



In Remembrance of His Majesty King Bhumibol Adulyadej
at Prince Mahidol Hall, Mahidol University, 7 November 2016



Merit Making Ceremony
Dedicated to His Majesty King Bhumibol Adulyadej
December 2016 & January 2017



Proposal Defense

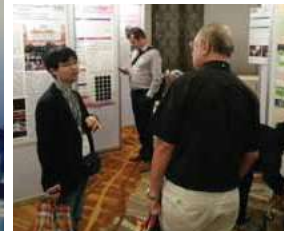


Prof. Tatsuo Shioda, Assoc. Prof. Emi Nakayama, Mr. Aekkachai Tuekprakhon and Ms. Juthamas (from left to right)

On 22 September 2016, Prof. Tatsuo Shioda, Director of MOCID, together with Assoc. Prof. Emi E. Nakayama and Ms. Juthamas attended the proposal defense of Mr. Aekkachai Tuekprakhon. Mr. Aekkachai, a Ph.D. candidate from the Department of Microbiology and Immunology, is the Dean-MOCID scholarship awardee and currently working on immunodiagnostic kit development for Chikungunya virus. One step closer to his Ph.D. Degree!

“Uncover Asian Tropical Medicine” JITMM 2016

One of the biggest annual meetings of the Faculty of Tropical Medicine, Mahidol University, Joint International Tropical Medicine Meeting (JITMM 2016) with the theme “Uncover Asian Tropical Medicine” was held during 7 - 9 December 2016 at Amari Watgate Bangkok Hotel. Prof. Tatsuo Shioda, as one of the Scientific Committee, participated and



Prof. Jiro Yasuda

exchanged scientific knowledge with other researchers. Apart from that, Prof. Shioda also invited Prof. Jiro Yasuda, one of the team members who invented diagnostic tools for viral infection, to give an interesting oral presentation on “Development of rapid and portable diagnostic assays for Ebola and Zika virus diseases” in the “Translational Research: Challenges and Successes” session.

Collaboration between MOCID and Bamrasnaradura Infectious Diseases Institute

On 13 December 2016, Prof. Tatsuo Shioda and MOCID staffs visited his collaborators in Bamrasnaradura Infectious Diseases Institute. Prof. Tatsuo Shioda (Director of MOCID) and Prof. Masashi Tatsumi (Director of Thai-Japan Research Collaboration Center for Emerging and Re-emerging Infectious Diseases, RCC-CRI) discussed further collaborative projects with Dr. Sumonmal Uttayamakul and her team.



Prof. Tatsuo Shioda and Prof. Masashi Tatsumi (front row, left and middle)

New Year 2017: Warm wishes from MOCID!



Prof. Tatsuo Shioda was presenting New Year's gifts to Dean Pratap Singhasivanon (left), Prof. Srivicha Krudsood (middle) and Prof. Yaowalark Sukthana (right)

Prof. Tatsuo Shioda and MOCID staffs presented New Year's gifts along with warm wishes to Dean Pratap Singhasivanon, Prof. Srivicha Krudsood (Deputy Dean for Research and International Relations) and Prof. Yaowalark Sukthana. MOCID wishes you all a happy year ahead!

Visiting Student from Osaka University, Japan



Prof. Tatsuo Shioda, Mr. Yuhei Shimizu and Assoc. Prof. Emi E. Nakayama (from left to right)

enjoyed Thai culture and food and sightseeing in Thailand. It was a very good chance for him to come to Thailand, and we were also delighted to have him here as we exchanged language and culture from each other. Nice to see you, Yuhei Shimizu!

MOCID welcomed a visiting student from the Faculty of Medicine, Osaka University, Yuhei Shimizu. A third-year medical student conducted some parts of his research project in our laboratory for four weeks, from 17 January to 10 February 2017. Here, Shimizu gained experience on how to isolate Dengue viruses from clinical samples under mentorship of our staff, Ms. Juthamas. Besides performing laboratory work, he also

New Staff of MOCID

Ms. Narinee Srimark, M.Sc. (Microbiology)

Position: Research Assistant



part of MOCID and it is quite challenging for me to work on mosquito-borne viruses."

Ms. Narinee graduated from the Faculty of Public Health, Mahidol University. Prior to coming here, she used to work on Plasmodium parasite. Ms. Narinee said, "I am happy to be a

Ms. Chanokporn Sunamalai, B.A. (English)

Position: Administrative Officer



Ms. Chanokporn (Cha-Mod) graduated with a Bachelor of Liberal Arts in English. She joined MOCID in March 2017 as an administrative officer. Cha-Mod told us, "I think I will gain more experience and new challenges in MOCID."

Welcome to MOCID!

BIKEN Endowed Department of Dengue Vaccine Development

BIKEN Endowed Department of Dengue Vaccine Development will be closed at the end of this March, due to the termination of our six-year contract between the Research Institute for Microbial Diseases, Osaka University and the Faculty of Tropical Medicine, Mahidol University. The members of our Department would like to take this opportunity to express our sincere gratitude to all Faculty members, especially the current Dean Pratap Singhasivanon and former Dean Yaowalark Sukthana, who both greatly helped us performing our research collaborations.



Drs. Pongrama (right) and Konishi (left)

At first, BIKEN started collaborative activity on antibody-expressing vaccines with Assoc. Prof. Dr. Pongrama Ramasoota, Director of Center of Excellence for Antibody Research (CEAR). We came up with this idea because this is an interdisciplinary subject between the antibody research (Dr. Pongrama's expertise) and vaccinology (BIKEN's mission). After a long-term study, we finally established a vaccine candidate which can express strongly neutralizing antibody against dengue virus (DENV) *in vitro* and in mice (Yamanaka, Pitaksajjakul, Ramasoota et al., Expression of enhancing-activity-free neutralizing antibody against dengue type 1 virus in plasmid-inoculated mice. Vaccine 33, 6070-7, 2015).

In addition, BIKEN collaborated with Assoc. Prof. Dr. Supatra Thongrungrat from Department of Medical Entomology concerning a successful isolation of cell fusing agent virus (CFAV) from *Aedes aegypti* mosquitoes (Yamanaka, Thongrungrat, Ramasoota et al., Genetic and evolutionary analysis of cell-fusing agent virus based on Thai strains isolated in 2008 and 2012. Infect Genet Evol. 19, 188-94, 2013). This was the first isolation in Thailand and phylogenetic analyses indicated that our Thai CFAV isolates were distinct from previously reported CFAV strains from other countries. CFAV is an insect-specific and non-pathogenic flavivirus, but its ecological and evolutionary relationships to globally important human-pathogenic flaviviruses such as DENV are the focus of our interest. Our study suggests superinfection with CFAV of *Aedes* mosquitoes carrying DENV presence in Thailand for over 50 years.

Another collaboration regarding dengue and HIV/AIDS was composed of three nations (Indonesia, Japan and Thailand; abbreviated INiTha) under the J-GRID (Japan Initiative for Global Research Network on Infectious Diseases) project organized by the Japanese government. Although the INiTha project ended 2 years ago, there were fruitful collaborations along the way. Joint Forum on infectious diseases was organized once or twice every year. Several papers were produced via this triangle research collaboration. A study involving our Department suggested a genotype impact on the dengue antibodies possessed by Thai populations (Yamanaka, Oddgun, Chantawat et al., Dengue virus infection-enhancing antibody activities against Indonesian strains in inhabitants of central Thailand. Microbes and Infection 18, 277-84, 2016). The finding of our study had implications for the selection of DENV genotypes as tetravalent dengue vaccines in particular countries.



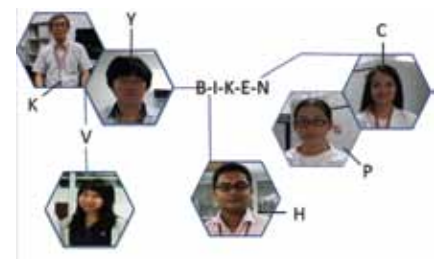
Dr. Supatra (right) visited our lab and worked with Ms. Varaporn (middle) and Dr. Yamanaka (left).



Ms. Siti Churrotin from Ms. Siti and Dr. Konishi AirLangga University, Indonesia visited our lab.

this specific amino acid substitution induces neutralizing antibody equivalent to, but infection-enhancing antibody much lower than the control antigen without the amino acid substitution. Because infection-enhancing antibody suppresses neutralizing antibody activity, this amino acid substitution provides safe and effective dengue vaccine antigens.

The current BIKEN members are Ms. Varaporn Pongjaroen (secretary), Ms. Chayada Khamsawad and First Lieutenant (Lt1.) Paweena Manmee (Master students from the Faculty of Public Health, Mahidol University), Dr. Hisham Ahmed Imad (Ph.D. student in Clinical Tropical Medicine, Faculty of Tropical Medicine, Mahidol University), Dr. Atsushi Yamanaka (Endowed Assistant Professor) and Dr. Eiji Konishi (Endowed Professor and Chair).



Members of our Department



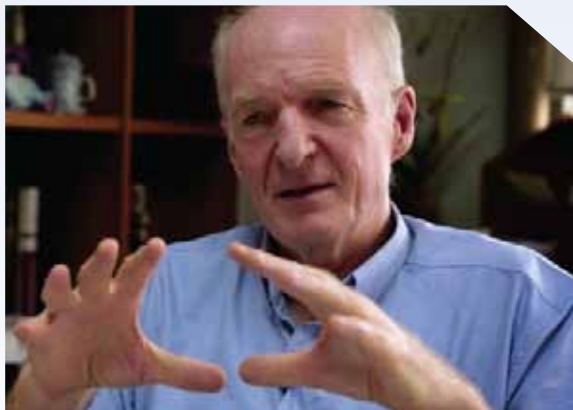
Celebrating New Year's Party 2015 on 16 December 2014, most students and BIKEN, CEAR and MOCID (former team) staffs were attended. It was a precious time.



Indonesia-Japan-Thailand (INiTha) collaboration under the frame of J-GRID (Japan Initiative for Global Research Network on Infectious Diseases)

Although our Department will be closed, another Mahidol-Osaka collaboration center, MOCID (Mahidol-Osaka Center for Infectious Diseases) still continues their research activities with the Faculty. BIKEN members strongly hope further academic achievement through closer relationships between Thailand and Japan. Our best wishes for the success and progress of the Faculty and Mahidol University.

Nick White recognised in UK's New Year's Honours 2017



On New Year's Day, Nick White was appointed a Knight Commander of the Order of St Michael and St George for services to tropical medicine and global health in the UK's New Year's Honours list for 2017.

"This is one of the highest honours that the British government can confer, and was made in Nick's case 'For services to tropical medicine and global health'," noted MORU Director Nick Day in an email to staff and colleagues that day. "Please join me in congratulating Sir Nick on this extraordinary and richly deserved achievement!"

On 14 February, the Faculty of Tropical Medicine (FTM), Mahidol University hosted a Congratulations party to honour Prof. Sir Nick. After congratulatory speeches from Mahidol FTM Dean Pratap Singhasivanon (centre photo) and MORU Director Prof. Nick Day (right), Prof. Sir Nick (shown left with Prof. Sasithon Pukritayakamee) received a flower bouquet and souvenir from Dean Pratap.



Now formally known as Prof. Sir Nick White, OBE, Nick is a Professor of Tropical Medicine at Oxford and Mahidol University, Thailand, Fellow of St John's College, a Wellcome Trust Principal Fellow, and Chairman of the Wellcome Trust's South East Asian Research Units since 2003. Before that he was Director of the Thailand Unit from 1986 to 2001, during which time he started the research units in Vietnam and Laos. He has lived and worked in Thailand for over 30 years where he has built a reputation as a ferocious squash player and a renowned malariologist whose work has informed WHO treatment guidelines and the implementation of new treatments, notably the artemisinin combination treatments (ACTs).

His principal research interests at present include malaria, particularly the pathophysiology and treatment of severe malaria, the prevention of antimalarial drug resistance using artemisinin-based combinations, and the biology of relapse in vivax malaria, and the clinical pharmacology of anti-infective drugs.

SMRU celebrates 30 years of delivering quality healthcare to Thai-Myanmar border communities

From 12 - 14 December, SMRU concluded a month-long series of activities to celebrate 30 years of providing quality health care to the marginalised populations on both sides of the Thai-Myanmar border. Over 400 attended festivities that included a seminar, theatre performances, dances, sports and games, information booths and a photo exhibit.

SMRU staff were joined by MORU and Oxford Tropical Network colleagues, Myanmar and Thailand public health officials and guests and collaborators from across Thailand, Myanmar and the globe at the celebration, which was held at Wattana Village Resort near SMRU's home base in Mae Sot, Thailand.

Activities included a seminar, Health Care in a Changing National Landscape, that focused on malaria, maternal and child health and TB/HIV in Kayin State, Myanmar and along the Thailand-Myanmar border in general. Led by SMRU Director Prof. Francois Nosten and Martin Smith, the seminar included a panel discussion and provided an opportunity to reflect and look forward on important issues facing the Unit. The seminar was translated into English, Thai, Burmese and Karen languages. A position paper summarizing discussions will be distributed shortly. Seminar speakers included: Dr. Rony Brauman (Doctors Without Borders Foundation and Sciences Po Paris); Dr. Cynthia Maung (Founder, Mae Tao Clinic); Lahpai Seng Raw (Founder, Metta Development Foundation); Naw Ta Mla Saw (Karen Women Organization); Decha Tangseefa (Thammasat University); Dr. Ric Price (Menzies School of Health Research and University of Oxford); Dr. Arjen Dondorp (MORU and University of Oxford); Dr. Nick White (MORU and University of Oxford); Dr. Thazin Nyunt (OG Society, Myanmar); Dr. Win Maung (WHO counsellor, NTP Myanmar); Daw Mya Thet Su Maw (Dept of International Development); Dr. Kyaw Nyunt Sein (Three Millennium Development Goals Fund) and Nang Mo Kham (World Bank).

Other 30th anniversary activities included traditional Karen and Thai dances, music and singing; a photo exhibition that raised THB 200,000 for the building of a new Maternal Health clinic in Mae Salit, in Myanmar's Karen state; a month-long sports competition; and educational games and information booths on SMRU's work.



Scenes from SMRU's 30th Anniversary in Nov-Dec, clockwise from top left: Local girls hop to it; traditional Karen Don Dance; SMRU founder and Director Prof. François Nosten with Dr. Mellie and Greg Tyrosvoutis; SMRU and MORU staff with Fishy Clouds Puppet Show performers; Dr. Rony Brauman (right); SMRU staff May Myo, Jordi Landier and Moh Doh; children's corner; Dr. Cynthia Maung; Sir Nick White, chairman of Wellcome's MOPs in SE Asia, with Wellcome's Michael Chew and MORU Deputy Director Arjen Dondorp.

Finally, the Bangkok-based B-floor Theatre group's Fishy Clouds, a puppet show about antibacterial drug resistance, was performed to appreciative audiences in Mae Sot (12 December), and at the Wang Pha (13 December) and Mawker Tai (14 December) clinics. Funded by the Wellcome Trust, the performance is part of MORU's Public Engagement activities to make science more accessible to a wider audience, including children.

SMRU wishes to thank Mahidol and Oxford Universities, MORU, The Wellcome Trust and our many supporters and team members for making SMRU and this wonderful celebration possible. We look forward to many more years of providing quality health services to communities along our constantly changing border landscape.

*- Thank you Amber Parker and Suphak Nosten for text
& Hsa Dah and Suphak Nosten for images*

Dr. Rattanaphone Phetsouvanh



It is with profound sadness and sorrow that we inform you of the death of Dr. Rattanaphone Phetsouvanh on the evening of Wednesday 23rd November 2016. She had been ill for two years and bore her illness with enormous courage and completed her PhD on scrub typhus during her treatment.

Dr. Rattanaphone was a dear friend, colleague, leader and an inspiration to all at LOMWRU, in the Microbiology Laboratory at Mahosot Hospital, in Laos and across the MORU Network.

She was an enormous inspiration to us all for restarting the microbiology services in Laos in 1993, for accepting the offer of collaboration with MORU that led to the founding of LOMWRU, for her wonderful leadership, encouragement and support for all in the Microbiology Laboratory, for fostering LOMWRU, for her research on bacteriology and scrub typhus and for her humour, courage and example in her illness.

She will be greatly missed by many people, near and far. Please join us in extending profound condolences to Dr. Rattanaphone's family and to all in the Microbiology Laboratory.

- Manivanh Vongsouvaht, Mayfong Mayxay and Paul Newton

Combating anti-microbial resistance in Lao PDR



LOMWRU was well represented at the 1st Multi-Sectoral Workshop on Combating Antimicrobial Resistance (AMR) in Vientiane on 17 - 18 November. The meeting was co-ordinated by WHO, FAO and OIC and involved staff from the Lao Ministries of Health and Agriculture and Forestry as well as the health and animal/ agricultural sectors. This was the first step in developing a National Action Plan on AMR for Laos, a process in which LOMWRU and the Mahosot Microbiology Laboratory will be actively involved. Dr. Vilada Chansamouth, who will also be working closely with the Global Antibiotic Resistance Partnership (GARP) in undertaking a situation analysis for Laos, presented data on AMR gathered over several years from the Mahosot Microbiology Laboratory. The afternoon sessions involved group work to identify specific actions and generated considerable discussion.

- Thank you, David Dance, for text and photo

TRAC II uses elephant logistics

Elephant can now be added to the growing list of methods used to ship sample by TRAC II Myanmar. The Pyay TRAC II study team, working in a remote region of central Myanmar, showed their dedication to the TRAC II study when they transported a patient's samples by elephant!



The situation arose when Dr. Kyaw Hlaing Oo and his team found that a young patient had moved to a farm neighbours described as "just a short walk away". After 4 hours and multiple creek crossings, the team finally found their patient and completed their clinical follow up. The patient's father offered them the farm's working elephant to transport samples. This cut the travel time to just over an hour, and ensured that Dr. Kyaw Hlaing Oo and his team could meet the six hour processing limit.

Pyay is one of three TRAC II sites in Myanmar, along with Thabeikkyin and Pyin Oo Lwin, all coordinated by MOCRU. Declining malaria prevalence in Myanmar means that teams must be dedicated and creative to recruit and follow up patients. This case was no exception!

- With thanks to James Heaton for text and photo

Epidemiology of malaria in Ubon study begins

Since 2013, in contrast to the rest of Thailand where malaria has continued to decrease, the number of malaria cases in Ubon Ratchathani Province, northeast Thailand has increased, with 3 times more malaria cases found in 2015 than in 2013. Understanding the causes and possible consequences of this increase and the persisting burden of malaria in this part of Thailand are vital for local and regional elimination efforts.



On 1 December 2016 at Na Chaluai district hospital in Ubon Ratchathani Province, Richard Maude, MORU's Head of Epidemiology, Study Coordinator Vilasinee (Pik) Yuwaree (Epidemiology), Clinical Trial Coordinator Prayoon Yuentrakul (CTSG), Clinical Data Manager Pasathorn Sirithiranont (CTSG) and Research Scientist Sornsuda Setaphan (Malaria Lab) provided training as part of the site initiation visit for the study Epidemiology of malaria in Ubon Ratchathani, Thailand: a case-control study.

Attendees, who included staffs from Ubon Ratchathani province's Buntharik District Hospital, Na Chaluai District Hospital, Malaria Clinic Buntharik and Malaria Clinic Na Chaluai, were trained in Good Clinical Practice and study protocols and discussed work plans in the study areas.

- With thanks to Vilasinee Yuwaree for text and photos

And the poster competition award winners are...



MAEMOD's Angela Devine (left, with Nick White), took 1st prize in MORU's 2nd annual Student Posters' Competition, held 6 December in Bangkok. A Research Fellow in Health Economics supervised by Yoel Lubell, Angela was awarded a trophy, certificate and gift voucher for her poster, Using G6PD Tests to Enable the Safe Treatment of *Plasmodium vivax* Infections with Primaquine on the Thai-Myanmar border: a Cost-Effectiveness Analysis. Microbiology's Sharanjeet Atwal (right, with Nick Day) won 1st runner up and was awarded a certificate and gift voucher for her poster, Distinct Subpopulations in the Obligate Intracellular Bacteria *Orientia tsutsugamushi*.



Epidemiology Research Assistant and MSc Student Chris Mercado (inset), who was absent during the award announcement, was 2nd runner up and received a certificate and gift voucher for his poster, An assessment of national surveillance systems for malaria elimination in the Asia Pacific.

Please join us in congratulating the winners and all who submitted posters for the competition.

- Text and photos by Pawinee (Joy) Pawthong

International data and stats on the banks of the Chao Phraya



From left: Course organizers and teachers from NUS Saw Swee Hock School of Public Health Koh Wee Min, Prof. Teo Yik Ying and Keisha Prem with Dr. Quan Tran Minh (OUCRU), Dr. Xinhui Chan (MORU), Dr. Rene Neihus (LOMWRU and MAEMOD), Dr. Ipsita Sinha (MORU Epidemiology) and Dr. Janjira Thaipadungpanit (MORU Microbiology).

OUCRU, LOMWRU, and MORU colleagues from CTSG, Epidemiology, MAEMOD, Malaria, Microbiology, and Pharmacology attended the R 2017 International Workshop on Advanced R Programming Language for Data Analysis and Statistical Applications from 17 - 19 January at the Siriraj Medical Research Centre, on the banks of Bangkok's River of Kings, the Chao Phraya. The course was jointly organised by the Division of Bioinformatics and Data Management for Research, Department of Research and Development, Faculty of Medicine Siriraj Hospital, Mahidol University, and the National University of Singapore Saw Swee Hock School of Public Health. We had an enriching time learning about multivariate analysis data visualisation, and Bayesian statistics on the banks of the Chao Phraya River. Many thanks to Janjira (Kae) Thaipadungpanit for leading our contingent.

- Text courtesy of Xin Hui Chan; photo thanks to Ipsita Sinha



CTSG hosts visiting FTM students

On 26 January, Clinical Trial Support Group (CTSG) staff hosted 6 visiting MSc and PhD students from the Mahidol Faculty of Tropical Medicine (FTM) and explained CTSG and data management work processes. The CTSG visit is part of FTM's MSc and PhD tropical medicine course on data management and presentation,

which includes CTSG's Naomi Waithira, Head of Data Management and Mavuto Mukaka, Head of Statistics, teaching online survey design and STATA for data management.

Area safety officer training day at British Club

On 17 January, 30 colleagues from MORU, WWARN, SMRU, LOMWRU and MORU's Chiangrai, Ubon and Udon units attended the annual Area Safety Officer (ASO) Training Day at the British Club Bangkok. Led by MORU Bio-safety Officer Stuart Blacksell, trainers Soiratchaneekorn (Tal) Ruanchaiman, Unit Health and Safety Administrator, Safety Administrator Assistant Manusanun (Nut) Deddoung, and MORU Training Consultant Gaye Proctor reviewed risk assessment, fire training, new safety policies and forms, and the online safety induction course for ASOs. Participating ASOs made suggestions and worked on devising solutions together.



- Thank you, Manusanun (Nut) Deddoung for text and photos

Data sharing trends, issues and risks examined at conference



At the British Club Bangkok on 18 January, 50 colleagues from across the MORU Network participated in a Data Sharing Conference hosted by Phaik Yeong Cheah and the Bioethics and Engagement team. Discussions centred on:

- Current trends in data sharing: journal and funders policies
- The MORU data sharing policy and Data Access Committee (DAC)
- Impact on data management process and procedures (data standards, security, capacity, repositories, anonymization)
- Ethical and practical issues such as consent, contracts with funders and collaborators
- MORU incentives and barriers to data sharing.

Selected external invited guests included Mike Parker and Susan Bull (Ethox Centre) and Katherine Littler and Natalie Banner (Wellcome Trust).

T-CAB celebrates its 8th anniversary



On Saturday 28 January, the Tak Province Community Ethics Advisory Board (T-CAB) celebrated their 8th anniversary. Organised by The Napat Khirikkoekong, the event was attended by T-CAB members and some MORU and SMRU staff (pictured).

One of many ways MORU and SMRU engage with served communities, T-CAB was set up in January 2009 to advise SMRU and MORU on health and research activities along the border and assist in communications between SMRU and MORU researchers and community members. Its 8-12 members come from communities along the border.

The event kicked off with thank you speeches by Khin Maung Lwin, Phaik Yeong Cheah and François Nosten. These were followed by talks from Laurence Thielemas and Lei Lei Swe of SMRU on results of completed studies, neonatal resuscitation and tuberculosis, and concluded with a scrumptious lunch at the wonderful Passport Restaurant in Mae Sot.

- Text: Pawinee (Joy) Pawthong; Photos: Phaik Yeong Cheah

- Text and photos courtesy of Phaik Yeong Cheah

Direk, David and Rosalie discuss melioidosis in DC



During the week of 6 February, MORU's Direk Limmathurotsakul and LOMWRU's David Dance visited the USA, supported by the Defence Threat Reduction Agency (DTRA) Cooperative Biological Engagement Program (CBEP). While there, Direk, David and Frances Daily from the Diagnostic Microbiology Development Programme in Cambodia ran a session on melioidosis at the American Society for Microbiology (ASM) Biothreats meeting.

The group then flew to the United States Army Medical Research Institute for Infectious Diseases (USAMRIID), where they gave cut down versions of the ASM presentations and listened to a series of talks from USAMRIID researchers working on animal models and vaccine studies of melioidosis and glanders. The USAMRIID workers were fascinated to hear about the real clinical problems posed by melioidosis as they rarely receive visitors from 'the front line'.

At the DTRA CBEP Science Program Review, the team presented progress reports on their CBEP-funded research. Rosalie Zimmermann, a Swiss physician who spent more than a year in Laos, spoke about her MSc project from the University of Basel Environmental Department with LOMWRU looking for *Burkholderia pseudomallei* in the Mekong and its tributaries. Direk presented an update on the work of the Melioidosis Research Collaboration Network and their efforts to collate data on the numbers of cases and deaths from melioidosis across SE Asia, which was recognised as an excellent model of collaborative working.

- With thanks to David Dance for text and photo

Ubon sepsis study completes enrolment



On 26 January, the Sepsis1 study in Ubon Ratchathani enrolled its 5,020th patient, nearly 4 years after the study's first patient was enrolled on 3 March 2013. Titled, Causes and factors associated with outcomes in community-acquired sepsis and severe sepsis in Northeast Thailand, the study is a clinical research collaboration between MORU's Head of Microbiology Dr. Direk Limmathurotsakul (PI) and the University of Washington's Dr. Eoin West.

Study data will be used to increase understanding of sepsis and improve the care of patients with sepsis in north-eastern Thailand and elsewhere in Asia. Although no current estimates exist of the severity of the burden of community-acquired-sepsis, an estimated 38,582 of 151,179 (25%) sepsis patients died in Thailand in 2016 – more deaths than those caused by traffic accidents! Study results are expected no earlier than end 2017. The study team wishes to especially thank Dr. Prapit Teparrukkul and Sunprasithprasong Hospital and the nurses and clinicians in its ER, medical wards and ICUs for their great support and the MORU Ubon Ratchathani team for their hard work throughout the study.

- Text and photos courtesy of Viriya (Oh) Hantrakun

Arjen awarded Spinoza Chair

On 14 February, MORU Deputy Director and Head of Malaria, Prof. Arjen Dondorp, delivered the Spinoza Lecture, Malaria elimination in the context of drug resistance.



Arjen (2nd from left) was awarded the Spinoza Chair by the Amsterdam University Association on behalf of the Faculty of Medicine. They noted that: "Prof. Dondorp is one of the world's leading experts on malaria treatment following the malaria treatment trials he coordinated on a global scale including thousands of African children and Asian adults and children with both severe and uncomplicated malaria. In addition, he conducted critical research on malaria pathophysiology focusing on the severely compromised microcirculation and estimating the size of the hidden sequestered parasite burden. Finally, as intensive care specialist, he has made important contributions to the improvement of intensive care practice in developing countries."

Research ethics training in Myanmar



Phaik Yeong Cheah, Nick Day and Kyaw Myo Tun conducted a research ethics training day 20 February in Yangon for 25 attendees from the Myanmar Defense Services Medical Research Centre, Defence Services Medical Academy and Myanmar Oxford Clinical Research Unit (MOCRUC). Topics included research ethics guidelines, informed consent, data sharing and community engagement. This pre-conference workshop of the 24th Myanmar Military Medical Conference was organized by Brigadier General Tin Maung Hlaing and Lt Col Kyaw Myo Tun.

- Text and photos courtesy of Phaik Yeong Cheah and Kyaw Myo Tun



SEAMEO TROPMed Network Highlights

🏆 Celebration of the “50th Anniversary of SEAMEO TROPMed Network with the theme: Achievements and Challenges for Sustainable Development in Health”, Bangkok, Thailand



🏆 SEAMEO Centre Directors Meeting 2016, Bangkok, Thailand



🏆 ASEAN-China Forum on Traditional Medicine and Health Professional Education organized with Asian China Centre during the 9th China-ASEAN Education Cooperation Week, Guizhou Province, P. R. China



🏆 South East Asia (SEA) – Technical Vocational Education & Training (TVET) Workshop on Hospitality, Health Care (Nursing), and Creative Industry hosted by the Ministry of Education and Culture, Indonesia



🏆 Consultative Conference for the Philippines Health Agenda (PHA), HIV/AIDS and Healthy Settings Programme, organized by the Department of Health, Philippines



Engaging Intergovernmental Organizations' visit to SEAMEO TROPMED Network Office, Bangkok, Thailand



International Training Course on Dengue: Pre-Congress, Queen Sirikit National Convention Center, Bangkok, Thailand



SEAMEO TROPMED Network booth at the 8th Asian Congress of Pediatric Infectious Diseases, Bangkok, Thailand



39th SEAMEO High Officials Meeting (HOM), Amari Watgate Hotel, Bangkok, Thailand

Dioscoro Umali Achievement Award in Agricultural Development: Conferment and Lecture as part of the 50th Anniversary of SEAMEO SEARCA, Los Banos, Philippines



Training Course on "Quantitative and Qualitative Methods in Designing Development Evaluation for SEAMEO Centres" organized by SEAMEO TROPMED Network, Bangkok, Thailand



Building Staff Capacity on RCA & CAPA in Site Management Training

The SCC @TropMed conducts network clinical trials that are sponsored by the Division of AIDS (DAIDS) of the U.S. National Institutes of Health, as well as other HIV/STI behavioral and biomedical interventions and prevention studies in men who have sex with men (MSM) and transgender women (TGW). SCC @TropMed is a Clinical Research Site (CRS) and studies are required to comply with DAIDS requirements as well as Good Clinical Practice guidelines, an international quality standard by the International Council for Harmonisation (ICH-GCP).

To be proactive in preventive action planning and implementation, staff with the CRS participated in the training course on “Root Cause Analysis & Corrective and Preventive Action in Site Management (RCA & CAPA)” during 28 - 29 November 2016 at Chalermprakit Conference Room, 5th floor, Chalermprakit Building, Faculty of Tropical Medicine, Mahidol University. The main objectives of this training were to help staff understand the concepts of performance and issues management, as well as RCA & CAPA, develop skills in performing root cause analysis in clinical trial study site management, and practice assigning interventions for successful solutions.



Staff acquired skills for effective site risk management and applied Gilbert's Behavioral Engineering Model implementation.

Over 40 staffs attended the two-day session that included presentations, group discussions, brainstorming sessions, case studies in site management and exercises in common scenarios. It was an engaging and informative training, and the skills acquired by staff will support the Silom Community Clinic CRS success in upcoming research.

BMCS/ALLO/GENVAR Closeout Party



The SCC @TropMed has reached a momentous occasion with the closure of the Bangkok MSM Cohort Study and completion of enrollment into its supplementary studies, Genvar and the Allo study. We organized a closeout party on 11 January 2017 at Chalermprakit Conference Room, 5th floor, Chalermprakit Building, Faculty of Tropical Medicine, Mahidol University.

“This celebration is to recognize all of the hard work, long hours, and self-sacrifice that our wonderful staff members put in over the 11 years of the BMCS. During this time, the staff dealt with floods, political unrest and violence, and relocation of our Silom Community Clinic site in order to provide a high-level of care to our clients and study participants and to acknowledge all the wonderful work that went into these studies. They are the heart and soul of our organization and we feel as though they should be celebrated” stated Dr. Michael Thigpen, Director of HIV/STD Research Program, Thailand MOPH – U.S. CDC Collaboration (TUC).



YMSM Nakhon Sawan Team Visit to SCC @TropMed

The Young Men who have Sex with Men Cohort Study (YMSM Cohort Study) is a collaboration between the Department of Disease Control (DDC), Thailand Ministry of Public Health and the U.S. Centers for Disease Control and Prevention (U.S. CDC). This study will begin in 2017 at the SCC @TropMed, Bangrak hospital and the Rainbow Clinic in Nakhon Sawan province.

As part of the formal collaboration, Rainbow Clinic staffs routinely receive consultation and technical assistance from TUC and SCC staff on site.

One of the activities that SCC supported for this study is a “reverse site visit” of Rainbow Clinic staff to SCC during 31 January – 1 February 2017. Visitors included a research physician, research nurses, laboratory staff and study coordinators. The visit activities included step-by-step demonstration of research activities such as screening, enrollment and follow-up visits. Besides, they received training on the concept of voluntary participation and the practice of informed consent in addition to the Human Subject Protection Training.



Conference on Retroviruses and Opportunistic Infections (CROI 2017)

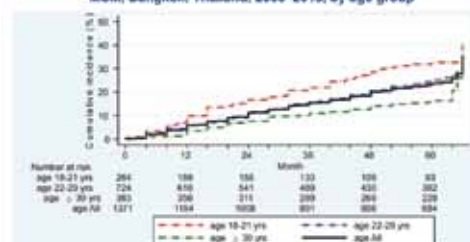


From 13 – 16 February 2017, Dr. Michael Thigpen and Dr. Chaiwat Ungsedhapand attended the 2017 annual Conference on Retroviruses and Opportunistic Infections (CROI 2017) at Seattle, Washington, U.S. to present three posters.

One abstract presented was “HIV incidence and risk behaviors in the Bangkok MSM Cohort Study, Thailand, 2006 – 2015” (Abstract/ Electronic Poster #854). This study assessed 10-year HIV incidence trend and risk factors for incident infection among men who have sex with men (MSM), and transgender women (TGW), participating in the Bangkok MSM Cohort Study (BMCS) at the Silom Community Clinic (SCC) in Bangkok from 2006 – 2015 (Figure 1).

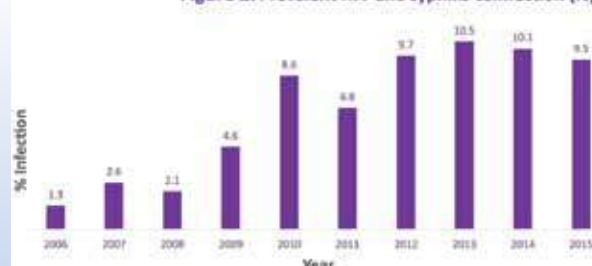
Cumulative incidence at 60 months of follow up was 23.6% overall, and varied by age group: 32.5% among 18-21 year olds; 25.0% among 22-29 year olds; and 16.3% among ≥30 year olds ($p < 0.001$)

Figure 1: Sixty months cumulative HIV-incidence (Kaplan-Meier) in a cohort of MSM, Bangkok, Thailand, 2006–2015, by age group



“Change in risk behaviors after HIV seroconversion, Bangkok MSM Cohort Study” (Abstract/ Electronic Poster #855), this study evaluated risk behaviors before and after HIV seroconversion in the Bangkok MSM cohort study (BMCS). The third abstract was “HIV and syphilis coinfection in men who have sex with men, Bangkok, 2005 – 2016” (Abstract/ Electronic Poster #862). This study evaluated HIV and syphilis infection among men attending Silom Community Clinic for HIV voluntary counseling and testing (VCT) services in Bangkok, Thailand over 10 years (Figure 2).

Figure 2: Prevalent HIV and syphilis coinfection (%)



Over 10 years, prevalent HIV and syphilis coinfection was common and increased with each calendar year from 1.3% in 2006 to 9.5% in 2015 ($p < 0.05$)



WORLDWIDE ANTIMALARIAL RESISTANCE NETWORK (WWARN)

ASIA REGIONAL CENTRE @TropMed

Pharmacometric model enables revised dose regimen so all malaria patients can safely be treated with DP

In the largest study of its kind, a team of researchers led by MORU and WWARN in Bangkok developed a pharmacokinetic model that enabled a revised dose regimen to safely treat all malaria patients including young children with dihydroartemisinin-piperaquine (DP), a widely used antimalarial and a first-line treatment against malaria recommended by the World Health Organization (WHO).

Results from the study, published in PLOS Medicine, have already been used by the WHO expert review panel's decision to update its Guidelines for the treatment of malaria.

"It's crucial to develop optimised dosing regimens to ensure appropriate drug exposure in all patient groups," says Prof. Joel Tarning, senior author of the study and Head of Clinical Pharmacology at MORU. "This revised dose regimen of dihydroartemisinin-piperaquine is intended to provide equivalent piperaquine exposures safely in all patients, including in small children with malaria. It's an important step towards giving all patients an equal chance of cure."

Although widely used, manufacturers' DP dosing recommendations were developed before there was extensive pharmacokinetic data of piperaquine use in young children. Previous studies suggested that based on those dosing recommendations, young children with malaria were being under-dosed.

The team collated drug concentration data from 728 malaria patients in 11 separate clinical trials and developed a pharmacokinetic model that demonstrated that young children and heavier adults had a substantially lower piperaquine exposure after using industry-based dose recommendations – which might increase the risk of treatment failures and antimalarial drug resistance. They used the model to derive a new optimised dose regimen that would sufficiently treat all populations, including vulnerable groups such as young children.

"An optimised dose regimen should prolong the useful therapeutic life of dihydroartemisinin-piperaquine by increasing cure rates and hopefully also slowing the development of antimalarial drug resistance – a major threat in Southeast Asia where resistance is confirmed and likely to spread or emerge beyond the Greater Mekong regional borders," adds study first author Dr. Richard Hoglund, from MORU and WWARN.

- Story adapted from Pharmacokinetic analysis supports improvements to antimalarial dosing regimens, which originally appeared on WWARN's website

New ACT partner drug efficacy program

On 10 January, WWARN reported the launch of a new programme, Molecular and *in vitro* surveillance of ACT partner drug efficacy in the Greater Mekong Subregion (MIVS-ACT). Run by a consortium that includes MORU,



Faculty of Tropical Medicine, Mahidol University, WWARN and Institut Pasteur du Cambodge, the MIVS-ACT project will collect up to 10,000 specimens over the next 3 years, using them to provide policy makers and public health officials with near real-time information and regularly updated maps of the prevalence and distribution of molecular ACT drug resistance markers including *pfmdr1* and *pf-plasmepsin-II* across the Mekong Greater Subregion. Policy makers can use these results to select the most effective drug combinations – which may include novel strategies like drug rotation, sequential administration or triple ACT combinations – to prolong the efficacy of current antimalarials and support containment and elimination goals in the region. "This programme gives us an urgent insight into the suspected declining efficacy of not just artemisinin medicines, but also valuable partner drugs," says Mallika Imwong (pictured inset), Head of MORU's Malaria Molecular Laboratory.



Her Royal Highness Princess Maha Chakri Sirindhorn Mobile Service Center in cooperation with Hospital for Tropical Diseases Foundation Medical Mobile Unit provided medical services to people including health investigation and parasitic assessment at Kamapado Border Patrol Police School, Tak province during 19 – 21 December 2016



The 8th Mahidol-Phayathai Sport Day on 1 February 2017



🦋 Congratulations to Prof. Sir Nicholas J. White
On the occasion of his appointment as a Knight Commander of the Order of St. Michael and St. George from the United Kingdom
14 February 2017



🦋 Voices from our collaborators at the Faculty of Tropical Medicine, Mahidol University for forming the Faculty's strategic plan, January & February 2017

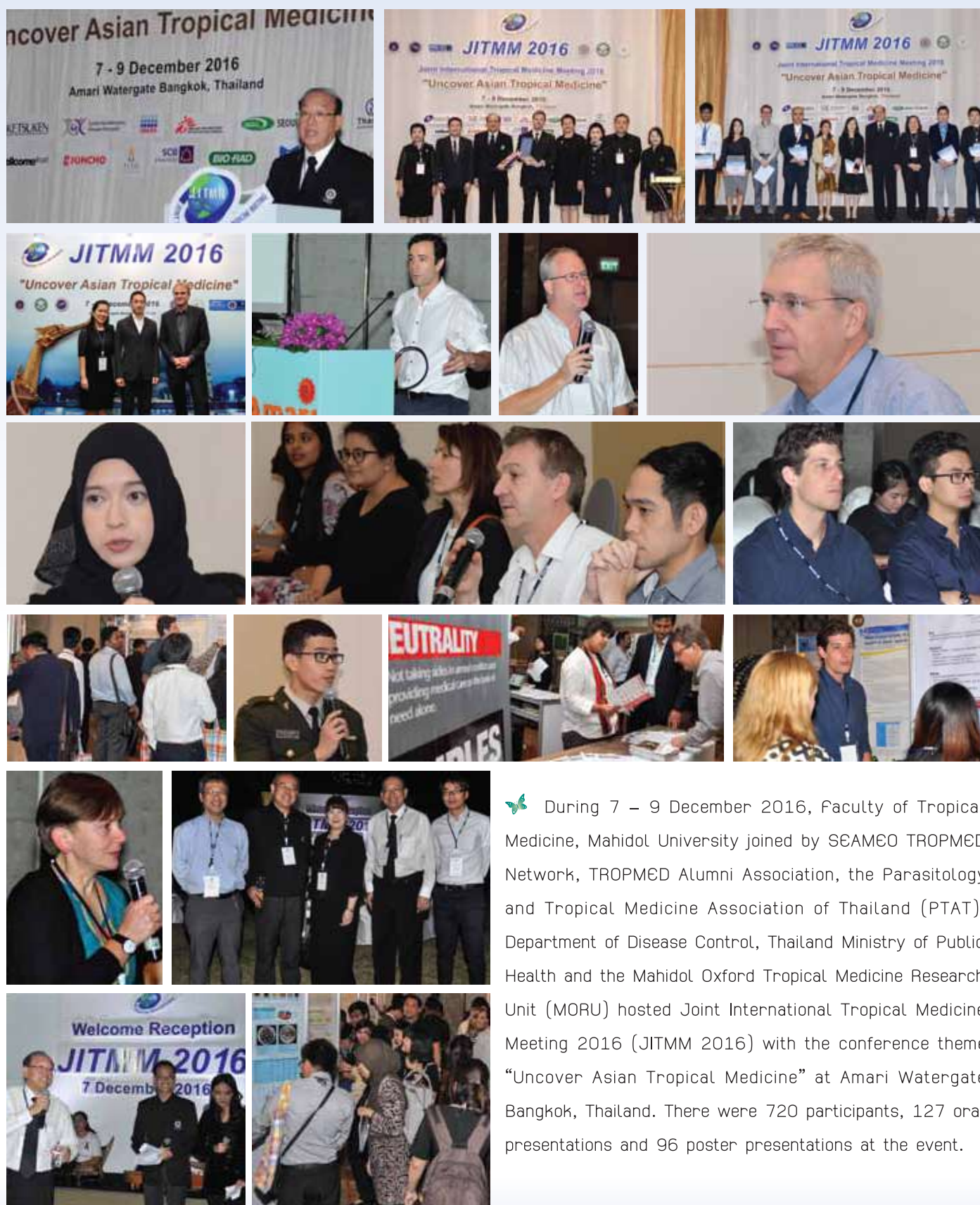


🦋 During 12 - 19 February 2017, Faculty of Tropical Medicine, Mahidol University in cooperation with School Health Promotion Unit, Asian Centre of International Parasite Control (ACIPAC), Partnership for Child Development (PCD), Imperial College London and Japan Consortium for Global School Health Research (JC-GSHR) organized the 6th Annual Course on School Health and Nutrition Programmes in Asia for 55 foreign School Health personnel from 15 countries.



Happy New Year 2017





🦋 During 7 – 9 December 2016, Faculty of Tropical Medicine, Mahidol University joined by SEAMEO TROPMED Network, TROPMED Alumni Association, the Parasitology and Tropical Medicine Association of Thailand (PTAT), Department of Disease Control, Thailand Ministry of Public Health and the Mahidol Oxford Tropical Medicine Research Unit (MORU) hosted Joint International Tropical Medicine Meeting 2016 (JITMM 2016) with the conference theme “Uncover Asian Tropical Medicine” at Amari Watgate Bangkok, Thailand. There were 720 participants, 127 oral presentations and 96 poster presentations at the event.

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