

--Public Announcement--

The e-ASIA Joint Research Program (e-ASIA JRP)  
**The Review Results of the 13<sup>th</sup> Call for Proposals**  
In the Field of

**Health Research**

It is our great pleasure to publicly announce the selected projects from the e-ASIA Joint Research Program (e-ASIA JRP\*<sup>1</sup>) 13<sup>th</sup> Call for Proposals in the field of Health Research.

This call received a total of 52 proposals, reflecting significant interest and collaboration in this vital area. Following a thorough evaluation process, which included joint reviews conducted by seven funding organizations from seven participating countries\*<sup>2</sup>, the following six collaborative projects have been selected for support. These projects have been approved by the e-ASIA JRP Board and will receive funding for a duration of three years.

Project Title:

***“Innovative Bacteriophage-Antibiotic Therapeutics Targeting the Extremely-Drug Resistant Superbugs”***

to be conducted jointly by:

**Australia**

**Tony Velkov**

*Associate Professor, Head of the Anti-infective  
Pharmacology Unit, Monash University*

**Singapore**

**Andrea Lay Hoon Kwa**

*Deputy Director, Pharmacy, Singapore General Hospital*

**USA**

**Gauri Rao**

*Associate Professor, Director of the Quantitative Disease and  
Drug Modeling Center, University of Southern California*

Over population and antibiotic overuse has led to widespread infectious diseases caused by antimicrobial resistant (AMR) bacteria. Serendipitously, these unfortunate events have also led to the co-evolution of super-phages in sewage that kill these super-bugs.

Our project aims to break the AMR vicious cycle by harnessing the bacterial killing power of these super-phages and combine them with new-generation antibiotics to develop novel therapies against these deadly infections.

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Project Title:

**“Accelerating Vaccine Development for *Plasmodium vivax malaria*”**

to be conducted jointly by:

<b>Australia</b>	<b>James Beeson</b> <i>Deputy Director, Burnet Institute</i>
<b>Indonesia</b>	<b>Rintis Noviyanti</b> <i>Senior Research Scientist, National Research and Innovation Agency (BRIN)</i>
<b>Japan</b>	<b>Eizo Takashima</b> <i>Associate Professor, Ehime University</i>

A *Plasmodium vivax malaria* vaccine is crucial to elimination efforts in Asia-Pacific but remains elusive. This project will advance development of promising vaccine candidates identified as major targets of potent protective functional antibody activity. Lead antigens will undergo extensive evaluation in clinical studies of symptomatic malaria, identifying regions targeted by protective antibodies and not vulnerable to vaccine escape. This will inform optimal candidate design as mRNA vaccines using our established platforms supporting pre-clinical studies and development with industry partners.

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Project Title:

**“Systems Immunology Approaches for the Identification of Biomarkers of Susceptibility and Immunity to Severe Dengue Fever”**

to be conducted jointly by:

<b>Australia</b>	<b>Diana Silvia Hansen</b> <i>Prof/Laboratory Head, Infection Discovery Program Co-Head, Monash Biomedicine Discovery Institute</i>
<b>Indonesia</b>	<b>Bachti Alisjahbana</b> <i>Chairperson, Universitas Padjadjaran</i>

**Japan****Kouichi Morita***Professor, Nagasaki University*

This cooperative research project will apply a comprehensive systems immunology approach to cohort studies of individuals with uncomplicated or severe dengue fever recruited at local hospitals in Indonesia. The project will uncover critical correlates of immunity as well as processes leading to life-threatening dengue hemorrhagic fever. The results will inform the design and evaluation of new and safe dengue vaccines and aid the identification of biomarkers to develop diagnostic tools for early detection of cases at risk of severe dengue.

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Project Title:

**“TB-ACQUIRE: Mechanisms and Relevance of Resistance Against Novel Anti-TB Drugs”**

to be conducted jointly by

**Australia****Vitali Sintchenko***Professor, The University of Sydney***Singapore****Stefan Oehlers***Principal Investigator, Agency for Science, Technology and Research (A\*STAR)***Philippines****Catherine Ann Sacopon***Science Research Specialist II, Research Institute For Tropical Medicine*

TB-ACQUIRE addresses a crucial knowledge gap by investigating the acquisition and spread of resistance against new life-saving TB drugs (BPAL/M). Integrating in vitro, in vivo and ‘in human’ studies with cutting-edge long-read sequencing technology and genomics, TB-ACQUIRE will uncover *M. tuberculosis* evolution under selective drug pressure, exploring genetic markers and compensatory mechanisms of drug resistance acquisition and spread. TB-ACQUIRE will contribute to national, regional, and global TB control efforts, and inform updates of the 2023 WHO Drug Resistance Mutation Catalogue.

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Project Title:

**“Collaborative Surveillance to Prevent Measles Outbreaks (CoSMO) in Southeast Asia: A Model for Future Pandemics”**

to be conducted jointly by

<b>Australia</b>	<b>Meru Sheel</b> <i>Associate Professor, The University of Sydney</i>
<b>Lao PDR</b>	<b>Mayfong Mayxay</b> <i>Professor, Vice–Rector and Vice Chair, University of Health Sciences, Ministry of Health; Lao PDR National Immunisation Technical Advisory Group (NITAG)</i>
<b>Philippines</b>	<b>Ma Liza Antoinette Gonzales</b> <i>Professor and Associate Dean for Faculty &amp; Students, University of the Philippines</i>

Efficient pandemic response relies on governments’ ability to identify and monitor diseases in a timely manner. Surveillance in Southeast Asia is often fragmented and ineffective. Using measles as a model, this interdisciplinary project will deliver a new model for collaborative surveillance to eliminate measles and prevent outbreaks in Southeast Asia (Lao PDR and The Philippines). This approach will reduce the morbidity, mortality and socio-economic losses associated with measles. It will also enable a faster and efficient response to emerging infections in the future.

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Project Title:

**“Development of Wastewater Genomic Surveillance Platform Powered by Artificial Intelligence for Next Pandemic Preparedness in Indonesia”**

to be conducted jointly by

<b>Indonesia</b>	<b>Harimurti Nuradji</b> <i>Head of Research Center, National Research and Innovation (BRIN)</i>
<b>Japan</b>	<b>Ryo Honda</b> <i>Professor, Kanazawa University</i>
<b>Australia</b>	<b>Guangming Jiang</b> <i>Associate Professor, University of Wollongong</i>

This project aims to create a comprehensive platform for data collection, sharing, and modeling to track the spread of COVID-19, tuberculosis, and antimicrobial resistance via wastewater surveillance. By employing artificial intelligence, it aims to analyze epidemic trends within communities, leveraging wastewater information into tracers for the origins and spread of diseases to assess intervention effectiveness. The developed platform will support decision-making in disease control, especially for low- and middle-income countries such as Indonesia, where clinical surveillance is limited, by providing insights on the ecology and evolution of the pathogens.

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**\*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 Seven Participating Organizations**

In the 13<sup>th</sup> Joint Call for Proposals in the Field of Health Research:

- Australia: National Health and Medical Research Council (NHMRC)  
<https://www.nhmrc.gov.au/>
- Indonesia: National Research and Innovation Agency (BRIN)  
<https://brin.go.id/>
- Japan: Japan Agency for Medical Research and Development (AMED)  
<https://www.amed.go.jp/en/>
- Lao PDR: Ministry of Health (MOH)  
<https://moh.gov.la/>
- Philippines: Department of Science and Technology (DOST-PCHRD)  
<https://www.pchrd.dost.gov.ph/>

- Singapore: Agency for Science, Technology and Research (A\*STAR)  
<https://www.a-star.edu.sg/>
- USA: National Institute of Allergy and Infectious Diseases (NIAID)  
<https://www.niaid.nih.gov/>

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