

***The e-ASIA Joint Research Program***  
7<sup>th</sup> Annual Activity Report - Summary  
(2018.8 ~ 2019.8)



e-ASIA JRP Secretariat

Basic Information

This yearly report summarizes the activities of the e-ASIA Joint Research Program during the period from the 7<sup>th</sup> Annual Board Meeting (August 22-23, 2018) to the 8<sup>th</sup> Annual Board Meeting (September 5-6, 2019) in principle.

First Edition

This report was originally approved on September 6, 2019

**The e-ASIA Joint Research Program  
Annual Activity Report – Summary  
(7<sup>th</sup> year: 2018.8 ~ 2019.8)**

Program Administration

The 7<sup>th</sup> Annual Board Meeting

1. The 7<sup>th</sup> Annual Board Meeting was held on August 22-23, 2018 in Vladivostok, Russia, chaired by Mr. Yaroslav Sorokotyaga, Division director, International Relations Department, Russian Foundation for Basic Research (RFBR).
2. The items that had been approved by the Board through the 18<sup>th</sup> to 22<sup>nd</sup> ad hoc Board Meetings were reviewed at the 7<sup>th</sup> Annual Board Meeting.
3. The final reports for the finished projects, the progress reports for on-going projects were reported to the Board. The Board discussed about how to enhance interaction among the Program and projects, and the RFBR proposed to have opportunities for Projects PIs to present research outputs and to interact among the Board, SAC, and projects for better understanding of the supported projects
4. The Board discussed improvement proposals from the Secretariat and the MOs. One important issue is the reconsideration of the SAC mission due to the limited SAC outcome with little utilization of valuable experts' insight. The Board agreed to invite SAC members to jointly discuss at the next Board meeting in Thailand in order to hear their opinion on the role of SAC.
5. Other Improvement proposals of e-ASIA Activities brought to the discussion floor were:
  - Call guidelines improvement
  - Delay of award notices in past e-ASIA JRP calls
  - Time difference in project funding period
  - Minimize delay of final approval
  - Increase/expand publicity to widely disseminate funding opportunities
  - Modification of application format
  - Increase the evaluation period

- Effective utilization of project outcome
6. The Board approved the concept to facilitate opportunities for early-career researchers. JST was entrusted by the Board to draft the call concept.

The Board discussed topics of interests and agreed on the schedule for the 8<sup>th</sup> Call for proposals. The Board also approved the following workshops to be further discussed;

- Workshop on “Climate Change” organized by RFBR
- Workshop on “Precision Medicine” organized by NSTDA and TCELS.
- Workshop on “Innovative Materials” for early-career researchers organized by DOST

AMED proposed establishing a mid-term or five-year strategy to focus on long-term topics of priority and the Board agreed that AMED leads call topics discussion for a longer-term plan.

7. The Board also discussed about the “Five Year Program Activity Evaluation” summarized by the SAC that covered various aspects of program implementation for the 5 years such as methods to improve the program, future progress, and future activities, etc.
8. Other topics that were discussed at the meeting included rating for national evaluation results, Guest Partner status, revision of the Program statute, future activities and the operation policy of e-ASIA secretariat focusing on the following three topics:
- Mr. Sato’s Term of office as Secretary-General
  - Sustainability of the Program
  - Location of the e-ASIA Secretariat Office

#### The 23<sup>rd</sup> ad hoc Board Meeting

9. The 23<sup>rd</sup> ad hoc Board Meeting was held via email sent on 30<sup>th</sup> October 2018.
10. Formal participation of the Agency for Science, Technology and Research (A\*STAR) of the Republic of Singapore of the e-ASIA JRP was approved.

The 24<sup>th</sup> ad hoc Board Meeting

11. The 24<sup>th</sup> ad hoc Board Meeting was held via email sent on 14<sup>th</sup> November 2018.
12. One collaborative research projects on the “Fundamental study of the physical properties of metal-oxide single nanowires and nanoparticles for bio-nano-sensing” were approved from the 6<sup>th</sup> Call for Proposals on the topic of “Functional Bio-Nanotechnology for Innovative Materials System” in the fields of “Materials (Nanotechnology)”.
13. The following two collaborative research projects were approved from the 7<sup>th</sup> Call for Proposals: 1) “Integrated biorefinery of sugarcane trash” and 2) “Development of Algal Bioenergy Systems for Green and Sustainable ASEAN Region” on the topic of “Bioenergy” in the field of “Alternative Energy”.
14. The following two collaborative research projects were approved from the 7<sup>th</sup> Call for Proposals: 1) “Establishment of a Landslide Monitoring and Prediction System” and 2) “Informational system for management of flood and land slide disaster areas using a distributed heterogeneous robotic team” in the field of “Disaster Risk Reduction and Management” on the topic of “Torrential Rainfall, Associated Flood and Land Slide”
15. The following three collaborative research projects were approved from the 7<sup>th</sup> Call for Proposals: 1) “Development of new diagnostic tools for detecting malaria parasites resistant to drugs used in Artemisinin-based Combination Therapy”, 2) “Investigating the sylvatic transmission and reservoir potential of Zika, dengue, and chikungunya viruses of long-tailed macaques proximal to human populations of Thailand and Cambodia”, and 3) “Randomised trial of an intervention to increase tuberculosis notifications by private practitioners in Indonesia, plus sequencing and susceptibility sub studies” on the topic of “Infectious Diseases and Cancer” in the field of “Health Research”.

The 25<sup>th</sup> ad hoc Board Meeting

16. The 25<sup>th</sup> ad hoc Board Meeting was held via email sent on 3<sup>rd</sup> December 2018.

17. Support for one collaborative research project on the “Development of Precision treatment for inflammation/infection-related cholangiocarcinoma” was approved from the 7<sup>th</sup> Call for Proposals on the topic of “Infectious Diseases and Cancer” in the fields of “Health Research”. The title of the project was changed to “Construction of liver fluke biliary cancer PDX library aiming at development of personalized medicine” later based on the condition requested at the time of adoption.

#### The 26<sup>th</sup> ad hoc Board Meeting

18. The 26<sup>th</sup> ad hoc Board Meeting was held via email sent on 11<sup>th</sup> January 2019.

19. Formal participation of the Ministry of Industry and Handicraft (MIH) of the Kingdom of Cambodia was approved.

#### The 27<sup>th</sup> ad hoc Board Meeting

20. The 27<sup>th</sup> ad hoc Board Meeting was held via email sent on 24<sup>th</sup> April 2019.

21. Formal approval of Ms. Emi Kaneko, new director of JST Singapore Office, as new Secretary-General of the Program Secretariat from April 2019.

#### Program Secretariat


22. Ms. Emi Kaneko, who succeeded Mr. Masaki Sato as the new director of JST Singapore Office, became the new Secretary-General of the Program Secretariat from April 2019.

23. Term of e-ASIA office at TSP (Bangkok) provided by NSTDA will finish the 2<sup>nd</sup> term in 2020.





#### Member Organizations and Guest Partner

1. List of current Member Organizations and their Board Members and representatives in alphabetical order by country (as of August 2019).

\*21 Member Organizations from 14 countries

	Country	Name	Title & Organization
1	 Australia	Prof. Anne Kelso AO	National Health and Medical Research Council, NHMRC

	<b>Country</b>	<b>Name</b>	<b>Title &amp; Organization</b>
2	 Cambodia	Dr. Kheng Sim	Deputy-Director of Communicable Disease Control Department, MOH
3	 Cambodia	(TBD)	(TBD), MIH
4	 Indonesia	Prof. Ocky Radjasa	Directorate General of Research and Development, RISTEKDIKTI
5	 Japan	Mr. Masahiko Noda	Managing Director of Department of International Affairs, AMED
6	 Japan	Dr. Michinari Hamaguchi	President, JST (as the agent of MEXT)
7	 Lao PDR	Mr. Phouthanouthong Saysombath	Deputy Director General of Planning and Cooperation, MOST
8	 Lao PDR	Dr. Rattanaxay Phetsouvanh	Director General of the Department of Communicable Diseases Control , MOH
9	 Malaysia	(TBD)	(TBD), MESTECC (Status: Quasi Member)
10	 Myanmar	Dr. Win Khaing Moe	Director General, Department of Research and Innovation, MOE
11	 New Zealand	Prof. Kathryn McPherson	Chief Executive, HRC
12	 The Philippines	Dr. Rowena Cristina L. Guevara	Undersecretary for Research & Development, DOST
13	 Russian Federation	Mr. Alexander Usoltsev	Head of International Relations, RFBR
14	 Singapore	Dr. Raj. Thampuran	Special Advisor, Agency for Science, Technology and Research (A*STAR)
15	 Thailand	Ms. Kunvara Chotiphansophon	Deputy Director, ARDA
16	 Thailand	Dr. Narong Sirilertworakul (deputy: Prof. Prasit Palittapongarnpim)	President, NSTDA (Executive Vice President, NSTDA)
17	 Thailand	Dr. Nares Damrongchai	Chief Executive Officer, TCELS

	Country	Name	Title & Organization
18	 Thailand	(TBD)	(TBD), TSRI
19	 U.S.	Mr. F. Gray Handley	Associate Director for International Research Affairs, NIAID
20	 U.S.	Dr. Paul Pearlman	Health Science Policy Analyst, Center for Global Health, NCI
21	 Vietnam	Ms. Le Thi Viet Lam	Deputy Director General of Department of International Cooperation, MOST

2. In addition to the above Member Organizations, National Science Foundation of Sri Lanka is the Guest Partner organization in the Program since October 2017.

#### Joint Calls for Proposals

##### The 7<sup>th</sup> Joint Calls for Proposals

1. Out of eight proposals submitted to the 7<sup>th</sup> Joint Call for Proposals on the topic of “Bioenergy” in the field of “Alternative Energy” opened from January to April 2018, the following two projects were approved by the Board to be supported:
  - i “Integrated biorefinery of sugarcane trash” to be supported by JST of Japan, NSTDA of Thailand, RISTEKDIKTI of Indonesia, and MOST (Lao PDR).
  - ii “Development of Algal Bioenergy Systems for Green and Sustainable ASEAN Region” to be supported by JST of Japan, NSTDA of Thailand, DOST of the Philippines, and RISTEKDIKTI of Indonesia,
  
2. Out of 29 proposals submitted to the 7<sup>th</sup> Joint Call for Proposals in the topic of “Infectious Diseases, Cancer” in the field of “Health Research” opened from January to April 2018, the following four projects were approved by the Board to be supported:
  - i “Development of new diagnostic tools for detecting malaria parasites resistant to drugs used in Artemisinin-based Combination Therapy” to be



supported by AMED of Japan, NSTDA of Thailand, and RISTEKDIKTI of Indonesia.

- ii “Investigating the sylvatic transmission and reservoir potential of Zika, dengue, and chikungunya viruses of long-tailed macaques proximal to human populations of Thailand and Cambodia” to be supported by NSTDA of Thailand, NIAID of United States, and MOH of Cambodia.
- iii “Randomised trial of an intervention to increase tuberculosis notifications by private practitioners in Indonesia, plus sequencing and susceptibility sub studies” to be supported by HRC of New Zealand, RISTEKDIKTI of Indonesia, and NIAID of United States.
- iv “Construction of liver fluke biliary cancer PDX library aiming at development of personalized medicine” to be supported by NSTDA of Thailand, AMED of Japan, and NCI of United States.

3. Out of 10 proposals submitted to the 7<sup>th</sup> Joint Call for Proposals on the topic of “Torrential Rainfall, Associated Flood and Land Slide” in the field of “Disaster Risk Reduction and Management” opened from January to April 2018, the following two projects were approved by the Board to be supported:

- i “Establishment of a Landslide Monitoring and Prediction System” to be supported by JST of Japan, NSTDA of Thailand, and MOST of Vietnam.
- ii “Informational system for management of flood and land slide disaster areas using a distributed heterogeneous robotic team” to be supported by RFBR of Russia, JST of Japan, and NSTDA of Thailand.

#### The 8<sup>th</sup> Joint Calls for Proposals

4. The 8<sup>th</sup> Joint Calls for Proposals on the topic of “Conservation, Improvement and Utilization of Animal Genetic Resources in Asia” in the field of “Agriculture”, on the topic of “Innovative Materials” in the field of “Materials”, and on the topic of “Infectious Diseases, Antimicrobial and Multidrug

Resistance, and Cancer Research” in the field of “Health Research”, were opened from January to May 2019. These calls were supported by the following Member Organizations (listed in alphabetical order):

Participating Member Organizations and their funding modalities for the 8<sup>th</sup> Calls for Proposals

		Conservation, Improvement and Utilization of Animal Genetic Resources in Asia	Innovative Materials	Infectious Diseases	Antimicrobial and Multidrug Resistance	Cancer Research
Australia	NHMRC	-	-	New	New	New
Cambodia	MOH	-	-	In-kind	In-kind	In-kind
Indonesia	RISTEKDIKTI	New <sup>*1</sup> , In-kind	New <sup>*1</sup> , In-kind	New <sup>*1</sup> , In-kind	-	-
Japan	JST	New	New	-	-	-
	AMED	-	-	New	New	New
Lao PDR	MOST	In-kind	In-kind	-	-	-
	MOH	-	-	In-kind	In-kind	In-kind
Malaysia	MESTECC	-	-	-	-	-
Myanmar	MOE	-	-	-	-	-
New Zealand	HRC	-	-	New	New	New
Philippines	DOST	New, In-kind	New, In-kind	New, In-kind	New	New
Russia	RFBR	New	New	New	New	New
Sri Lanka	NSF	New	-	-	-	-
Thailand	NSTDA	-	New	New	New	-
	ARDA	-	-	-	-	-
	TCELS	-	-	-	-	New
	TRF	New	-	-	-	-
USA	NIAID	-	-	New, In-kind, Re-budget	New, In-kind, Re-budget	-

	NCI	-	-	-	-	-
Vietnam	MOST	New, In-kind	New, In-kind	-	-	-

\*1: "New" funding modality is added on 7 May to avoid applying to domestic funding program to seek "New" funding from RISTEKDIKTI.

The selection of the proposals for all these three calls is in progress.

### Researcher Interaction

1. The e-ASIA Joint Research Program Workshop on Cancer Research  
 The workshop was held on the 24th – 25th of August 2018, took place in the Far Eastern Federal University (Russia, Vladivostok). This workshop was held as a side event of the e-Asia JRP 7<sup>th</sup> Annual Board Meeting with participation of leading researchers in the field of cancer research from the Asia-Pacific region.  
 The goal of the event was to foster the development of international scientific cooperation and to attract public attention to emerging cancer problems, to foster exchange of authoritative opinions of leading scientists and the exchange of therapeutic cancer treatment international experience.
  
2. The e-ASIA Joint Research Program Workshop on Strategy for Conservation and Utilization of Animal Genetic Resources in Asia  
 The workshop was held on 10<sup>th</sup> October 2018 in Tokyo, Japan. The workshop was Co-organized by the Japan Science and Technology Agency (JST), National Science Foundation (NSF) and e-ASIA JRP Secretariat. There were about 40 participants including leading researchers and representatives of research institutes, government, and universities in the Asia region. This workshop aimed to discuss issues and concerns in the topics area, discuss potential solutions, prepare observations and recommendations of the Workshop, develop project ideas for follow up actions and possibility of joint research activities.
  
3. The e-ASIA Joint Research Program Workshop on Intelligent Infrastructure for Water  
 The workshop was held on 21-22 February, 2019 in Hanoi, Vietnam. There

were 60 participants including 18 invited speakers (Indonesia, Japan, Philippines, Thailand, and Vietnam).

The objectives of the workshop included:

- Discuss hot topics of “Intelligent Infrastructure for Water” among eminent researchers’ community in e-ASIA JRP, leading to sustainable future development in Asian countries.
- Explore potential future collaboration opportunities to prepare for the next e-ASIA JRP call on "Advanced Interdisciplinary Research towards Innovation" in 2019-20.
- Establish tight researchers’ network among participants for better international collaboration, especially by inviting and encouraging young researchers to the research presentations by invited speakers.

Participants shared the latest information on the Nagoya Protocol on Access and Benefit sharing, a supplemental agreement on the Convention on Biological Diversity, which shall be observed when international joint research on genetic resources is conducted.

#### 4. Asia - Pacific Scientific Workshop involving NHMRC and other e-ASIA Joint Research Program Member Organizations

The workshop was held on 4th and 5th of March 2019 in Singapore, co-organized by NHMRC, HRC, NIAID, and AMED to encourage and foster collaborative partnerships in health and medical research across the Asia – Pacific region. Around 50 scientists from Australia, Cambodia, Indonesia, Japan, New Zealand, Philippines, Singapore, Sri Lanka, Thailand and the United States gave a wide range of scientific presentations over the two days covering research and policy issues across the workshop themes.

#### Selected Projects

1. The third project selected from the 6<sup>th</sup> Calls of Proposals in the field of “Materials” on the topic of “Functional Bio-Nanotechnology for Innovative Materials System” is as follows:
  - i. “Fundamental study of the physical properties of metal-oxide single nanowires and nanoparticles for bio-nano-sensing”.

(Countries and Principal Investigators)

Russia: Victor Koledov, Doctor, Magnetic phenomena Laboratory,  
Kotel'nikov Institute of Radioengineering and Electronics of Russian  
Academy of Sciences

Myanmar: Than Zaw Oo, Doctor, Department of Physics, Panglong  
University

Philippines: Gil Nonato Santos, Professor, College of Science, De La  
Salle University- Manila

Vietnam: Vu Hong Ky, Senior Researcher, Lab of Materials Science,  
Institute of Materials Science of Vietnam Academy of Science and  
Technology

(Forms of Funding)

Russia: New funds from Russian Foundation for Basic Research (RFBR)

Myanmar: "In-kind" participation support by Ministry of Education (MOE)

Philippines: New funds from Department of Science and Technology  
(DOST)

Vietnam: New funds from Ministry of Science and Technology (MOST)

This research aims to study size effects for individual metal-oxide  
nanoparticles and nanowires using new mechanical 3D  
nanomanipulation methods based on smart materials nanotweezers and  
search for new physical effects and applications.

2. The selected projects from the 7<sup>th</sup> Call for Proposals in the field of "Disaster Risk Reduction and Management" on the topic of "Torrential Rainfall, Associated Flood and Land Slide", in the field of "Alternative Energy" on the topics of "Bioenergy", and in the field of "Health Research" on the topic of "Infectious Diseases, Cancer" are as follows:

Torrential Rainfall, Associated Flood and Land Slide

- i. "Establishment of a Landslide Monitoring and Prediction System".

(Countries and Principal Investigators)

Japan: Akihiko Wakai, Graduate School of Science and Technology,  
Gunma University

Thailand: Jessada KARNJANA, Advanced Automation and Electronics  
Research Unit, NECTEC

Vietnam: Hung HOANG VIET, Faculty of Civil Engineering, Thuyloi  
University of Vietnam

(Forms of Participation)

Japan: New funds from Japan Science and Technology Agency (JST)

Thailand: New funds from National Science and Technology  
Development Agency (NSTDA)

Vietnam: New funds from Ministry of Science and Technology (MOST)

This cooperative research project will develop a simple method for  
landslide susceptibility mapping to help reduce landslide disasters in  
cooperation with researchers from Japan, Thailand, and Vietnam.

- ii. “Informational system for management of flood and land slide disaster  
areas using a distributed heterogeneous robotic team”

(Countries and Principal Investigators)

Russia: Evgeni Magid, Professor, Higher School of Information  
Technology and Intelligent Systems, Kazan Federal University

Japan: Fumitoshi Matsuno, Professor, Mechanical Engineering and  
Science, Kyoto University

Thailand: Jackrit Suthakorn, Professor, Department of Biomedical  
Engineering, Mahidol University

(Forms of Participation)

Russia: New funds from Russian Foundation for Basic Research (RFBR)

Japan: New funds from Japan Science and Technology Agency (JST)

Thailand: New funds from National Science and Technology  
Development Agency (NSTDA)

The project develops an informational system that collects data for  
disaster management using heterogeneous robotic teams. We create a

novel working framework and control strategies for robots' cooperative behavior in sensing, monitoring and mapping of flood and landslide disaster areas. The findings will be validated in simulations and field experiments.

### Bioenergy

#### i “Integrated biorefinery of sugarcane trash”

(Countries and Principal Investigators)

Japan: Takashi Watanabe, Director, Professor, Research Institute for Sustainable Humanosphere (RISH), Kyoto University

Thailand: Verawat Champreda, Research Unit Leader, Microbial Biotechnology and Biochemicals Research Unit, National Center for Genetic Engineering and Biotechnology

Indonesia: Euis Hermiati, Group Leader, Research Center for Biomaterials, Indonesian Institute of Sciences (LIPI)

Laos: Keonakhone KHOUNVILAY, Division Head, Faculty of Engineering, National University of Laos

(Forms of participation)

Japan: New funds from Japan Science and Technology Agency (JST)

Thailand: New funds from National Science and Technology Development Agency (NSTDA)

Indonesia: “In-kind” participation supported by Ministry of Research, Technology and Higher education (RISTEKDIKTI)

Laos: “In-kind” participation supported by Ministry of Science and Technology (MOST)

This cooperative project aims to study an integrated biorefinery model for efficient utilization of sugarcane trash for conversion to advanced biofuels and biochemicals using bio- and chemical processing. Social LCA will be studied to show social impact of the proposed model.

#### ii “Development of Algal Bioenergy Systems for Green and Sustainable ASEAN Region”

(Countries and Principal Investigators)

Japan: Armand Quitain, Professor, Cross-Cultural and Multidisciplinary Studies, Kumamoto University

Thailand: Suttichai Assabumrungrat, Professor, Department of Chemical Engineering, Chulalongkorn University

Philippines: Raymond Tan, Professor, Center for Engineering and Sustainable Development Research, De La Salle University

Indonesia: Siti Zullaikah, Assistant Professor, Department of Chemical Engineering, INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS)

(Forms of participation)

Japan: New funds from Japan Science and Technology Agency (JST)

Thailand: “In-kind” participation supported by National Science and Technology Development Agency (NSTDA)

Philippines: “In-kind” participation supported by Department of Science and Technology (DOST)

Indonesia: “In-kind” participation supported by Ministry of Research, Technology and Higher education (RISTEKDIKTI)

For a sustainable ASEAN region, this cross-cultural and multidisciplinary research collaboration aims to develop third-generation algal bioenergy systems by non-conventional approaches utilizing green sustainable technologies such as microwave, hydrothermal and supercritical fluid aided with novel functional catalysts. The integration of such technologies into biomass processing networks will then be optimized using process systems engineering (PSE) models.

### Infectious Diseases and Cancer

- i. “Development of new diagnostic tools for detecting malaria parasites resistant to drugs used in Artemisinin-based Combination Therapy”

(Countries and Principal Investigators)

Japan: Shiroh Iwanaga, Professor, Environmental Parasitology, Tokyo Medical and Dental University

Thailand: Chairat Uthaipibull, Principal Researcher, Medical Molecular Biology Research Unit, National Center for Genetic Engineering and



Biotechnology (BIOTEC)

Indonesia: Din Syafruddin, Professor, Malaria and Vector Resistance Laboratory, Eijkman Institute for Molecular Biology

(Forms of participation)

Japan: New funds from Japan Agency for Medical Research and Development (AMED)

Thailand: “In-kind” participation supported by National Science and Technology Development Agency (NSTDA)

Indonesia: “In-kind” participation supported by Ministry of Research, Technology and Higher education (RISTEKDIKTI)

This cooperative research project aims to identify new genetic markers associated with resistance to drugs used in Artemisinin-based Combination Therapy (ACT), and to develop new diagnostic tools to detect those identified biomarkers in ACT-resistant malaria parasites.

- ii. “Investigating the sylvatic transmission and reservoir potential of Zika, dengue, and chikungunya viruses of long-tailed macaques proximal to human populations of Thailand and Cambodia”

(Countries and Principal Investigators)

Thailand: Kobporn Boonnak, Assistant Professor, Microbiology and Immunology, Mahidol University

USA: Rebecca C. Christofferson, Assistant Professor, School of Veterinary Medicine, Louisiana State University

Cambodia: Leang Rithea, Head, National Dengue Control Program, National Center for Parasitology, Entomology, and Malaria Control

(Forms of participation)

Thailand: New funds from National Science and Technology Development Agency (NSTDA)

USA: New funds from National Institute of Allergy and Infectious Diseases (NIAID)

Cambodia: “In-kind” participation supported by Ministry of Health (MOH)

This cooperative research project aims to determine the role of non-human primates in the transmission cycle of Zika, dengue, and chikungunya viruses in Southeast Asia through evaluation of the seroprevalence of monkeys and close proximal human population(s), as well as infection rates in peri-urban and urban mosquitoes.

- iii. “Randomised trial of an intervention to increase tuberculosis notifications by private practitioners in Indonesia, plus sequencing and susceptibility sub studies”

(Countries and Principal Investigators)

New Zealand: Philip Hill, Professor, Centre for International Health, University of Otago

Indonesia: Bacht Alisjahbana, Ph.D., Faculty of Medicine, University of Padjadjaran

USA: Megan Murray, Professor, School of Public Health, Harvard University

(Forms of participation)

New Zealand: New funds from Health Research Council (HRC)

Indonesia: “In-kind” participation supported by Ministry of Research, Technology and Higher education (RISTEKDIKTI)

USA: New funds from National Institute of Allergy and Infectious Diseases (NIAID)

This cooperative research project aims to conduct a randomised trial of a tailored intervention package to increase notifications of tuberculosis by private practitioners in Bandung, Indonesia. Mycobacterium tuberculosis isolates from notified TB cases will be sequenced to facilitate social network analyses and drug susceptibility testing.

- iv. “Construction of liver fluke biliary cancer PDX library aiming at development of personalized medicine”

(Countries and Principal Investigators)

Thailand: Siwanon Jirawatnotai, Instructor, Department of Pharmacology,

Mahidol University

Japan: Seiji Okada, Professor, Division of Hematopoiesis, Kumamoto University

USA: Piotr Sicinski, Professor, Cancer Biology, Dana-Farber Cancer Institute

(Forms of participation)

Thailand: New funds from National Science and Technology Development Agency (NSTDA)

Japan: New funds from Japan Agency for Medical Research and Development (AMED)

USA: "In-kind" participation supported by National Cancer Institute (NCI)

This cooperative research aims to make possible personalized treatment for inflammation/infection-related cholangiocarcinoma (CCA). By combining strengths of systems pharmacology, patient-derived xenograft animal models, and advanced molecular technology, our team will deliver novel treatment strategies for CCA subtypes.

For more information, please visit the following website:

<http://www.the-easia.org/jrp/>

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