Knowledge Co-Creation Program
(Group & Region Focus)

GENERAL INFORMATION ON

Improvement of Clinical Laboratory Technology for Infectious Disease Control
-for Proper Diagnosis of Infectious Diseases-
課題別研修「感染症対策のための臨床検査技術の改善
－感染症の適切な診断のために－」
JFY 2015
NO. J1504037 / ID. 1584432
Period in Japan: From September 30, 2015 to December 5, 2015

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.

‘JICA Knowledge Co-Creation (KCC) Program’ as a New Start

In the Development Cooperation Charter which is released from the Japanese Cabinet on February 2015, it is clearly pointed out that “In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together.” We believe that this ‘Knowledge Co-Creation Program’ will serve as a center of mutual learning process.


I. Concept

Background

One of the most important priorities of international cooperation based on human security is the improvement and strengthening of the health system to prevent the expansion of various infections threatening the life of people in developing countries. Particularly, securing sufficient healthcare workers and developing their abilities are important elements.

In this situation, this program is conducted so that clinical laboratory technologists in participating countries are able to acquire the knowledge and skills of clinical laboratory technology in Japan and improve the quality of their examination skills.

Furthermore, this program is intended to develop capacity to manage laboratory works and to establish system for effective diagnosis of infectious diseases according to the health system and prevalence of infectious diseases in each country.

For what?

This program aims to improve the quality of clinical laboratory examination for proper diagnosis of infectious diseases, and management skills for laboratory works.

For whom?

This program is designed for clinical laboratory technologist (or medical doctor/pharmacist/nurse) who are currently engaged in microbiology examination and responsible for the management of laboratory works at National/Local core hospitals or laboratories.

How?

The program comprises lectures, practices, visits, and discussions. Practices forming the main part of program are performed by small groups of participants at medical institutions.
II. Description

1. Title (J-No.) : Improvement of Clinical Laboratory Technology for Infectious Disease Control —for Proper Diagnosis of Infectious Diseases— (J1504037)

2. Course Period in Japan:
   September 30 to December 5, 2015

3. Target Regions or Countries:
   China, Egypt, Honduras, Laos, Micronesia, Myanmar, Paraguay, Sudan, Tonga, Viet Nam, Zimbabwe

4. Eligible / Target Organization :
   1) National/Local core hospitals
   2) National/Local core laboratories which collaborate with the diagnosis/treatment section

5. Course Capacity (Upper Limit of Participants) : 20 participants

6. Language to be used in this program : English

7. Course Objective :
   Participants are expected to acquire and be able to explain knowledge and skills of accurate examination for diagnosis and treatment of infectious diseases, and skills for laboratory management in considering of the role of clinical laboratory in the health system in each country.

8. Overall Goal :
   Infectious Diseases is properly diagnosis by accurate examination, and laboratory network is strengthened in participating countries.

9. Expected Module Output and Contents:
   This program consists of the following components. Details on each component are given below:
<table>
<thead>
<tr>
<th>Expected Modules Output</th>
<th>Subjects</th>
<th>Methodology</th>
</tr>
</thead>
</table>
| 1. To acquire and be able to explain knowledge and skills of clinical examination for infectious diseases control (including “KAIZEN” approach) | (1) Biosafety and standard precaution in laboratory,  
(2) Quality control of examination and laboratory management (including human resource management),  
(3) Smear examination as rapid test,  
(4) Procedures for processing of specimen (how to progress of examination, interpretation and report of results),  
(5) Characteristics and usage of each medium, Characteristics of clinically important colony,  
(6) Identification test,  
(7) Drug susceptibility test and characteristics of drug resistant bacteria | Lecture, Discussion, Practice |
| 2. To acquire and be able to explain how to utilize clinical examination effectively for diagnosis of infectious diseases | (1) Characteristics of various examinations  
(2) data analysis of examination for diagnosis of infectious diseases  
(3) Role of clinical laboratory in infectious diseases control (including HAIs) | Lecture, Discussion, Practice |
| 3. To acquire and be able to explain how to manage laboratory and how to establish system for effective diagnosis of infectious diseases, considering the health system and prevalence of infectious diseases in each country | (1) Role of clinical laboratory in health system  
(2) Epidemiology, collection and evaluation of information in order to grasp prevalence of infectious diseases  
(3) Detection and countermeasure of outbreak  
(4) Cooperation between the core hospitals (laboratories) in the central level and those in the regional level  
(5) Preparation of standard operation procedures (SOP), Laboratory Management | Lecture, Discussion, Practice |

*After returning home countries, participants are expected to share the knowledge and skills with their supervisors and colleagues and discuss how to make use of the results within their activities.*
III. Conditions and Procedures for Application

1. Expectations from the Participating Organizations:
   (1) This program is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Participating organizations are expected to use the program for those specific purposes.
   (2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the program to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.

2. Nominee Qualifications:
Applying Organizations are expected to select nominees who meet the following qualifications.

   (1) Essential Qualifications
      1) Present Position: be a clinical laboratory technologist (or medical doctor/pharmacist/nurse) who are engaged in microbiology examination, and be responsible for the management of laboratory works at national/local core hospitals, or core laboratories which collaborate with the diagnosis/treatment section
      2) Language: have a competent command of spoken and written English
      3) have basic computer skills, including ability to use Microsoft office software (Word, Excel, Power Point)
      4) must be in good health, both physically and mentally, to participate in the program in Japan
      * Note: Accepted candidates are required to be negative on tuberculin reaction and submit “certificate of antibody test and vaccination” (ANNEX-3) on chicken pox, measles, rubella and mumps. In case if it is difficult to have antibody test and vaccination depending on the situation of medical institutions in participants’ countries, participants are required to have antibody test and vaccination after arrival in Japan.
      5) must not be serving any form of military service

3. Required Documents for Application
   (1) Application Form: The Application Form is available at the JICA office (or the Embassy of Japan).
   *Pregnancy
   Pregnant participants are strictly requested to attach the following documents in order to minimize the risk for their health.
   1) letter of the participant’s consent to bear economic and physical risks
   2) letter of consent from the participant’s supervisor
   3) doctor’s letter with permission of her training participation.
Please ask JICA Staff for the details.

(2) **Questionnaire on Laboratory Works (ANNEX-1):** to be submitted with the application form. Please fill in the **ANNEX-1** of General Information.

(3) **Photocopy of passport:** to be submitted with the application form, if you possess your passport which you will carry when entering Japan for this program. If not, you are requested to submit its photocopy as soon as you obtain it.

*Photocopy should include the followings:
Name, Date of birth, Nationality, Sex, Passport number and Expire date.

(4) **Nominee’s English Score Sheet:** to be submitted with the application form. If you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

4. Procedures for Application and Selection
   (1) **Submission of the Application Documents:**
   Closing date for applications: Please inquire to the JICA office (or the Embassy of Japan).
   (After receiving applications, the JICA office (or the Embassy of Japan) will send them to the JICA Center in JAPAN by August 10, 2015)

   (2) **Selection:**
   After receiving the documents through proper channels from your government, the JICA office (or the embassy of Japan) will conduct screenings, and then forward the documents to the JICA Center in Japan. Selection will be made by the JICA Center in consultation with concerned organizations in Japan. The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.

   (3) **Notice of Acceptance:**
   Notification of results will be made by the JICA office (or the Embassy of Japan) not later than **August 31, 2015**.

5. Document(s) to be submitted by accepted candidates:
   Accepted candidates are requested to send the following documents(1)(2) by e-mail to JICA Tokyo by **September 14, 2015**.

   (1) **Job Report for Presentation (ANNEX-2):**
   Participants are required to make presentation using power point slides, according to the guidelines (ANNEX-2).

   (2) **Certificate of Antibody Test and Vaccination (ANNEX-3):**
   Since the program includes hospital practices, participants are required to submit the Certificate of Antibody Test and Vaccination (on chicken pox, measles, rubella, mumps, and tuberculosis). JICA will bear the expense only when participants bring the receipt for issuing the certificate.
(3) Standard Operation Procedures (SOP) for laboratory works
Since the program includes practice on development of SOP, participants are requested to bring the core part of SOP used in each organization on their arrival in Japan.

6. Conditions for Attendance:
(1) to strictly adhere to the program schedule.
(2) not to change the program topics.
(3) not to extend the period of stay in Japan.
(4) not to be accompanied by family members during the program.
(5) to return to home countries at the end of the program in accordance with the travel schedule designated by JICA.
(6) to refrain from engaging in any political activities, or any form of employment for profit or gain.
(7) to observe Japanese laws and ordinances. If there is any violation of said laws and ordinances, participants may be required to return part or all of the training expenditure depending on the severity of said violation.
(8) to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.
(9) to observe the rules and regulations of the facilities where the program is implemented.
IV. Administrative Arrangements

1. Organizer:
   (1) Name: JICA Tokyo
   (2) Contact: Ms. Yuki YOSHIDA

2. Implementing Partner:
   (1) Name: Japan International Medical Technology Foundation (JIMTEF)
   (2) Contact: Mr. Hiroaki MIKUNI
   (3) URL: http://www.jimtef.or.jp/english/eindex.htm

3. Travel to Japan:
   (1) Air Ticket: The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.
   (2) Travel Insurance: Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan will not be covered.

4. Accommodation in Japan:
   JICA will arrange the following accommodations for the participants in Japan:
   
   JICA Tokyo International Center (JICA Tokyo)
   
   Address: 2-49-5 Nishihara, Shibuya-ku, Tokyo 151-0066, Japan
   TEL: 81*-3**-3485-7051  FAX: 81*-3**-3485-7904
   * “81” is the country code for Japan, ** “3” is the local area code

   If there is no vacancy at JICA TOKYO, JICA will arrange alternative accommodations for the participants. Please refer to facility guide of JICA Tokyo at its URL.

   <Service Guide>
   http://www.jica.go.jp/english/about/organization/domestic/c8h0vm0000023sqf-att/tokyo_service.pdf

   <Facility Guide>
   http://www.jica.go.jp/english/about/organization/domestic/c8h0vm0000023sqf-att/tokyo_facilities.pdf

   <JICA Tokyo’s Facebook Page>
   https://www.facebook.com/jicatokyo
5. Expenses:
The following expenses will be provided for the participants by JICA:

(1) Allowances for accommodation, meals, living expenses, outfit, and shipping
(2) Expenses for study tours (basically in the form of train tickets.)
(3) Free medical care for participants who become ill after arriving in Japan
   (costs related to pre-existing illness, pregnancy, or dental treatment are not included)
(4) Expenses for program implementation, including materials
   *For more details, please see “III. ALLOWANCES” of the brochure for participants titled “KENSHU-IN GUIDE BOOK,” which will be given before departure for Japan.

6. Pre-departure Orientation:
   A pre-departure orientation will be held at the respective country’s JICA office (or the Embassy of Japan), to provide participants with details on travel to Japan, conditions of the program, and other matters.

V. Other Information

1. Medical Examination and Vaccination after arrival in Japan:
   Since the program includes practice in medical institutions, participants will be required to have a medical check including Chest X-Ray after arrival in Japan.
VI. ANNEX

ANNEX I  Questionnaire on Laboratory Works

Improvement of Clinical Laboratory Technology for Infectious Disease Control —for Proper Diagnosis of Infectious Diseases— (J1504037)

All applicants are requested to fill in this questionnaire and submit it with Application Form. It is used as reference for screening of applicants and arrangement of the program.

1. Basic Information
   1-1 Name of applicant
   1-2 Nationality
   1-3 Your Organization
      (1) Name
      (2) Your department/division
         *1: Please attach the organization chart of your organization and mark the department/division you belong to.
      (3) Your Position
         (4) Position of your organization
            *Please check ☑.
            □ National Hospital
            □ Region/Province Hospital
            □ National Laboratory
            □ Region/Province Laboratory
            □ Others ( )

2. Your professional experience of microbiology examination
   2-1 Name of the college/institution where you acquired qualification for engaging in microbiology tests, and the year of graduation
   2-2 How long have you been engaged in microbiology test?
   2-3 What is the license you have?
      *Please check ☑.
      □ Microbiologist
      □ Medical Technician
      □ Biomedical Laboratory Scientist
      □ Laboratory Technician
      □ Other ( )
2-4 Please clarify your experience and knowledge of the following subjects, and check the appropriate level in each category which best describes your level.

<table>
<thead>
<tr>
<th>Field</th>
<th>Work Experience(*)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram staining</td>
<td>A : B</td>
<td></td>
</tr>
<tr>
<td>Preparing culture media by yourself</td>
<td>A : B</td>
<td></td>
</tr>
<tr>
<td>Culture and Isolation from specimen</td>
<td>A : B</td>
<td></td>
</tr>
<tr>
<td>Identification of bacterial isolation</td>
<td>A : B</td>
<td></td>
</tr>
<tr>
<td>Antimicrobial Susceptibility Tests (AST)</td>
<td>A : B</td>
<td></td>
</tr>
<tr>
<td>Nucleic acid amplification tests (ex. PCR)</td>
<td>A : B</td>
<td></td>
</tr>
</tbody>
</table>

*Definitions:  
Work Experience    A: currently performing    B: performed in the past

3. Introduction and current situation of your organization

3-1 Number of staff working at your laboratory.  
(1) Pathologist: ____ persons  
(2) Microbiologist: ____ persons  
(3) Medical Technician: ____ persons  
(4) Biomedical Laboratory Scientist: ____ persons  
(5) Laboratory Technician: ____ persons  
(6) Assistant: ____ persons  
(7) Others: ____ persons

3-2 Does your laboratory perform Mycobacteriology tests?  
Please check ☑ the methods employed at the laboratory.  
☐ Direct smear examination (Ziehl-Neelsen or fluorochrome method)  
☐ Culture method  
☐ Anti-tuberculosis drug susceptibility tests  
☐ Nucleic acid amplification tests (ex. PCR)  
☐ not performing

3-3 Does your microbiology laboratory conduct internal quality control?  
*Please check ☑.  
☐ conducting daily  
☐ conducting periodically  
☐ not conducting

3-4 Does your microbiology laboratory participate in external quality assessment program?  
*Please check ☑.  
☐ Yes  
☐ No
ANNEX-2  Job Report for Presentation

Improvement of Clinical Laboratory Technology for Infectious Disease Control
— for Proper Diagnosis of Infectious Diseases — (J1504037)

In the beginning of the program, participants are requested to make a presentation on your job in front of other participants and course staffs.
- The purpose of the presentation is to share issues in participant’s country and prepare for further discussions and practices planned in this program.
- Each participant has 10 minutes for presentation.

Please include the following topics in the country report;
1) Your name/Country/Organization
2) Your laboratory services (method, workload)
3) Laboratory network in whole country
4) External quality assurance system in whole country
5) Quality management in your laboratory
6) Training, supervision, recording and reporting, evaluation
7) Challenges and problems in your laboratory.
8) Expectation to the course

[Instruction for Job Report for Presentation]
(1) Data Format:
It should be prepared by Power Point (15 slides at a maximum) or Word (5 pages at a maximum).

(2) Submission of the report:
The report should be sent to JICA Tokyo (ticthd@jica.go.jp) by e-mail by September 14, 2015. Please include the course title and course number (J1504037) in the e-mail title.
ANNEX-2 Certificate of Antibody Test and Vaccination

Improvement of Clinical Laboratory Technology for Infectious Disease Control
—for Proper Diagnosis of Infectious Diseases—  (J1504037)

Request for taking measures against infection for participating the program

Many university hospitals oblige their health professionals and trainees regardless of their nationalities to take countermeasures against 5 kinds of infectious diseases (Chickenpox, Measles, Rubella, Mumps, and Tuberculosis). This is necessary not only for protecting medical service workers from the exposure to infection but also for preventing them from being infection source. Since this program includes hospital practices, you are kindly requested to fill out the following list and submit it to JICA.

When the result of the antibody test of Chickenpox, Measles, Rubella, and Mumps is negative, false-positive or unclear, you are requested to have a vaccination and submit a statement mentioned below certified by a doctor. Regarding Tuberculosis, you are required to be negative against tuberculin reaction.

* The accepted candidates will have an x-ray exam in Japan.

<table>
<thead>
<tr>
<th></th>
<th>Result of antibody test</th>
<th>Vaccination status</th>
</tr>
</thead>
</table>
| Chickenpox | 1) Date of test: (day/month/year)□positive □false-positive□negative □unclear  
2) Testing method : EIA ・ others □positive □false-positive □negative □unclear  
3) Remarks : ( ) | Date of vaccination (day/month/year) |
| Measles   | 1) Date of test: (day/month/year)□positive □false-positive□negative □unclear  
2) Testing method : EIA ・ others □positive □false-positive □negative □unclear  
3) Remarks : ( ) | Date of vaccination (day/month/year) |
| Rubella   | 1) Date of test: (day/month/year)□positive □false-positive□negative □unclear  
2) Testing method : EIA ・ others □positive □false-positive □negative □unclear  
3) Remarks : ( ) | Date of vaccination (day/month/year) |
<table>
<thead>
<tr>
<th>Mumps</th>
<th>Date of test: (day/month/year)</th>
<th>□ positive □ false-positive □ negative □ unclear</th>
<th>Date of vaccination (day/month/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2) Testing method: EIA · others</td>
<td>( )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) Remarks: ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>Date of test: (day/month/year)</td>
<td>□ negative □ positive □ false-positive □ unclear</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) Testing method: Tuberculin Skin test · others</td>
<td>( )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) Remarks: ( )</td>
<td></td>
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</tr>
</tbody>
</table>

Your Name: __________________________

Country: __________________________

Date: __________________________

Name of testing organization: __________________________

Name of the doctor: Certified by __________________________

(Enter Name of the doctor in block letter)

Signature: __________________________
For Your Reference

JICA and Capacity Development

The key concept underpinning JICA operations since its establishment in 1974 has been the conviction that “capacity development” is central to the socioeconomic development of any country, regardless of the specific operational scheme one may be undertaking, i.e. expert assignments, development projects, development study projects, training programs, JOCV programs, etc.

Within this wide range of programs, Training Programs have long occupied an important place in JICA operations. Conducted in Japan, they provide partner countries with opportunities to acquire practical knowledge accumulated in Japanese society. Participants dispatched by partner countries might find useful knowledge and re-create their own knowledge for enhancement of their own capacity or that of the organization and society to which they belong.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs and are being customized to address the specific needs of different target organizations, such as policy-making organizations, service provision organizations, as well as research and academic institutions. Some programs are organized to target a certain group of countries with similar developmental challenges.

Japanese Development Experience

Japan was the first non-Western country to successfully modernize its society and industrialize its economy. At the core of this process, which started more than 140 years ago, was the “adopt and adapt” concept by which a wide range of appropriate skills and knowledge have been imported from developed countries; these skills and knowledge have been adapted and/or improved using local skills, knowledge and initiatives. They finally became internalized in Japanese society to suit its local needs and conditions.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated from this “adoption and adaptation” process, which, of course, has been accompanied by countless failures and errors behind the success stories. We presume that such experiences, both successful and unsuccessful, will be useful to our partners who are trying to address the challenges currently faced by developing countries.

However, it is rather challenging to share with our partners this whole body of Japan’s developmental experience. This difficulty has to do, in part, with the challenge of explaining a body of “tacit knowledge,” a type of knowledge that cannot fully be expressed in words or numbers. Adding to this difficulty are the social and cultural systems of Japan that vastly differ from those of other Western industrialized countries, and hence still remain unfamiliar to many partner countries. Simply stated, coming to Japan might be one way of overcoming such a cultural gap.

JICA, therefore, would like to invite as many leaders of partner countries as possible to come and visit us, to mingle with the Japanese people, and witness the advantages as well as the disadvantages of Japanese systems, so that integration of their findings might help them reach their developmental objectives.
For enquiries and further information, please contact the JICA office in your country.

JICA Tokyo International Center (JICA Tokyo)
Address: 2-49-5 Nishihara, Shibuya-ku, Tokyo 151-0066, Japan
TEL: +81-3-3485-7051  FAX: +81-3-3485-7904