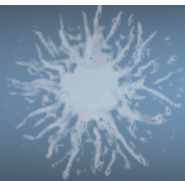


L-TEAM

LAOS
TRAINING
EVENT FOR
AWARENESS OF
MELIOIDOSIS

VANG VIENG, LAOS • 1 – 3 OCTOBER

PARTICIPANT GUIDE



L-TEAM

1 – 3 October 2019
Vang Vieng, Laos



Welcome Letter

Welcome to the Laos Training Event for Awareness of Melioidosis. For the last several years, the Defense Threat Reduction Agency (DTRA) Biological Threat Reduction Program (BTRP) and health experts across Southeast Asia have worked together on increasing awareness of melioidosis, a highly endemic infection that poses a risk to the people of Laos and elsewhere in the region. At this event clinical and diagnostic trainers and subject matter experts will come together to raise understanding of melioidosis and its diagnosis and treatment, and to convey the severity of melioidosis as a public health threat to Laos and neighboring countries. Your participation is key to making this effort a success.

BTRP aims to foster partnerships between communities of practice to reduce emerging and re-emerging infectious disease threats around the globe. It is my sincere hope L-TEAM will not only serve as a melioidosis awareness building mechanism, but also facilitate the trust and communication among diagnosticians and clinicians needed to act in partnership to reduce the risks associated with melioidosis and determine the true prevalence.

Sincerely,

A handwritten signature in cursive script, reading "Martha M. Stokes", in a light blue color.

Dr. Martha Stokes

Biological Threat Reduction Program
Defense Threat Reduction Agency
U.S. Department of Defense

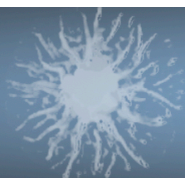
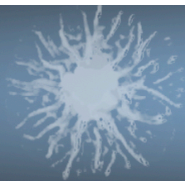


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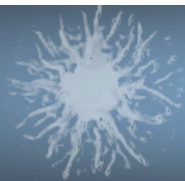


Event Background

Melioidosis is a highly endemic infection in Laos caused by the bacterium *Burkholderia pseudomallei*, yet awareness of melioidosis among physicians, laboratory technicians, and policy makers remains low. This is most likely owing to the lack of diagnostic microbiology competency needed to make the correct diagnosis, and misdiagnosis due to a lack of specific signs and symptoms presented with melioidosis, also known as ‘the great mimicker’.

The Biological Threat Reduction Program (BTRP) seeks the establishment of sustainable capabilities and capacities within partner countries that mitigate global biological threats, while imposing minimal disruption to the advancement of life sciences. BTRP enhances partner capability to survey, detect diagnose, and report outbreaks of pathogens and diseases of security concern in accordance with international reporting requirements. The DTRA BTRP-sponsored Threat Reduction Network (TRN) for melioidosis research convenes meetings, workshops, and other training events with the aim of improving clinical and laboratory melioidosis awareness and diagnostic and treatment aptitude. Since the inception of the melioidosis TRN, BTRP has supported (1) a threat characterization discussion in Bangkok, Thailand in February 2016; (2) a strategy mapping session in Cebu, Philippines in August 2016; and the Cambodia Training Event for Awareness of Melioidosis (C-TEAM) in Phnom Penh, Cambodia in October 2017. The Laos Training Event for Awareness of Melioidosis (L-TEAM) is the first step in bringing similar meetings and training events in Laos.

On 22 January 2019 BTRP hosted a planning meeting L-TEAM with representatives from the Laos Ministry of Health, Military Preventative Medicine Institute, Khammouane Provincial Hospital, Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, French Institute of Research for Sustainable Development, and International Water Management Institute. Meeting participants agreed unanimously that building awareness for melioidosis should be a national priority. Point-of-care representatives stated that district hospitals often treat patients empirically and clinicians repeatedly ask for more information about melioidosis. They also advocated for increased diagnostic capacity throughout the country, stating that some locations that perform culture confirmation of melioidosis receive more requests than they are resourced to process. The group concluded that a national-level event focused on melioidosis would be valuable to build awareness for the disease amongst relevant One Health practitioners and policy makers.



Objectives

- Build national awareness of disease burden amongst relevant One Health participants
- Train appropriate staff to safely identify, treat, and report cases; specifically:
 - Review and update existing guidelines for prevention, specimen collection, patient treatment, and follow-up care
 - Initiate discussions about laboratory SOPs and job aids for identification and isolation of *B. pseudomallei*
- Enhance confidence between clinicians and laboratory staff for better communication and timeline identification of melioidosis cases

Meeting Overview

Format

Day 1 – 1 October 2019

The first day of the symposium will focus on building national awareness of melioidosis from a One Health perspective, including the animal and environmental component before focusing on clinical presentation and diagnostics. Leading experts in the field will discuss the global burden of melioidosis and the current situation in Laos. Representatives from regional hospitals will share their experience with melioidosis and panel discussions will provide a forum for participant members to ask questions and exchange ideas. The day will close with a session on melioidosis prevention.

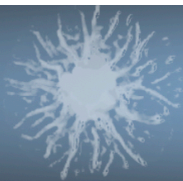
Day 2 – 2 October 2019

The second day will consist of occupational training. Participants will be broken up between clinicians and technicians. Clinicians will learn more about the manifestations of melioidosis, its diagnosis, and treatment in a seminar setting and through case-presentations. Current Laos melioidosis treatment guidelines will be also presented and discussed and participants will have the opportunity to workshop up-to-date summary guidelines.

Laboratory technicians will learn more about diagnosing *B. pseudomallei* and related techniques. Participants will engage in dry-lab group work that will expand upon *B. pseudomallei* identification and risk assessment.

Day 3 – 3 October 2019

The third and final day will bring participants back together for a facilitated discussion and roleplay exercise. This exchange will allow participants to share and apply the lessons learned through the previous two days through this workshop.



Presenter Biographies

Dr. Ellen Jo Baron



Ellen Jo Baron, Stanford University Professor of Pathology Emerita, directed diagnostic microbiology and virology laboratories for over 35 years, most recently at Stanford Medical Center in California. She wrote or edited several major reference books, including the American Society for Microbiology's Manual of Clinical Microbiology, 7th, 8th, and 9th editions. In 2007 she developed a visually-based basic training course aimed at enhancing diagnostic microbiology capacity in resource-poor areas; and since then the materials have been used around the world. The non-governmental organization she co-founded in 2008, Diagnostic Microbiology Development Program, continues to support laboratory capacity improvement in resource-poor areas of the world, currently focused in Cambodia. She joined the molecular diagnostics company Cepheid in 2008 and retired as Executive Director of Medical Affairs in 2018. In 1997 she received the ASM Alice Evans Award (women's leadership), the BioMerieux Sonnenwirth Award for Leadership in Clinical Microbiology in 2000, and the ASM Founders' Award in 2012. She received several teaching awards at Stanford and was honoured with the Lifetime Achievement Award from the Anaerobe Society of the Americas in 2018.

Dr. Stuart Blacksell



Professor Stuart Blacksell joined the Nuffield Department of Medicine at the University of Oxford in August 2001 and is based at the Mahidol-Oxford Tropical Medicine Research Unit (MORU) in Bangkok, Thailand.

He has more than 35 years working in microbiology research activities and has been actively involved in studies in Asia (Thailand, Laos, Cambodia, Myanmar, Vietnam, China) since 1989.

In his position at MORU, he is a senior researcher responsible for Rickettsial, Dengue and tropical disease diagnostics. Over the past 5 years he has been team leader for DTRA-CBEP projects focusing on One health pathogens, biosafety and biosecurity in veterinary and human health laboratories in Thailand, Laos and Cambodia. He

is also the Head of Safety across the MORU tropical health network as well as the MORU post-graduate student coordinator for the Open University UK Affiliated Research Centre program.

He holds Bachelor of Applied Science (Charles Sturt University), Master of Public Health and PhD degrees (both University of Queensland) and is a Fellow of the Faculty of Science of the Royal College of Pathologists (Australasia). He is an Associate Professor at the Nuffield Department of Medicine at the University of Oxford. He also currently or previously held Visiting Professorships at the Open University, United Kingdom, Adjunct Associate Professorships at the School of Population Health, University of Queensland and at the School of Veterinary & Biomedical Science, Murdoch University in Australia.

He is a member of the scientific advisory board of the Foundation for Innovative Diagnostics (FIND), the WHO biosafety advisory group and WHO Laboratory Biosafety Manual revision editorial group. He as an advisor to FAO One Health/Biosafety programs on matters regarding biosafety throughout Southeast Asia and SAARC countries. He is also an advisor to Médecins Sans Frontières on biosafety and waste disposal.

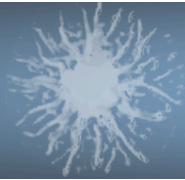
Prof Blacksell has authored or co-authored more than 170 scientific papers in international journals and book chapters.

Mr. Ros Chanyasith



Ros Chanyasith has a Bachelor of Science, Laboratory, from International University and a Bachelor of Arts in Teaching English-TESOL from Pannasastra University, Phnom Penh, Cambodia. Chanyasith has more than 5-years' experience in clinical diagnostic microbiology. Since 2016, he has been working for Diagnostic Microbiology Development Program as a Diagnostic Microbiology Technologist Mentor, building capacity in diagnostic testing according to Dr Ellen Jo Baron's visual flowcharts and Antibiotic Susceptibility Testing performance standards CLSI M02 and M100.

He provides long-term mentoring for Cambodian government staff at provincial and national hospital laboratories in Cambodia including Battambang, Takeo, Kampong Cham, Siem Reap and the National Public Health Laboratory in Phnom Penh. In 2017, Chanyasith contributed to the development of Standard Operating Procedures for isolation and identification of *Burkholderia pseudomallei* and subsequent translation into Khmer language for Cambodian laboratories with the C-TEAM.



Dr. Khim Gaetan

Dr. Khim Gaetan graduated from University of Health Sciences, Cambodia, with a Medical degree in Internal Medicine in 2013. Dr. Gaetan joined Diagnostic Microbiology Development Program (DMDP) in 2016, working in government provincial referral hospitals to bridge the gap between the microbiology laboratory and the physicians and provide support in diagnosis and management of infectious diseases. Dr. Gaetan has significant frontline experience with melioidosis in a LMIC setting, working with physicians who manage this devastating disease. He participated in similar melioidosis awareness activities in Cambodia (*Cambodia Training Event for Awareness of Melioidosis*) in 2017. Dr. Gaetan is a co-author in the drafting of the Cambodia national melioidosis guidelines in collaboration with partners and the Ministry of Health. Currently, Dr. Gaetan is working on strengthening clinical surveillance of melioidosis in Cambodia and has used free online software to develop a survey that can be used on smartphones.

Dr. Tanit Kasantikul

Dr. Tanit Kasantikul is an instructor at the Faculty of Veterinary Science, Mahidol University. He is a graduate with a doctoral degree in veterinary medicine from Mahidol University. Later, he completed his masters from Kasetsart University in field of veterinary pathology.

Dr. Kasantikul has a long-term interest in Zoo and wildlife pathology. He had worked for Zoological Park Organization (ZPO) for years as a zoo pathologist of the diagnostic unit in the Department of Animal Health. He further pursued his interest in veterinary pathology by receiving an advance training in Veterinary Anatomic Pathology Residency training program at Michigan State University at United States. Dr. Kasantikul is currently a certified Diplomate of the American College of Veterinary Pathology. His current work focuses on diagnostic pathology, emerging disease, and neoplasia.

Dr. Valy Keoluangkhot



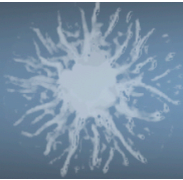
Assoc. Prof. Valy KEOLUANGKHOT is the Head of Infectious and Tropical Diseases Centre at Mahosot Hospital, Vientiane, Lao PDR. She is also a lecturer at the Faculty of Medicine, University of Health Sciences (UHS) and Lao Tropical and Public Health Institute (formerly Institut de la Francophonie pour la Medecine Tropicale or IFMT) in Vientiane. Her teaching responsibilities have contributed to significant development of health professionals nationwide including graduates, residents and fellows.

Assoc. Prof. Valy KEOLUANGKHOT is the President of Lao Internal Medicine Association, Acting Director of Lao Internal Medicine Chair at Faculty of Medicine, University of Health Sciences, Honorary Advisor of Lao Infectious Disease Society, Vice President of National Immunization Technical Advisory Group (NITAG), and a member of Lao Medical Board and Lao Medical Association.

Her major research interests include infectious/tropical diseases and parasitic diseases conducted in collaboration with Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit (LOMWRU), a research unit of Mahidol Oxford Tropical Medicine Research Unit (MORU) Tropical Health Network based at Mahosot Hospital, Lao PDR. She has contributed in publications in international peer reviewed journals, including Transactions of Royal Society of Tropical Medicine and Hygiene, The American Journal of Tropical Medicine and Hygiene, Veterinary Parasitology, Emerging Infectious Diseases, Tropical Medicine and International Health, and Médecine et maladies infectieuses.

She has participated in International Congress on Tropical and Infectious Diseases in Marseilles and Bangkok as a speaker, and in London, Kuala Lumpur, Hanoi, Chiangmai and Colombo as an attendee. She has also been a speaker at annual Lao Internal Medicine Symposium for sixteen years, and Lao-Thai Internal Medicine Conference. She authored national guidelines on tropical and infectious diseases including HIV.

Assoc. Prof. Valy KEOLUANGKHOT holds a Medical Diploma from the University of Health Sciences, and MSc in Tropical Medicine from IFMT, Laos.



Dr. Koukeo Phommason



I have joined LOMWRU since 2009 as a senior research physician involving in many studies done at our unit. Clinical liaison between Microbiology Laboratory, Mahosot Hospital and other linked hospitals. Co-investigator for “Clinical features and Epidemiology of Hand, Foot and Mouth disease”. Organization and recruitment of patients into the study: “Randomized Clinical Trial in the treatment of Scrub and Murine typhus”, “Meloidosis”. I worked on the prevalence of G6PD deficiency in the South of Laos. I worked as the coordinator for the Expanded Fever Surveillance project and was responsible for coordinating and problem solving at Mahosot Hospital the three provincial hospitals involved in this study. Currently I am a PhD student at Amsterdam University working on Targeted Malaria Elimination and also a coordinator of Expanded Fever Surveillance and Acute Respiratory infection studies at three Provincial Hospitals in Laos.

Dr. Matthew Reed



Matthew Reed has been supporting infectious disease research as a veterinary pathologist since earning his board certification in 2016. He earned a Bachelor of Science degree in Zoology from Iowa State University in 2005, and the Doctor of Veterinary Medicine degree from Iowa State University College of Veterinary Medicine in 2009. His veterinary pathology training was conducted at the Joint Pathology Center in Silver Spring, MD. His research experience includes animal model development for select agents such as Ebola virus and Burkholderia pseudomallei infection, tropical diseases including Malaria and Zika, and diseases important to industrial agriculture such as epidemiological surveillance studies and analysis of biosecurity risk factors for bovine viral diarrhea virus infection in cow-calf herds. He is currently serving as the Chief of Comparative Pathology at the Armed Forces Institute of Medical Sciences in Bangkok, Thailand.

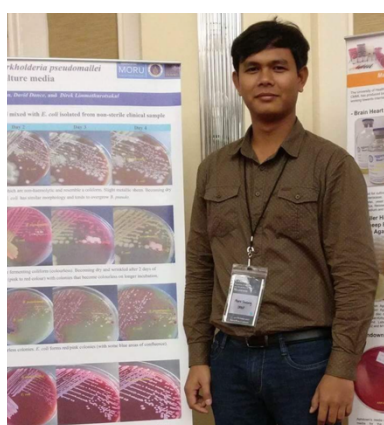
Dr. Andrew Simpson



Dr Andrew (Andy) Simpson MBBS MSc FRCPATH
Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit (LOMWRU), Mahosot Hospital, Vientiane, Lao PDR.

Andy Simpson is a Clinical Microbiologist and Research Physician with the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit (LOMWRU), based in Vientiane. He studied Medicine at Kings College London and Microbiology at Barts Hospital. He has worked previously in London, Thailand (with Oxford University) and most recently with Public Health England's Rare & Imported Pathogens Laboratory at Porton Down. He has published on a wide variety of infections, and in particular, various aspects of melioidosis.

Dr. Morn Sineang



Mr. Morn Sineang is a Diagnostic Microbiology Technologist with DMDP. He graduated with the associate Degree in Medical Laboratory Technology from Technical School for Medical Care, Phnom Penh in 2013 and has a Bachelor's degree in Teaching English as a Foreign Language from Build Bright University, Phnom Penh, 2018. Sineang has five years' experience working with DMDP improving capacity of government microbiology laboratory staff in provincial hospitals and the National Public Health Laboratory in Cambodia. In 2017, he participated in a short course training at Pacific Paramedical Training Center in Wellington, New Zealand, based on diagnostic microbiology and participated in the microbiology module of their distance learning program. In addition, he was a facilitator for the wet lab during C-TEAM, October 2017 in Cambodia. Sineang successfully submitted an abstract and will present the poster "Implementation of Standard Operating Procedures for Testing and Reporting of *Burkholderia pseudomallei* in Cambodian Government Laboratories" at the 9th World Melioidosis Congress 2019, Hanoi, Vietnam.

Dr. Noikaseumy Sithivong

I am the head of laboratory at the National Center for Laboratory and Epidemiology responsible for the Bacteriology Unit and Serology Unit and work as manager of laboratory Section. I am the member of Biosafety and Biosecurity authority and National AMR surveillance, where I supervise to detect the causative agents of diarrhea and outbreak investigation and response; detection of *Burkholderia pseudomallei*, Shigella, salmonella, staphylococcus, Neisseria gonorrhea, and more. I hope to enhance Laboratory capacity in the province for performing bacteriology to detect the causative agents of diarrhea. To develop national biosafety guidelines, I would like to have bacteriology unit for all provincial hospitals in Lao PDR.

Dr. Pornpan Suntornsut



Pornpan Suntornsut is a study leader of melioidosis prevention programme at Mahidol-Oxford Tropical Medicine Research Unit (MORU). Her research experiences (as a research nurse and a study leader) involved with clinical studies and quantitative research. She has to manage a large behavioral change randomized control trial, which aim to evaluate effect of health education program to reduce rate of acquiring melioidosis infection in diabetes adults. To determine potential behavioral change interventions and to develop health education program, qualitative methods were used. She had conducted focus groups and interviews to identify the behavioral barriers to wear protective gear during farming as a protection from pathogenic organisms in soil and water.



Dr. Watthana Theppangna

Dr. Watthana Theppangna currently acts as the Deputy Director of National Animal Health Laboratory, Department of Livestock and Fisheries of Lao PDR. His major responsibilities works on Laboratory Biosafety and Biosecurity, National OIE focal point for wildlife disease. His major work also significant zoonoses and transboundary animal diseases diagnosis at the Laboratory and wildlife disease diagnosis for all the wildlife in the country. Dr. Watthana also work for National University of Lao PDR for supporting the lectural for

veterinary student in the university in Lao PDR and providing the training support on Animal disease diagnosis and control to the vet authorities in the each province in LAO PDR.

Dr. Watthana received his Doctor of Veterinary Medicine (DVM) from Kasetsart University, Thailand in 2000. Dr. Watthana has a background in animal diseases disaster management in Lao PDR through his work with the Care international organization and ACF international organization based in LAO PDR. He received a Doctor of philosophy (PhD) from the Tottori University, Japan. He completed his PhD on Veterinary microbiology. He most recently worked with the FAO as a National technical officer for Avian Influenza disease control. His role was to provide an animal Health-related technical support for the project in Lao PDR. He also worked with the project under USAID funded support through PREDICT program over 10 years for screening the emerging infectious diseases in wildlife in the country. In his spare time, Dr. Watthana enjoys travelling.

Dr. Nicola Townell



Dr Nikki Townell, Infectious Disease Physician and Microbiologist successfully completed joint training in January 2015. She is fellow for the Royal Australian College of Physicians and Royal College of Pathologists Australia. She has worked as a consultant in Australia, as well as a number of countries in the Pacific region, prior to joining DMDP as Clinical Team Lead in January

2019. She is working with Cambodian doctors and nurses to improve knowledge in microbiology and strengthen capacity in regards to diagnosis and management of infections. As *Burkholderia pseudomallei*, causative agent of melioidosis, is one of the most frequently isolated pathogens by microbiology laboratories in Cambodia, a lot of her work is focused on

supporting early recognition, timely diagnosis and optimal management of patients with melioidosis.

Dr. Pichest Watanapairojrat



Pichest Watanapairojrat is a general surgeon at department of surgery, Faculty of Medicine of Naresuan university. He has interests in minimally invasive surgery (MIS), Trauma, Hepatobiliary and GI endoscopy. His works focuses on laparoscopic cholecystectomy, laparoscopic totally extraperitoneal hernia repair, endoscopic retrograde cholangiopancreatography (ERCP) and morbid obesity. He held the position as course director of Advanced Trauma Life Support (ATLS), Royal College of Surgery of Thailand; ATLS & ACLS instructor and vice director for administrative affairs of Naresuan University Hospital.

Dr. Vanaporn Wuthiekanun



Vanaporn Wuthiekanun or Lek is a senior microbiologist at Mahidol-Oxford Tropical Medicine Research Unit (MORU). She has a long-term interest in melioidosis research for over 30 years. Her research focuses on diagnostic, epidemiology, and environmental sampling. She is a first person who isolated *Burkholderia thailandensis* and *B. thailandensis* express a *B. pseudomallei*-like capsular from environment. Her research focuses on the diagnostic test development and evaluation, and epidemiological aspects of tropical and emerging infections (included Leptospirosis, Staphylococcus aureus infection and etc.). Her collaborations with clinical and scientific colleagues elsewhere in Thailand and overseas have resulted in over 230 peer-reviewed publications.



Event Logistics

Venue Information

Amari Vang Vieng

Song River Road, Sawang Village, Vang Vieng, Vientiane 1003 Lao PDR

Phone: +856 (0)23 511800 Fax: +856 (0)23 511999

Inthira Hotel Vang Vieng

Ban Viengkeo, Vang Vieng District Vientiane Province

Phone: +856 (0)23 511088 Fax : +856 (0)23 511088

Meals

Breakfast is included with your hotel package. Lunches and tea breaks will be provided to all attendees. Dinner will be provided at the networking event. Attendees are responsible for other meal arrangements. The meal schedule for the duration of the workshop will be outlined in the agenda.

Transportation

There will be two large VIP charter buses to transport participants from the Ministry of Health (MOH) in Vientiane in Vientiane to Vang Vieng on September 30 at 12:30 pm. Participants who arrive at Wattay International Airport (VTE) on September 30 will be transported to the Ministry of Health at 12:00 p.m. to join the rest of the group. On October 3 at 12:30 pm, participants will be transported back to MOH and onward to Wattay International Airport in Vientiane.

Coordinating Instructions

- Dress for this event will be business or working casual
- POC for travel itineraries and hotel accommodations:
 - Jacob Roodvoets Jacob.Roodvoets@globalsyseng.com
WhatsApp: +1 (517) 898-0563
 - Chris Russell chris.russell@globalsyseng.com
WhatsApp: +1 (703) 915-2338