and the application for infectious disease were introduced. The development of mosquito sensor monitoring, and methods to catch flying mosquito using Unmanned Aerial Vehicle (UAV) were also introduced in the seminar.

SPEAKER:

Dr. Wataru Ohira

OBJECTIVE :

To advance our knowledge regarding the CDR data analysis for infectious disease spread and learn how UAV can be used in collecting mosquitoes for monitoring vector borne diseases.

SEMINAR SERIES II

CDR (CALL DETAILED RECORD) DATA FOR INFECTIOUS DISEASE GEOSPATIAL TRANSMISSION ANALYSIS

Seminar Series III

SPEAKER :
Tom Hughes

TITLE :
Promoting one health through zoonotic disease surveilance: the PREDICT, DTRA and IDEEALprojects in Malaysia

Emerging and re-emerging zoonotic virus outbreaks occurring in the past two decades have raised major public health and economic concerns globally. These outbreaks can be caused by factors including hunting, wildlife trade and land use change.

The USAID funded PREDICT project in Malaysia has helped to better understand and reduce the risk of zoonotic disease spill over into domestic animals and humans. The Deep Forest component evaluates patterns of biodiversity; corresponding patterns of viral diversity and human behaviour that may infuence contact rates with wildlife in dynamic landscapes.

The DTRA funded “Serological Biosurveillance for Spillover of Henipaviruses and Filoviruses at Agricultural and Hunting Human-Animal Interfaces in Peninsular Malaysia”

Builds on the PREDICT work making Malaysia the 6rst PREDICT country to use this serological panel to screen associated wildlife, livestock and human sera, and will strengthen our understanding of henipavirus and 6lovirus prevalence and circulation using novel diagnostic assays.

The project will investigate highly pathogenic viruses around agricultural operations and indigenous populations in Peninsular Malaysia. Finally the IDEEAL project investigates how human alteration of landscapes and ecosystem degradation contribute to disease emergence.

Together these projects have helped build capacity in Malaysia for zoonotic disease surveillance and provided information to help protect public health and inform wildlife management, and land use change decisions.

Dr. Peter Daszak is President of EcoHealth Alliance, a US-based organization that conducts research and outreach programs on global health, conservation, and international development. Dr. Daszak's research has been instrumental in identifying and predicting the impact of emerging diseases across the globe. His achievements include identifying the bat origin of SARS, and the underlying drivers of both Nipah and Hendra virus emergence. He confirmed the first case of a species extinction due to disease, and identified chytridiomycosis as the cause of amphibian declines around the globe. He is one of the founders of the field of conservation medicine and has been instrumental in the growth of EcoHealth, One Health, and now Planetary Health.

A fundamental part of Dr. Daszak's work on disease ecology is directed by the conviction that disease outbreaks are not just predictable, but preventable. This approach is informed by a perspective on emerging infectious disease research that sees problems of human and animal disease as intimately linked—exacerbated by ecological change. With this in mind, he led the research that produced the first ever global emerging disease 'hotspots' map to determine where in the world viruses with pandemic potential were most likely to emerge, and developed a strategy to identify just how many of those viruses currently exist.

SEMINAR SERIES IV

SPEAKER :

Dr. Peter Daszak

TITLE :

"Ebola, Nipah, Disease X and the new global strategy to fight emerging diseases".

INTERNATIONAL SYMPOSIUM ON PHYSIOLOGICAL ANTHROPOLOGY

ON May 15-18 October 2018, Borneo Medical and Health Research Centre (BMHRC), Faculty of Medicine and Health Sciences (FMHS), Universiti Malaysia Sabah (UMS) together with Journal of Physiological Anthropology, Japan successfully organized the International Symposium on Physiological Anthropology (ISPA2018).

This symposium main aims is to conduct research on humans in modern society from both physiological and a cultural standpoint, in an effort to create a truly healthy and comfortable living environment. This concept of study has never been introduced in Sabah or Malaysia and even in other ASEAN countries.

Since Japan is the pioneer of physiological anthropology, we have taken the opportunity to gather their expertise to introduce the concept of physiological anthropology to us. We envision that UMS will take this opportunity to become a leader of physiological anthropology not only in Malaysia but ASEAN as a whole.

Associate Professor Dr. Helen Benedict Lasimbang, Chief Executive Officer of Hospital Universiti Malaysia Sabah on behalf of Deputy Vice Chancellor of Research and Innovation, Universiti Malaysia Sabah was on hand to open the conference. This conference then proceeds with the foreword and welcoming speech from the Chairman of ISPA2018 from UMS Prof. Dr. Kamruddin Ahmed and Chairperson from Japan Prof. Dr. Harunobu Nakamura.

There are three components of the events including firstly the Pre-Symposium: first fellows' scholarly meeting to build a strong, talented and dedicated research community that leads the international arena of health research with the theme "Are We Prepared for an Unknown Pandemic?; secondly the ISPA2018 aims to introduce new area of science to reseachers in Malaysia and to develop researchers in UMS that take leadership in physiological anthropology in Malaysia;

lastly the Post-Symposium: two days Elisa hands-on workshop to equip participants with one of the most important fundamental biochemical techniques i.e enzyme linked immunosorbent assay (ELISA).

In overall, this symposium attended by 61 participants locally and internationally from Japan and Brunei.

PREPARED BY : MS.JECELYN LEASLIE JOHN

Prepared by : Ms.Azalina Farina

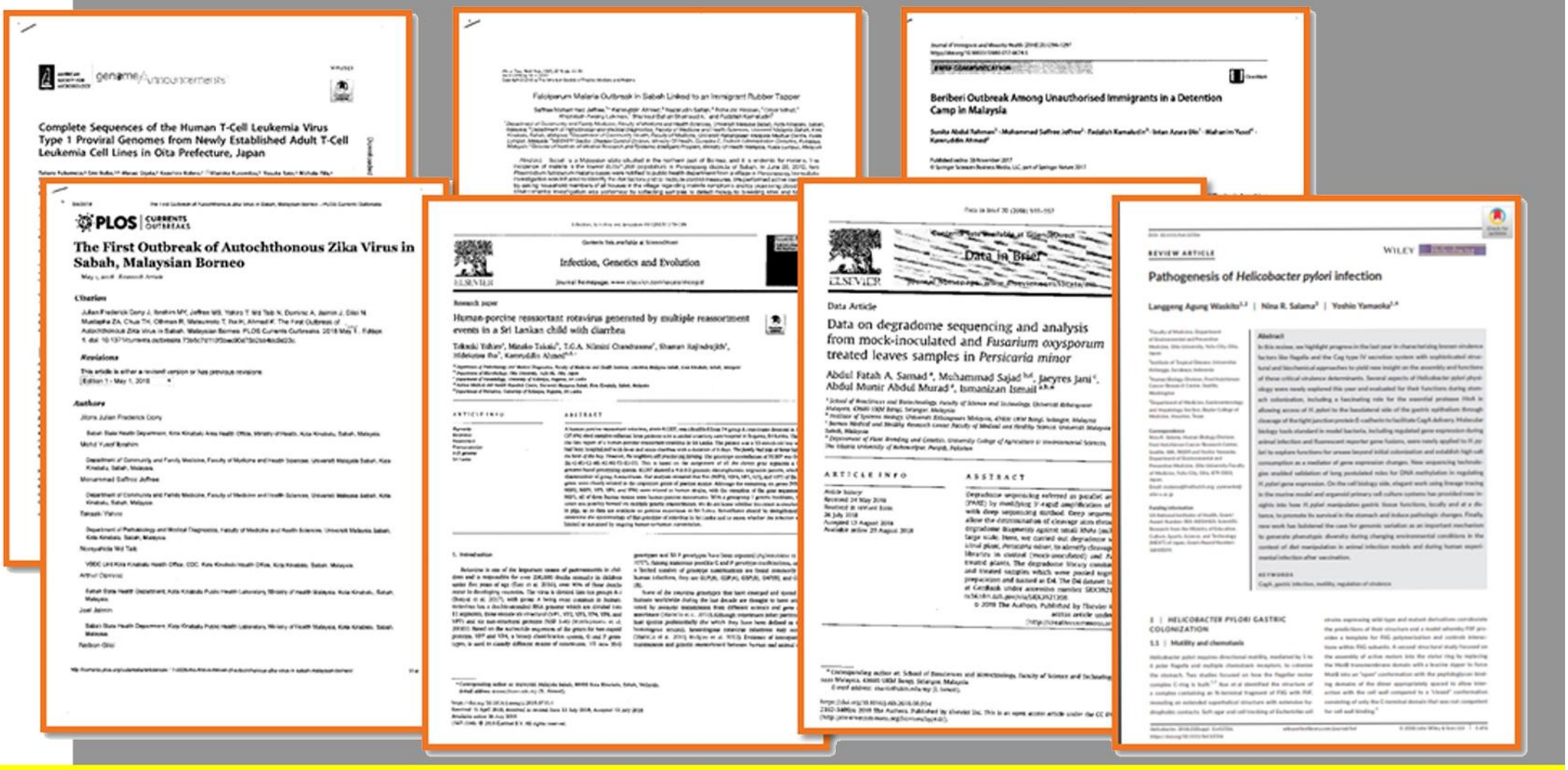
PEREKA 2018

Research and Invention Competiton (PEREKA) 2018 received 168 entries from among academicians of Universiti Malaysia Sabah (UMS). The event was visited by Dr. Maszlee Malik, Minister of Education Malaysia. There were 9 categories contested .The 9 categories comprised of :-

1) Education and Educational Aids
2) Biosciences and Biotechnology
3) Agriculture, Forestry and food
4) Environment, Energy and ecocampus
5) Humanities, arts and psychology
6) computing and mathematics
7) Health and Medical Sciences
8) Business and Economics
9) Engineering and Physical Sciences

Faculty of Medicine and Health Sciences (FMHS) was proudly send a total of 15 applications comprised of 6 research and 9 innovations.

The pereka was held in the main lecture hall 2 complex on 24th october 2018. Out of the 15 entries contested by FMHS. One has won gold medal in research category and one has won gold medal in innovation category . one silver medal has won silver and 4 has won bronze medal.
The gold medal was won by Prof. Dr. Kamruddin Ahmed with title " Genetic Characterization of Sabah Variant Zika Virus " in research category and in innovation category by Prof. Dr. Zainal Arifin Bin Mustapha tittle " Portable Bioinformatics gadget box".



JOURNAL PUBLISHED WITH HIGH IMPACT FACTORS

In year 2018, Borneo Medical and Health Research Centre has published journal with high impact factors. The list of research articles are showed in the table below:

no	Author	Title	Journal
1.	Fukumoto T, Ikebe E, Ogata M, Kohno K, Kuramitsu M, Sato Y, Fife N, Matsumoto T, Yahiro T, Ikeda M, Kusano S, Okayama A, Hori M, Hijiya N, Tsukamoto Y, Hirashita Y, Moriyama M, Ahmed K, Hasegawa H, Nishizono A, Saito M, and Iha H	Sequences of the HTLV-1 Proviral Genomes from Newly Established ATL cell-lines in Oita Prefecture, Japan	Genome Annoucer
2.	Dony JJF, Ibrahim YM, Jeffree MS, Yahiro T, Taib NM, Dominic A, Jaimin J, Giloi N, Mustapha ZA, Chua TH, Othman R, Matsumoto T, Iha H and Ahmed K	The first outbreak of autochthonous Zika virus in Sabah, Malaysian Borneo	PLoS Currents Outbreaks
3.	Jeffree MS, Ahmed K, Safian N, Hassan R, Mihat O, Lukman KA, Shamsudin SB and Kamaludin F	Falciparum malaria outbreak in Sabah linked to an immigrant rubber trapper	American Journal of Tropical Medicine and Hygiene
4.	Yahiro T, Takaki M, Chandrasena T.G.A, Rajindrajith S, Iha H and Ahmed K	Human-porcine reassortant rotavirus generated by multiple reassortment events in a Sri Lankan child with diarrhea	Infection, Genetics and Evolution
5.	Rahman SA, Jeffree MS, Kamaludin F, Din IA, Yusof M and Ahmed K	Beriberi outbreak among unauthorised immigrants in a detention camp in Malaysia	Journal of Immigrant and Minority Health
6.	Samad AFA, Sajad M, Jani J, Murad AMA and Ismail I	Data on degrodome sequencing and analysis from mock-inoculated and Fusarium oxysporum treated leaves samples in Persicaria minor	Elsevier Inc
7.	Waskito LA, Salama NR and Yamaoka Y.	Pathogenesis of *Helicobacter pylori* infection	Wiley Helicobact

INTERN AT BMHRC

2018, we're welcoming Ms. Noraini Philips, who joined BMHRC on 10th December 2018 for digital droplet PCR training. Ms. Noraini is a PhD student from Faculty of Medicine and Health Sciences, Universiti Putra Malaysia (UPM). We're expecting more researchers will come to do an attachment at BMHRC and develop more coloboration potential.

MEET BMHRC TEAM

Prof. Dr. Kamruddin Ahmed
Director
Borneo Medical and Health Research Centre

Dr. Alison Siat Yee Fong
Deputy Director
Borneo Medical and Health Research Centre

Ms. Jecelyn Leaslie John
Medical laboratory Technology
Borneo Medical and Health Research Centre

Ms.Azalina Farina binti Abd Aziz
Research Assistant
Borneo Medical and Health Research Centre

BMHRC Values

These values articulate our team mindset and serve as a code of conduct

PROFESSIONALISM

Ensure quality and integrity in every interaction with our diverse stakeholders

- Be Courageous and Honest
- Be Open
- Be Passionate
- Be Responsible

LEADERSHIP

Inspire, motivate, mentor and direct our team and projects to success

- Show Vision
- Show Initiative
- Show Mentorship
- Show Perseverance

MANAGEMENT

Leverage our small, highly-skilled group by consistently showing high levels of collaboration and innovation to produce superior results and create broad impact

- Demonstrate project management Capability
- Commit to Goals
- Demonstrate Team Management
- Relationships Management

Adaptation from GHIT (Global Health Innovative Tech.Fund)