

**e-ASIA Joint Research Program (e-ASIA JRP)**  
**The review results of the 10<sup>th</sup> Call for Proposals**  
**in the field of “Health Research”**  
**on the topic of**  
**“Infectious Diseases and Cancer”**

It is our great pleasure to announce the selected projects of the e-ASIA Joint Research Program (e-ASIA JRP\*1) 10<sup>th</sup> Call for Proposals in the field of “Health Research” on the topic of “Infectious Diseases and Cancer”.

A total of 34 proposals was submitted in response to the 10<sup>th</sup> joint call for proposals. After careful consideration based on the joint review results by the 12 funding organizations from 10 countries participating in the call\*2, the following seven collaborative projects were selected for support with the approval of the e-ASIA JRP Board. Support to the projects will continue for three years.

**“Alternative therapeutics to tackle AMR pathogens”**

to be conducted jointly by:

Thailand: Tavan Janvilisri, Professor, Mahidol University

USA: Joy Scaria, Associate Professor, South Dakota State University

Australia: Henrietta Venter, Associate Professor, University of South Australia

Philippines: Angelyn Lao, Associate Professor, De La Salle University

This cooperative research project aims to deliver alternative, non-antibiotic therapies to combat antimicrobial resistant (AMR) pathogens. AMR is one of the biggest challenges facing healthcare industries and is on a rapid rise as a result of the overuse of antibiotics. Replacing antibiotics with alternative products will delay the resistance and restore the activity of antibiotics that are no longer effective due to resistance.

**“Ending HIV transmission by Optimizing Pre-exposure prophylaxis in East Asia (HOPE)”**

to be conducted jointly by:

Australia: Jason Jiat Shern Ong, Doctor / Head of HIV Economics and Health Preference Research, Monash University

Thailand: Nittaya Phanuphak, Executive Director, Institute of HIV Research and Innovation

Philippines: Noel Juban, Professor, University of the Philippines Manila

USA: Weiming Tang, Doctor, University of North Carolina at Chapel Hill

This project aims to reduce HIV transmission in East Asia by optimizing the effectiveness of pre-exposure prophylaxis (PrEP). It establishes a network of regional experts to co-design strategies with key populations in Australia, Thailand and the Philippines. Interventions to optimize adherence among PrEP users will be informed by innovative methods (crowdsourcing, discrete choice experiments) and implemented in each country.

### **“Promotion of photodynamic medicine for cancer”**

to be conducted jointly by:

Japan: Shun-ichiro Ogura, Associate Professor, Tokyo Institute of Technology

Indonesia: Anom Bowolaksono, Doctor / Associate Professor, University of Indonesia

USA: Taifo Mahmud, Professor, Oregon State University

This cooperative research project aims to develop a new platform of aminolevulinic acid based photodynamic medicine that can be used for different purposes, ranging from screening of early stage cancers, diagnosis, to total treatment of cancers. Simultaneously, we will screen and develop small molecules that can improve the efficiency of photodynamic medicine.

### **“Development of genome platform for virulence and antimicrobial resistance of *Helicobacter pylori* in ASEAN countries”**

to be conducted jointly by:

Japan: Yoshio Yamaoka, Professor / Dean of Faculty of Medicine, Oita University

Indonesia: Muhammad Miftahussurur, Vice Rector, Airlangga University

Thailand: Ratha-korn Vilaichone, Professor, Thammasat University Hospital

This cooperative research project aims to develop genome database in ASEAN countries to predict *Helicobacter pylori* (*Hp*) carcinogenesis and antimicrobial resistance (AMR) using bacterial genome wide association study and in vitro experiments including human gastric organoid system. We will establish genome data platform to identify the virulence and AMR mutations used for individual-level treatment regimens and promote international collaboration.

### **“Targeting MYCN/NCYM for cancer therapy”**

to be conducted jointly by:

Japan: Yoshitaka Hippo, Department Head, Chiba Cancer Center

Australia: Tao Liu, Group Leader, The University of New South Wales

Indonesia: Edy Meiyanto, Professor, Gadjah Mada University

The aim of this project is to develop novel therapeutic strategies for liver cancer by targeting *MYCN/NCYM*. The effects of anti-cancer agents inhibiting *MYCN/NCYM* function, obtained either from natural resources or through chemical synthesis, will be examined using patient-derived organoid and mouse models for potential translation into clinical trials. Multi-omics will reveal the molecular mechanisms underlying the tumor suppressive effects.

**“Vector sero-surveillance tools to accelerate malaria elimination”**

to be conducted jointly by:

Australia: Freya Fowkes, Deputy Director of Maternal, Child and Adolescent Health / Head of Malaria and Infectious Disease Epidemiology, Burnet Institute

Thailand: Victor Chaumeau, Head of Entomology Laboratory, Shoklo Malaria Research Unit (SMRU)

Myanmar: Aung Pyae Phy, Clinician Scientist, Myanmar Oxford Clinical Research Unit (MOCRU)

Cambodia: Sovannaroeth Siv, Malaria Program Manager / Chief of Technical, Cambodia National Centre For Parasitology, Entomology & Malaria Control

Lao P.D.R.: Phouthalong Vilay, Vice of Unit, Ministry of Health

This cooperative research project aims to develop antibodies to mosquito salivary antigens as tools to measure exposure to malaria vectors and risk of malaria transmission in the Greater Mekong Subregion. We will assess whether these novel sero-surveillance tools can be used to measure the impact of preventive interventions on vector exposure and malaria transmission at an individual and population level.

**“Innovative point-of-care diagnostics and environmental surveillance tools for the elimination of Asian schistosomiasis”**

to be conducted jointly by:

Australia: Pengfei Cai, Doctor / Senior Research Officer, QIMR Berghofer Medical Research Institute

Philippines: Mario Antonio II Jiz, Department Head / Chief Science Research Specialist, Research Institute for Tropical Medicine

Japan: Yasuhito Sako, Professor, Asahikawa Medical University

This cooperative research project aims to develop inexpensive point-of-care (POC) diagnostics for Asian Schistosomiasis that are rapid and field-friendly, and to develop innovative environmental DNA (eDNA) detection tools for surveillance of schistosomiasis. Accurate and rapid diagnostics are a key cornerstone for control and elimination of schistosomiasis in Asia. Our research project will develop and trial molecular and immunology based POC, and molecular based eDNA detection methods in a schistosomiasis-endemic area of the Philippines.

On behalf of the e-ASIA JRP, we would like to offer our sincerest congratulations to the project teams and look forward to the significant impact their results will bring to our society in the future.

\*1 The e-ASIA Joint Research Program (e-ASIA JRP)

Through the acceleration of science and technology research exchange and collaboration in the East Asian region, the e-ASIA Joint Research Program (e-ASIA JRP) aims to strengthen research and development capabilities towards resolution of shared challenges across the region, including those associated with materials, alternative energy, agriculture, health research, disaster risk reduction and management, advanced interdisciplinary research towards innovation, and environment. As part of that objective, the e-ASIA JRP intends to support the multilateral collaborative research projects, which must consist of three or more countries.

e-ASIA JRP's homepage: <http://www.the-easia.org/jrp/>

\*2 The list of organizations participating in the 10<sup>th</sup> joint call for proposals in the field of “Health Research”:

- National Health and Medical Research Council (NHMRC), Australia  
URL: <https://www.nhmrc.gov.au/>
- Ministry of Health (MOH), Cambodia  
URL: <http://moh.gov.kh/?lang=en>
- Ministry of Education, Culture, Research and Technology (DIKBUDRISTEK) (Previous Responsible Organization: Ministry of Research and Technology/ National Research and Innovation Agency (RISTEK/BRIN)), Indonesia  
URL: <http://www.dikti.kemdikbud.go.id/> (Available only in Indonesian)  
<https://simlitabmas.ristekbrin.go.id/>
- Japan Agency for Medical Research and Development (AMED), Japan  
URL: <https://www.amed.go.jp/en/>
- Ministry of Health (MOH), Lao PDR  
URL: <https://moh.gov.la/>
- Ministry of Science and Technology (MOST) (Former Ministry of Education (MOE), Myanmar (Website under construction)
- Health Research Council (HRC), New Zealand  
URL: <http://www.hrc.govt.nz/>
- Department of Science and Technology (DOST-PCHR), Philippines  
URL: <https://www.dost.gov.ph/> (DOST)  
<http://www.pchrd.dost.gov.ph/> (DOST-PCHR)
- National Research Council of Thailand (NRCT), Thailand  
URL: <https://www.nrct.go.th/en>
- National Science and Technology Development Agency (NSTDA), Thailand  
URL: <https://www.nstda.or.th/en/>
- National Cancer Institute (NCI), USA  
URL: <https://www.cancer.gov/>
- National Institute of Allergy and Infectious Diseases (NIAID), USA  
URL: <http://www.niaid.nih.gov/>

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