

**e-ASIA Joint Research Program (the e-ASIA JRP)
Research Cooperation in the field of “Agriculture”
on the topics of
“Functional Food for Nutrition”
10th Joint Call for Proposals to be submitted by 29 March 2021**

The e-ASIA Joint Research Program (hereinafter referred to as the “e-ASIA JRP”) aims to develop a vibrant and collaborative research community in Science and Technology, to promote innovation in the East Asian region, and to contribute to the region’s economic development. As part of the program, the Member Organizations of the e-ASIA JRP listed below have agreed to implement a joint call for proposals of multilateral cooperative research activities.

Participating Member Organizations (listed in alphabetical order):

- 1) Cambodia: Ministry of Industry, Science, Technology and Innovation (MISTI)
- 2) Lao PDR: Ministry of Science and Technology (MOST)
- 3) Philippines: Department of Science and Technology (DOST-PCAARRD, DOST-PCIEERD)
- 4) Thailand: Agricultural Research Development Agency (ARDA)

I. Aim of Joint Call and Research Area

(1) Functional Food for Nutrition

The aim of this joint call is to pursue innovative technologies, molecular breeding strategies to improve genetic performance of local poultry breeds and sustainable solutions for common challenges across the region to meet the increasing requirements of food production, to obtaining nutritional value for the body, but also to prevent malnutrition problem

The area of “Functional Food” represents a critical research area with respect to sustainable long-term use of food resources for provides benefits beyond basic nutrition that may reduce disease risk and/or promote good health. Based on that functional food can be:

- Natural food
- Foods that have added positive ingredients / components or deleterious substances have been removed
- Foods where the properties of one or more components / ingredients have

been modified

The scientific community continues to improve its understanding of the benefit of functional foods and their role in maintaining and optimizing health. This is caused by a situation where consumers begin to realize the relationship between food and health and the importance of maintaining health, which motivates them to live healthier by consuming certain foods that have health functions. For functional foods to provide potential public health benefits, consumers must be able to rely on scientific criteria used to document these health claims and claims. The conclusion is that the increasing demand for functional food is in line with the increasing attention and awareness among consumers to consume healthy products that can improve their quality of life.

Research on functional food starts from growing the plant, producing a food product, analysing the bioactive components, predicting the bioavailability and biological activity of the bioactives, sensory evaluation, justifying health claim, and consumer acceptance, until regulation on policy for development, evaluation and claim regulation.

Although functional foods may provide benefit beyond standard of nutrition value, they must comply to food regulations. The primary objective of regulatory authorities is to protect the public by ensuring food safety, preventing misleading or false product claims, and authorize claim benefit of the products. The guidance helps develop data to demonstrate that a food ingredient is safe for the specific use at a specific use level and for use as a functional food.

The shifting consumers' preference toward organic or naturally produced food products like the native chicken is brought about by its distinct taste, flavor, and health benefits.

The utilization of native poultry breeds is gaining popularity all over the world. Many farmers prefer to raise native chicken over the exotic breeds because they have the inherent ability to survive and reproduce under harsh environmental conditions with minimal care and management. It is already a well-known fact that the products, both meat and eggs, coming from native chicken have superior

qualities compared to their commercial counterparts. The unique attributes of native chicken, including more flavorful meat, intense yolk color, adaptability to harsh environmental conditions, and disease resistance are also gaining appreciation from consumers. Previous research works showed that meat from various genetic groups of native chicken has the potential as a healthy substitute to commercial broiler because it has higher crude protein and lower fat than commercial broiler.

However, the sector is currently facing a huge gap between production and demand which will be difficult to address with traditional breeding and selection techniques. Thus, there is a need to improve production performance such as age at first lay, egg production and laying rate, among others in order to meet the demand of the local native chicken industry.

Research and development efforts have been done considerably for various breeds of native chicken for several decades now. With the increasing market demand for quality native chicken meat because of its inherent qualities and health benefits, significant number of stakeholders are already clamoring for reliable and consistent sources of breeder stocks.

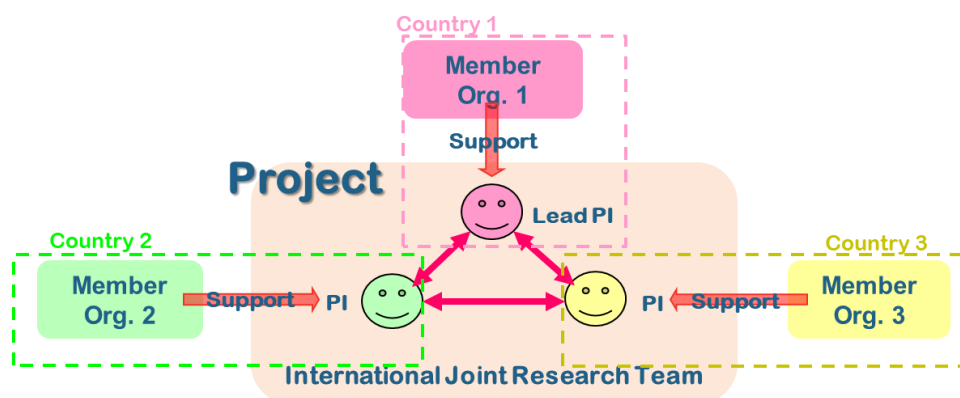
We would like to invite comprehensive research proposals including, but not limited to explore more functional food topics, especially in the scope of :

1. Food products for obesity management:
2. Food products for malnutrition
3. Food products for the elderly: functional foods based on local plant extracts to prevent degenerative diseases in the elderly
4. Food products for medical
5. Innovative approaches towards the improvement of genetics and production performance of native chicken in relation to its nutritional value or benefits, specifically on: a) Genome-wide association study on native chicken; b) Molecular-assisted selection and breeding as it relates to the macro- and micronutrient contents of native chicken meat.

II. Support/ Funding Modality

In principle, each Member Organization will support its own country's researchers in research projects selected for funding through this joint call with the type of

support available as defined under “Funding Modality” in the table below. The duration of a selected research project will be three years (36 months), in total, from the start date. Details of conditions of support will vary by Member Organization. Applicants should carefully consider information included in the Appendix for each Member Organization’s rules and regulations.



Participating Member Organizations and Funding Modality

| Participating Member Organizations | | Funding Modality |
|------------------------------------|--------------|------------------|
| (1) MISTI (Cambodia) | | In-kind |
| (2) MOST (Lao PDR) | | In-kind |
| (3) DOST (Philippines) | DOST-PCAARRD | New |
| | DOST-PCIEERD | New |
| (4) ARDA (Thailand) | | New |

New: Each Member Organization will support a selected project by new funding

Re-budgeting: Funds already allocated to an existing project by each Member Organization will be reallocated to the e-ASIA JRP

In-kind: Each Member Organization does not provide budget for a selected project. A researcher participating in a selected project will use funds that are already available, but no additional fund will be provided by each Member Organization. In principle, at least one country must participate via “new” or “re-budgeting” funding modality. In other words, proposals cannot be accepted if all

the applicants intend to participate through an “in-kind” basis.

III. Application

In addition to the following common requirements, there are specific rules clarified by each Member Organization. For specific rules by each Member Organization, please refer to the Appendix or consult the person noted in Section VI.

III-1. Applicant/ Project Consortium

A project consortium must consist of at least three eligible research teams from at least three different participating countries listed above.

Each research team shall be led by a Principal Investigator (PI), and a consortium shall be led by a Lead Principal Investigator (Lead PI) specified among the PIs.

The Lead PI will be responsible for running and managing the project. The Lead PI will be the contact point with the e-ASIA JRP Secretariat on behalf of the whole consortium and is responsible for the administrative management of the complete project, should it be awarded support. In addition, the Lead PI is responsible for leading the project activities at his/her own institution. The Lead PI must be affiliated with an institution situated in the home country of one of the Member Organizations participating in this call.

All PIs must fulfil their respective domestic eligibility rules for research application. Researchers from industry are encouraged to participate in the collaboration in accordance with domestic eligibility rules. PIs should contact the person noted in Section VI for information on their respective domestic eligibility rules.

III-2. Proposal Submission

Proposals must be submitted from the Lead PI by e-mail to the e-ASIA JRP Secretariat at the e-mail address specified below. Applications must be written in English.

Deadline for Submission:

17:00 (Thai Standard Time, UTC+7) 29 March 2021

Please submit the proposal to:



Yoshihide Kobayashi (Mr.)
e-ASIA JRP Secretariat
E-mail: easia_secretariat@jst.go.jp

Note 1: The e-ASIA JRP Secretariat will send a confirmation email to the Lead PI to confirm receipt of his/her proposal. In case the Lead PI does not receive a confirmation e-mail from the e-ASIA JRP Secretariat within one week, they should contact the e-ASIA JRP Secretariat at the address above. The e-ASIA JRP Secretariat does not assume any responsibility for delay or error in e-mail delivery.

Note 2: Application forms sent by any method other than e-mail (such as post, fax or telex) will be rejected.

< Important Notice to ALL PIs >

Make sure to submit all necessary application documents requested by each Member Organization of your country, in addition to the application to the e-ASIA JRP Secretariat (submitted by Lead PI only), because each Member Organization may request applicants of its country to submit another form of proposals with another deadline date. Proposals shall satisfy both common requirements written in this call guideline and individual requirements requested by each Member Organization. A research team that does not satisfy individual requirements of the Member Organization of your country will not be deemed as eligible research team.

For individual requirements by each Member Organization, please refer to the Appendix or consult the person noted in Section VI.

The proposal shall include:

- a) Project description including how the collaboration will be carried out, with clear statements of what roles each country's researchers will play respectively in the project;
- b) Description of the expected outcomes of the proposed project, scientifically as well as in terms of relevance for industry and society;
- c) Description of the ongoing activities and specific advantages of each

- group respectively, which form the basis for the proposed joint project;
- d) Description of the expected value added from the proposed joint project, including how the competence, technology and other resources in each group complement each other;
 - e) Description of how the project is expected to help strengthen multilateral research collaboration over the longer term;
 - f) Description of the expected value added from the multidisciplinary approach in the proposed joint project; and
 - g) Description of how the proposed joint project interacts with or impacts other comparable activities worldwide.

III-3. Application Forms

Researchers must prepare the following application (proposal) forms in English (“E”).

For further requirements by each Member Organization, researchers shall refer to the Appendix or shall consult each Member Organization of his/her country.

- Form 1E Application outline (title, acronym, general description and proposed period of cooperative research project)
- Form 2E Summary of the project
- Form 3E Research leaders’ information (their CVs*)
- Form 4E Research team (list of individuals committed to the cooperative research project in each country)
- Form 5E Description of the cooperative research project
- Form 6E Research networking plan
- Form 7E Plan to nurture early career researchers
- Form 8E Budget plan for the project
- Form 9E Research infrastructures and funds from other sources

** The description of Curriculum Vitae (CV) from each PI shall include basic information on education, past and present positions, membership of relevant organizations/associations and a publication list in the past 5 years.*

In addition to the documents above, all projects must comply with ethical review and requirements of each Member Organization, especially for research activities related to human and animal subjects. PIs shall refer to the Appendix for each

Member Organization's ethical requirement.

IV. Evaluation

IV-1. Evaluation Process

A proposal will be evaluated at each relevant Member Organization of the project consortium, according to the evaluation criteria clarified in the following subsection.

Based on the results of the evaluation conducted at each Member Organization, a final decision will be made at the joint panel meeting among the participating Member Organizations, followed by approval at the e-ASIA JRP Board Meeting.

IV-2. Evaluation Criteria

Proposals will be evaluated according to the following common e-ASIA JRP evaluation criteria, incorporated with evaluation criteria clarified by each Member Organization. For the evaluation criteria clarified by each Member Organization, please refer to the respective Appendix or consult each respective Member Organization.

1) Regional Relevance of the Research

The research activity should contribute to:

- The advancement of scientific discovery;
- The development of science and technology in the region; and
- The resolution of significant relevant issues across the region.

2) Mutual Benefits of the Joint Research

Activities of mutual benefit to the collaborators and their institutions are desirable. Mutually beneficial in the sense that the projects utilize unique opportunities the e-ASIA JRP will provide that could not be achieved either through bilateral or individual research but only through multilateral cooperation.

3) Effectiveness of Exchange

The project should:

- Contain activities to nurture early career researchers through research activities;
- Contain activities to engage female researchers where strengthening capacity is needed; and

- Enhance research capacity in the region.

IV-3. Notification of the Final Decision

The Lead PI will be notified the final decision by the e-ASIA JRP Secretariat as soon as the final decision is taken and approved by all Member Organizations in the e-ASIA JRP. (Approximate implementation of the notification: End of November 2021)

V. Project Implementation

Project reporting will be in accordance with the respective Member Organization's rules. Please contact respective Member Organizations for more details.

In addition to the Member Organization's requirements, the consortia are expected to deliver Progress Reports and Final Reports to the e-ASIA JRP Secretariat, in English, including a description of their collaboration and a publishable summary of the project status. The Progress and Final Reports will be reviewed by the Board and Scientific Advisory Council. It is also encouraged that the project proactively disseminates its achievements to the public.

V-1. Progress Report

In the middle of research period (i.e., after one and a half year), the lead PI shall promptly develop and submit an integrated progress report to the e-ASIA JRP Secretariat on the status of the joint research.

V-2. Final Report

A final report shall be developed and submitted by the Lead PI to the e-ASIA JRP Secretariat within two months after the completion of the joint research period.

V-3. Others

All the researchers/research institutions organizing a consortium are strongly recommended to conclude a Collaborative Research Agreement (hereinafter referred to as "CRA") to assure optimal understanding and coordination among the collaborating scientists working on each project before project starts. CRA should, with due respect to the researchers' institutions and the Member Organizations' intellectual property and data handling policy, include the treatment of intellectual property rights, handling of confidential information,

publication of research results, warranty and indemnification, and access to and transfer of the relevant materials. Applicants shall refer to the Appendix for each Member Organization's requirement.

VI. Contact information

Applicants should contact the following for information on each Member Organization's eligibility rules or support conditions:

Also please refer to the Appendix for information of each Member Organization.

| Country: Member Organization | | Contact Point |
|--|--|---|
| (1) Cambodia: Ministry of Industry, Science, Technology and Innovation (MISTI) | | Dr. KOUK FIDERO Tel: +855 12 375 552 E-mail: kuok.fidero@misti.gov.kh Mr. Vanthou CHORN Tel: +855 89 429 068 E-mail: chorn_vanthou@yahoo.com |
| (2) Lao PDR: Ministry of Science and Technology (MOST) | | Mr. Chittaphong ACHKHAVONG Tel: +85620 2239 9289 E-mail: chittaphong66@yahoo.com |
| (3) Philippines: Department of Science and Technology (DOST) | Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST -PCAARRD) | Mr. Reynaldo V. Eborá Tel: +49 536-4990 E-mail: r.eborá@pcaarrd.dost.gov.ph ; cc: oed-rd@pcaarrd.dost.gov.ph ; odedrd.pcaarrd@gmail.com |
| | Philippine Council for Industry, Energy and Emerging Technologies Research and Development (DOST-PCIEERD) | Dr. Enrico C. Paringit Tel: (+632) 8837-2071 locals 2100, 2121, 2120 and 2107 E-mail: enrico.paringit@pcieerd.dost.gov.ph |
| (4) Thailand: Agricultural Research Development Agency (ARDA) | | Ms. Somying Theeradech/ Mr. Torlarb Thanvareerat Tel: 0-2579-7435 Ext. 3604,3602 |

| | |
|--|---|
| | Mobile 0613235194 (Torlarb) E-mail: somying@arda.or.th Torlarb@arda.or.th |
|--|---|

Applicants should contact the following for general inquiries:



Yoshihide Kobayashi (Mr.)
e-ASIA JRP Secretariat / Japan Science and Technology Agency
Room 218 Innovation Cluster1 Building
National Science and Technology Development Agency (NSTDA)
111 Thailand Science Park, Phahonyothin Road
Khlong Nueng, Khlong Luang, Pathum Thani 12120 THAILAND
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E-mail: easia_secretariat@jst.go.jp

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Information about each Member Organization (alphabetical order by country)

- 1) Cambodia: Ministry of Industry, Science, Technology and Innovation (MISTI)..... 13
- 2) Lao PDR: Ministry of Science and Technology (MOST) 14
- 3) Philippines: Department of Science and Technology (DOST) 15
- 4) Thailand: Agricultural Research Development Agency (ARDA)..... 20

1) Cambodia: Ministry of Industry, Science, Technology and Innovation (MISTI)

Cambodian researchers can participate in research projects only on an "in-kind" basis, as there will be no new or additional support available from the MISTI of Cambodia.

Please consult the person in charge directly.

Contact Information



Dr. KOUK FIDERO

President of National Institute of Science, Technology & Innovation

Tel: +855 12 375 552

E-mail: kuok.fidero@misti.gov.kh

Mr. Vanthou CHORN

Deputy Director, Department of Planning, Statistics, Cooperation & ASEAN affairs

Ministry of Industry, Science, Technology and Innovation (MISTI)

Tel: +855 89 429 068

E-mail: chorn_vanthou@yahoo.com

2) **Lao PDR: Ministry of Science and Technology (MOST)**

Ministry of Science and Technology is unable to fund Lao researchers; however MOST encourages Lao researchers contribute their work effort in-kind to the project. In the case Lao researchers requires certain support, he/she needs to consult with countries partners and with person in charge from MOST

Contact Information



Mr. Chittaphong ACHKHAVONG
Deputy Director General of Planning and Cooperation
Ministry of Science and Technology (MOST)
Tel: +856 21 213470-132
Mobile: +85620 2239 9289
E-mail: chittaphong66@yahoo.com;

3) Philippines: Department of Science and Technology (DOST)

a) Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST -PCAARRD)

I. Who may apply

Filipinos with at least a Master's Degree in a relevant field, have proven research competence/track record, and employed in universities or research agencies/institutes that are members of the DOST-PCAARRD National Agriculture, Aquatic and Natural Resources Research and Development Network (NAARRDN) or Regional R&D Consortia are eligible to apply for the research grant.

II. How to apply

Interested parties should submit their proposals using the DOST-GIA-prescribed proposal templates through the DOST e-Proposal Portal (<http://dpmis.dost.gov.ph>) before the Closing Date on **March 29, 2021, 17:00 (Philippine Standard Time)**. Note: Applications with incomplete documents will not be accepted.

III. Review of proposals

Approval of proposals for research grants will be based on the following multi-level review process:

1. In-house screening in terms of alignment to the research priorities, duplication, and completeness of requirements.
2. Technical review by Experts' Pool based on the following criteria:
 - Technical merit;
 - Data management;
 - Relevance/significance;
 - Marketability potential (for product-based proposals);
 - Feasibility (practicality, cost, time); and
 - Proponent's/Institution's capacity
3. Final approval by the PCAARRD Governing Council (GC) or the PCAARRD Directors' Council (DC) depending on the recommended total budgetary requirement of the proposal.

4. In each stage of the review process, the proponent may need to revise the proposal on the basis of the recommendations of the reviewers/evaluators. The review process will take 40 working days provided that all the requirements had been submitted.

IV. Funding support available

DOST-PCAARRD will allocate a budget up to US\$300,000 or PhP15 million for one (1) research project for a duration of three (3) years. The DOST Grants-in-Aid guidelines shall be applied.

V. TIMELINE

The schedule below will be followed in processing and funding the proposal:

| | | |
|---|---|------------------------|
| Deadline of Proposal Submission (Both to e-ASIA and DOST/PCAARRD) | : | March 29, 2021 |
| PCAARRD's Review of Proposals (Directors' Council and Governing Council) | : | April 30-July 30, 2021 |
| Start of Implementation | : | January - March 2022 |

VI. Contact Information



Dr. Reynaldo V. Eborá
 Executive Director
 Philippine Council for Agriculture, Aquatic and Natural Resources
 Research and Development (PCAARRD)
 Department of Science and Technology (DOST)
 Tel: +6349-536-4990; +6349-554-9670
 e-Mail: r.eborá@pcaarrd.dost.gov.ph, cc: oed-rd@pcaarrd.dost.gov.ph

b) Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD)

The national call announcement will be published in the DOST-PCIEERD website : www.pcieerd.dost.gov.ph

I. Eligibility Requirements

(1) Any Filipino, public or private entity with proven competence may apply for funding support provided that projects fall under the specific research areas.

(2) Filipino researchers, should be connected with any public and private universities and colleges and Research and Development Institutes. The eligibility of the Philippine Principal Investigator shall be determined by DOST-PCIEERD based on his/her readiness in terms of technical, managerial, financial and marketing capabilities (if necessary). As such, the proponent shall submit documents/proof of the following: credentials/proof of capability, track record, and endorsement of his/her institution, must not have any existing accountability with DOST and its agencies particularly technical and financial reports, and must not have pending administrative or criminal case involving financial transactions. The Philippine Principle Investigator must possess at least a Master's degree in a relevant field.

II. Support

One (1) project could be supported under this call. Budget range of US\$300,00 – 310,000 per project for 3 years shall be provided by DOST-PCIEERD to support the collaborative projects.

III. Application

Interested parties should submit their proposals using the DOST-GIA proposal format through the DOST E-proposal portal, <http://dpmis.dost.gov.ph> before the Closing Date on 29 March 2021 : Together with the proposal, DOST-PCIEERD requires submission of a formal letter of intent from the applicant and an endorsement from the authorized head of organization. The authorized head of the organization will also be the principal signatory of their organization for the research

agreement award.

IV. Evaluation of Project Proposals

Review teams (Project Managers, Technical Experts Team or Technical Panel, and DOST-PCIEERD Management Team) will evaluate each proposal based on the following criteria:

Alignment to the Call, no duplication with previous or existing researches, scientific merit, technical feasibility, soundness of methodology, financial viability (commensurate to intended output and potential impact), potential socio-economic merits, environmental impact (e.g. does not pose significant adverse to the environment or will/can improve environmental conditions), and marketability (e.g. potential adoption/use of the industry (manufacturer) and other partners). Each proposal will be given a numerical score and will be ranked accordingly. Preliminary funding recommendations will be forwarded to the DOST-PCIEERD Governing Council based on this ranking.

The DOST-PCIEERD Governing Council, based on the rankings and preliminary recommendation of the DOST-PCIEERD evaluation teams, will make final funding decisions for the DOST-PCIEERD counterpart before forwarding the proposals to the joint panel of the participating Member Organizations and the e-ASIA JRP Board Meeting for final funding decisions.

V. Reporting

Semi-annual progress reports and a detailed final report will be required. Semi-annual progress reports summarize technical progress, planned activities for next semester and summary of expenditures. The final report shall be completed within 90 calendar days after the completion of the period of performance. Required forms are downloadable from the DOST-PCIEERD website and may be provided by the DOST-PCIEERD upon the awarding of the agreement to eligible applicants.

VI. Contact Information



Dr. Enrico C. Paringit

Executive Director

Philippine Council for Industry, Energy and Emerging Technology Research
and Development (PCIEERD)

Department of Science and Technology (DOST)

4th and 5th Levels, Science Heritage Building, DOST Compound,

Gen. Santos Ave., Bicutan, Taguig City

Tel: (+632) 8837-2071 locals 2100, 2121, 2120 and 2107

E-mail: enrico.paringit@pcieerd.dost.gov.ph

4) **Thailand: Agricultural Research Development Agency (ARDA)**

I. Eligibility for Thai applicants

The applicants must be researchers and/or university professors/instructors who work in public research institute or university in Thailand, and are competent in conducting a research with international partners.

"ARDA will provide support only for the area of **Functional Food for Nutrition**

II. Support

Approximately 2 million Thai baht for 1 research project for a duration of 3 years.

III. Application

Thai applicants should submit a national proposal through an Email of e-ASIA JRP secretariat (eamia_secretariat@jst.go.jp) **no later than 17.00 (Thai time) 29 March 2021**

IV. Evaluation of Project Proposals

Proposals will be peer-reviewed, and evaluated by a committee according to ARDA internal rules and procedures. The final selection will be done by the international selection committee of e-ASIA.

IV.I Evaluation Criteria

To be funded, proposals must be internationally competitive. It should lead to the advancement of the research field, or novel applications or increase of research capacity.

Key evaluation criteria are:

- Significance and impact of the research
- Scientific Rationale: novelty, importance and timeliness of the research
- Design and feasibility of the project plan
- Partnership: including strength and clarity of collaborations and opportunities provided, quality of the project management structure proposed;
- Quality and suitability of the research environment and of the facilities;

- Ethical considerations and governance arrangements

V. Reporting

- Thailand PI should submit a progress report on the status of joint research according to ARDA's funding procedures.
- After completion of the period of joint research, the Thailand PI shall submit within two months a final report on the results of the joint research to ARDA.

Contact Information



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General inquiries



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