

The e-ASIA Joint Research Program
3rd Annual Activity Report - Summary
(2014.7 ~ 2015.7)



e-ASIA JRP Secretariat

Basic Information:

This yearly report summarizes the activities of the e-ASIA Joint Research Program during the period from the Third Annual Board Meeting (July 11, 2014) to the Fourth Annual Board Meeting (August 2, 2015).

First Edition

This report was originally approved on Aug 3, 2016

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Program Administration

The 3rd Annual Board Meeting

1. The 3rd Annual Board Meeting was held on July 10 and 11, 2014 in Vientiane, the Lao People's Democratic Republic, chaired by the Ministry of Science and Technology of the Lao PDR.
2. Those items that had been approved by the Board through ad hoc Board Meetings were reviewed at the 3rd Annual Board Meeting.
3. The collaborative research project: "Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes" was approved by the Board to support in the field of "Nanotechnology and Materials" from the 4th call for proposals.
4. The collaborative research project: "Evaluation of the pandemic potential of H5N1 highly pathogenic avian influenza viruses circulating in Indonesia" was approved by the Board to support in the field of "Infectious Diseases" from the 3rd pilot call for proposals.
5. Other topics that were discussed at the meeting include redefinition of the Fields of Cooperation, Improvement of Flexible Call for Proposals, IP management, revision of the Program Statute and the Terms of Reference of the Scientific Advisory Council, other candidate Projects from the 3rd pilot call for proposals in the field of "Infectious Diseases", future activities of the Program, etc.
6. Minutes of the 3rd Annual Board Meeting were posted on the website.

The 7th ad hoc Board Meeting

7. The 7th ad-hoc Board Meeting was held via email sent to the Board members on 25th September 2014.

8. The participation of the Agricultural Research Development Agency (ARDA) of Thailand was formally approved by the Board.

The 8th ad hoc Board Meeting

9. The 8th ad hoc Board Meeting was held via email sent to the Board on 11th February 2015.

10. The participation of the Russian Foundation for Basic Research (RFBR) of the Russian Federation was formally approved by the Board.

11. The 2 collaborative research projects: “An integrated research for the development of a scheme to control emerging vector-borne viral diseases in Asia”, and “Antigenicity to humans and gene polymorphism of the new malaria vaccine candidate, TAM (Trans-amidase like module) of Asian malaria” were approved by the Board to support the field of “Infectious Diseases” from the 3rd pilot “Flexible” call for proposals.

The 9th ad hoc Board Meeting

12. The 9th ad hoc Board Meeting was held via email sent on 25th February 2015.

13. The participation of the Thailand Center for Excellence for Life Sciences (TCELS) of the Kingdom of Thailand was formally approved by the Board.

14. The 2 collaborative research projects: “Whole genome sequencing of drug-resistant Mycobacterium tuberculosis strains” and “Development of an innovative diagnostic system against liver fluke infection in Southeast Asian countries” were approved by the Board to support in the field of “Infectious Diseases” from the 3rd pilot “Flexible” call for proposals

The 10th ad hoc Board Meeting

15. The 10th ad hoc Board Meeting was held via email sent on 17th March 2015

16. The participation of the Japan Agency for Medical Research and Development (AMED) (to go into effect April 1st) was formally approved by the

Board.

The 2nd Scientific Advisory Council (SAC) Meeting

17. The 2nd SAC Meeting was held on March 27, 2015 in Bangkok, Thailand.

18. The SAC Members discussed the main agenda items, including revised Terms of Reference of the SAC, resulting in the suggestion to the Board that the duration of membership of the Council as well as the terms of its Chair and Vice-Chair shall be three years and the SAC Members as well as the Chair and Vice-Chair can serve for two terms in succession if they are re-elected.







19. The SAC Members also discussed Non-disclosure Agreement, evaluation criteria, re-definition of the fields of cooperation, specific fields to focus on requirements from society and significance of expanding collaboration with Sri Lanka, Bangladesh and Mongolia.

20. Minutes of the 2nd SAC Meeting were posted on the website.

Members

1. List of current Member Organizations and their Board Members and representatives in alphabetical order by country (as of June 2015).

***17 Member Organizations from 12 countries**

Country	Name	Title & Organization
 Cambodia	Dr. Kheng Sim	Deputy-Director of Communicable Disease Control Department, MOH
 Indonesia	Dr. Agus R. Hoetman	Deputy Minister of Science and Technology Network, RISTEK
 Japan	Mr. Masahiko Noda	Managing Director of Department of International Affairs, AMED
 Japan	Dr. Michiharu Nakamura	President, JST
 Lao PDR	Mr. Malaithong Kommasith	Director of the Department of Planning and Cooperation, MOST
 Lao PDR	Dr. Bounlay Phommasack	Deputy Director General of the Department of Hygiene and Prevention, MOH

 Malaysia	(TBD)	MOSTI (Status: Quasi Member)
 Myanmar	Dr. Win Khaing Moe	Acting Director General, Myanmar Scientific and Technological Research Department, MOST
 New Zealand	Dr. Robin Olds	Chief Executive, HRC
 The Philippines	Dr. Amelia P. Guevara	Undersecretary for Research & Development, DOST
 Russian Federation	Mr. Oleg Sharipov	Head of International Relations, RFBR
 Thailand	Ms. Kunvara Chotiphansophon	Deputy Director, ARDA
 Thailand	Dr. Thaweesak Koanantakool (deputy: Dr. Chadamas Thuvasethakul)	President, NSTDA (Executive Vice President, NSTDA)
 Thailand	(TBD)	President, TCELS
 U.S.	Mr. F. Gray Handley	Associate Director for International Research Affairs, NIAID
 U.S.	Dr. Paul Pearlman	Director, Center for Global Health, NCI
 Vietnam	Ms. Le Thi Viet Lam	Deputy Director General of Department of International Cooperation, MOST

* Blue text indicates new Member Organizations which have joined since the last Annual Board Meeting.

Joint Calls for Proposals

1. As the result of Joint Call for Proposals in the field of 'Functional Materials,' which was launched by JST of Japan, NSTDA of Thailand and the DOST of the Philippines in April 2014, "Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes" was approved by the Board to receive funding from JST, NSTDA, and DOST from October 2014.

2. As the result of the 1st Pilot "Flexible" Joint Call for Proposals in the field of 'Infectious Diseases,' which was launched by the 10 Member Organizations in February 2014, 4 projects in addition to 1 project which were approved at the 3rd

Annual Board Meeting, were approved by the Board in February and March 2015. As an effect of AMED establishment on 1st April 2015 in Japan, funding to the Japan-based research teams in the selected projects was initiated not by JST but by AMED.

The following 5 projects were selected in this call.

“Evaluation of the pandemic potential of H5N1 highly pathogenic avian influenza viruses circulating in Indonesia” to be jointly supported by AMED of Japan, RISTEK of Indonesia, and NIAID of the United States.

“Whole-genome sequencing of drug-resistant Mycobacterium tuberculosis strains” to be jointly supported by HRC of New Zealand, MOST of Myanmar, and RISTEK of Indonesia.

“An integrated research for the development of a scheme to control emerging vector-borne viral diseases in Asia” to be jointly supported by AMED of Japan, NIAID of the United States, RISTEK of Indonesia, NSTDA of Thailand, DOST of the Philippines.

“Development of an innovative diagnostic system against liver fluke infection in Southeast Asian countries” to be supported by AMED of Japan, NSTDA of Thailand, MOH of Lao P.D.R.

“Antigenicity to humans and gene polymorphism of the new malaria vaccine candidate, TAM (Trans-amidase like molecule) of Asian malaria” to be supported by AMED of Japan, MOST of Myanmar, and DOST of the Philippines.

3.The 5th Joint Call for Proposals in the field of ‘Disaster Risk Reduction and Management’, ‘Intelligent Infrastructure for Transportation’, ‘Bioenergy’ and ‘Health Research’ is in preparations for launch.

Researcher Interaction

Workshop in Japan

1. The 2nd “Intelligent Infrastructure” Workshop, co-organized by the Japan Science and Technology Agency (JST) of Japan and e-ASIA JRP Secretariat, and hosted by JST of Japan, was held from December 11 to December 13, 2014

in Tokyo, Japan.

2. 5 Keynote Speakers and 14 Invited Speakers from Japan, Philippines, Myanmar, Singapore, Thailand, Indonesia, Vietnam, and Malaysia gave presentations.

3. Following steps were suggested: Implementing a call for proposals reflecting the results of this workshop; Producing a workshop summary; Publishing a book on “science of infrastructure”.

4. The summary of the workshop was posted on the website.

Workshop in Philippines

1. A workshop in the field of “Disaster Risk Reduction and Management”, combined with the WS of Typhoon Yolanda related J-RAPID, co-organized by DOST of the Philippines, JST of Japan and e-ASIA JRP Secretariat, and hosted by DOST, was held on April 15, 2015, in Quezon City, Philippines.

2. 8 Invited Speakers from Japan, Philippines, Indonesia, Vietnam, Thailand and Lao PDR gave presentations.

3. Discussion was focused mainly on science and technology aspects with outcomes providing definite societal benefits in terms of disaster risk reduction. Examples of proposed objectives of joint research projects are: hazard and risk assessment, monitoring of hazardous natural phenomena, rapid response, recovery and restoration from disaster, human resources development, involvement of local government and people in disaster management and so on.

4. The summary of the workshop were posted on the website.

Selected Projects

The selected projects from the call in the field of “Functional Materials” and “Infectious Diseases” are as follows:

“Functional Materials”

1. “Development of Functional Nanocarbon-Based Catalysts for Biomass

Conversion Processes” to be conducted jointly by Dr. Tetsuya Kida, Professor at Kumamoto University in Japan, Dr. Joseph Auresenia, Professor at De La Salle University-Manila in the Phillipines, and Dr. Artiwan Shotipruk, Professor at Chulalongkorn University in Thailand.

This collaborative research aims to synthesize nanocarbon materials such as graphene oxide, carbon nanotube and hydrothermal carbon, and utilize them for efficient conversion of vast biomass resources available in Southeast Asian region into useful compounds under special reaction field of supercritical fluid and microwave irradiation.

“Infectious Diseases”

2. “Evaluation of the pandemic potential of H5N1 highly pathogenic avian influenza viruses circulating in Indonesia” to be conducted jointly by Dr. Yoshihiro Kawaoka, Professor at the Institute of Medical Science, University of Tokyo in Japan, Dr. Chairul A. Nidom, Professor at Avian Influenza Research Center, Universitas Airlangga in Indonesia, and Dr. Gabriele Neumann, Professor at School of Veterinary Medicine, University of Wisconsin-Madison in the U.S.

This collaborative research aims to characterize the H5N1 highly pathogenic avian influenza viruses currently circulating in Indonesia to assess their pandemic potential and prepare for a potential H5N1 pandemic.

3. “An integrated research for the development of a scheme to control emerging vector-borne viral diseases in Asia” to be conducted jointly by Dr. Ken Maeda, Professor at Joint Faculty of Veterinary Medicine, Yamaguchi University in Japan, Dr. Hideki Ebihara, Principal Investigator and Unit Chief at Molecular Virology and Host-Pathogen Interaction Unit, Laboratory of Virology, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health in the U.S., Dr. Srihadi Agungpriyono, Professor and Dean of the Faculty of Veterinary Medicine, Bogor Agricultural University in Indonesia, Dr. Worawut Rerkamnuaychoke, Dean of the Faculty of Veterinary Technology, Kasetsart University in Thailand, and Dr. Emmanuel T. Baltazar, Professor at the College of Veterinary Medicine, Central Mindanao University in the Philippines.

This collaborative research aims to conduct comprehensive surveillance of tick- and mosquito-borne infectious diseases in Japan, Philippines, Indonesia and Thailand to develop risk assessments of the outbreak potentials in Asia.

4. “Development of an innovative diagnostic system against liver fluke infection in Southeast Asian countries” to be conducted jointly by Dr. Hisashi Narimatsu, Senior Invited Researcher and Professor at the Glycomedicine Technology Research Center, National Institute of Advanced Industrial Science and Technology in Japan, Dr. Sopit Wongkham, Professor at the Biochemistry, Faculty of Medicine, Khon Kaen University in Thailand, and Dr. Bounthome Samounry, Professor at Faculty of Basic Sciences, University of Health Sciences in Lao P.D.R..

This collaborative research aims to develop and provide diagnostic systems to address bile duct cancer caused by liver fluke infection in more than ten million Thai and Lao patients, utilizing a platform for diagnostic markers developed based on Japan’s leading glycoscience technology.

5. “Antigenicity to humans and gene polymorphism of the new malaria vaccine candidate, TAM (Trans-amidase like molecule) of Asian malaria” to be conducted jointly by Dr. Kenji Hirayama, Professor at Institute of Tropical Medicine (NEKKEN), Nagasaki University in Japan, Dr. Tin Maung Hlaing, Director and Professor at the Defense Services Medical Research Center in Myanmar, and Dr. Mario Jiz, Department Chair and Professor at Immunology Department, Research Institute for Tropical Medicine (RITM) in the Philippines.

This collaborative research aims to produce a malaria vaccine that is useful for the control of Asian malaria by combining Japanese research and development ability with field research capacity in the Philippines and Myanmar.

6. “Whole-genome sequencing of drug-resistant Mycobacterium tuberculosis strains” to be conducted jointly by Dr. Gregory Cook, Professor at University of Otago in New Zealand, Dr. Wah Win Htike, Professor at University of Medicine-1 in Myanmar, and Dr. Bacht Alisjahbana, Chairperson of the Universitas Padjadjaran in Indonesia.

This collaborative research aims to determine the role of whole-genome sequencing (WGS) for drug susceptibility testing (DST) of *Mycobacterium tuberculosis* in Myanmar and Indonesia, two high TB burden countries. It will investigate discrepancies between genotypic and phenotypic DST results and use WGS to investigate the population structure of resistant *M. tuberculosis*.

For more information, please visit the following website:

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

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