

UNESCO Biotechnology School in Asia
2012 cohort

Final Report

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*Appendix 3, 5, 7, 8, 9 are not posted on the website due to the personal information protection.

UNESCO Biotechnology School in Asia 2012

— Report —

Contract No. 4500190480

Contract for Services between UNESCO and Osaka University

The UNESCO Biotechnology School in Asia 2012 was designed for the scientific training of young Asian university graduates in the field of biotechnology and related areas, resulting in their completion of Master's degrees. The participants are expected to make significant contributions to educational or scientific institutions in their home countries after graduating from the School. The program also aimed to strengthen the research network among the biotechnology scientists in the region.

The School's program consisted of two-year Master's degree courses (August/September 2012 to July/August 2014). Participants from Cambodia and Laos enrolled in these courses at universities in Indonesia and Thailand. During the first year of the Master's program, the participants (all of whom were Bachelor's degree-holding young researchers or post-graduate students from Asian countries) gained contemporary knowledge and mastered new technology to further develop their advanced research skills and to prepare for the 2nd-year Master's courses by earning the required credits and results for their assigned universities. The successful participants were then enrolled in the 2nd year of the Master's course.

Between the 1st year and 2nd years of the program, all of the participants were sent to Osaka University for a ten-day training program in which they attended lectures in advanced biotechnology, biodiversity, intellectual property rights and business development, which will assist them in their path to become the future leaders in the field of biotechnology.

After the ten-day training program, the participants from Cambodia and Laos (category a) returned to their host universities to continue the 2nd year of the Master's course. A participant from Vietnam (category a) returned to Kasetsart University in Thailand and continued the 2nd year there, receiving the Master's degree in September 2013. Participants from Indonesia, Philippines, and Thailand (category b) stayed in Japan to conduct their 2nd-year research.

List of participants

Family names (surnames) are in CAPITAL letters.

[Category a]

Name:	UNG Sivlin
Country of origin:	Cambodia
Where studied:	King Mongkut's University of Technology Thonburi
When graduated:	November 2014
Thesis:	Production of monoclonal antibody specific to CD20 by CHO cells
Supervisor:	Kanokwan Poomputsa

Name:	CHHON Yanvary
Country of origin:	Cambodia
Where studied:	King Mongkut's University of Technology Thonburi
When graduated:	July 2014
Thesis:	Premeditation of trimethylamine (TMA) by <i>Euphobia milli</i>
Supervisor:	Paitip Thiavetyan

Name:	BAN Mab
Country of origin:	Cambodia
Where studied:	Mahidol University
When graduated:	Left university
Thesis:	Effect of NaCl on gelatinization and retrogradation of rice starch in the presence of non-ionic (guar gum) and ionic (xanthan gum) hydrocolloids
Supervisor:	Manop Supantharika

Name:	SIENG Darith
Country of origin:	Cambodia
Where studied:	Mahidol University
When graduated:	May 2014
Thesis:	The yeast estrogen screen (YES) with deletion of some ABC transporter genes for detection of estrogenic-like compounds in Thai medical plant
Supervisor:	Chuenchit Boonchird

Name:	PHONEPASEUTH Phongphayboun
Country of origin:	Laos
Where studied:	Chulalongkorn University
When graduated:	September 2014
Thesis:	Removal of phenols and color from palm oil mill effluent by using grass and their rhizosphere bacteria
Supervisor:	Ekawan Luepromchai

Name:	SOULYAVONG Souphaline Liko
Country of origin:	Laos
Where studied:	Institut Teknologi Bandung
When graduated:	September 2014
Thesis:	Mycoremediation of waste water from pulp industry with white rot fungi
Supervisor:	I Nyoman P. Aryantha

Name:	TRUONG Ngoc Quang
Country of origin:	Vietnam
Where studied:	Kasetsart University
When graduated:	September 2013
Thesis:	Production of plant growth phytohormone indol-3-acetic acid by *Aureobasidium pullulans*
Supervisor:	Savitree Limtong

[Category b]

Name:	JATURAPAKTRARAK Chalisa
Country of origin:	Thailand
Where studied:	Osaka University
When graduated:	July 2014
Thesis:	The in vitro metabolic engineering to construct the artificial pyruvate production pathway from glycerol
Supervisor:	Hisao Otake

Name:	AYUNINGTYAS Fitria
Country of origin:	Indonesia
Where studied:	Osaka University
When graduated:	October 2014
Thesis:	Directed smooth muscle cell lineage differentiation of human mesenchymal stem cells on a dendrimer immobilized surface during serial subculture
Supervisor	Masahiro Kinooka

Name:	BADUA Mark Anthony Alfredo
Country of origin:	Philippines
Where studied:	Osaka University
When graduated:	December 2014
Thesis:	Improved ethanol production by a xylose-fermenting yeast strain constructed through genome-shuffling method
Supervisor:	Satoshi Harashima

Name:	WIDEKDO Dwi Purno
Country of origin:	Indonesia
Where studied:	Osaka University
When graduated:	August 2014
Thesis:	Production of Immunoglobulin (Ig) A and Chimeric IgA-IgG Against Dengue Virus and Their Evaluation
Supervisor:	Kazuhito Fujiyama

The selection procedure of the UNESCO Biotechnology School in Asia for the 2012 cohort started in mid-February, 2012. The application deadline was 15 April, 2012 (Appendix 1). We received a total of 21 applications (Appendix 3). The Selection Committee (Appendix 4) was formed, and 11 participants were selected (Appendix 5).

The participants then enrolled in the assigned universities in Indonesia, and Thailand in 2012. The enrollment date varied depending on the host countries' school systems.

All 11 participants completed the first year of the Master's course at their assigned universities, and all 11 participated in the ten-day training at Osaka University (Appendix 6).



In the classroom, ICBiotech – Osaka University.

On 2 August 2013 during the training period, the Opening Ceremony for the 2012 cohort was held (Appendix 6).

Opening Ceremony, 2 August 2013



The next day, 3 August 2015, the 11 students attended the Japan Society for the Promotion of Science (JSPS) – National Research Council of Thailand (NRCT) Joint Symposium on Bioproduction Platform (Leveraging Subtropical Microbial Bioresources), which developed a next-generation bioproduction platform based on the

interactions among excellent researchers from Japan, Thailand, Vietnam, Laos and Cambodia in the field of industrial biotechnology. This symposium had a satellite session for the young scientists and students the next day, 4 August. The participants attended the JSPS Vietnam-Japan Workshop, which was a JSPS- Vietnamese Academy of Science and Technology (VAST) bilateral joint project on “A feasibility study toward the identification of marine bio-resources and eco-remediation along coastal areas in Vietnam” on 5 August 2015.



JSPS-NRCT Joint Symposium on 3 August.

Satellite session for young scientists on 4 August



JSPS Vietnam-Japan workshop on 5 August.

The 11 students also gained front-line knowledge by attending lectures by leading researchers and a program by Shimadzu Corporation that introduced examples of Shimadzu's new technology. After the two-week training, four of the students remained at Osaka University to continue their studies as special auditors, and the other seven students returned to their assigned universities to resume their studies.

At Osaka University, the four assigned students gave interim-report presentations every 3 months.

Presentation on 21 April 2014.

On 27 May 2014, the students in Thailand made an interim report presentation. This one-day academic event featured the presentation of progress reports for the 2012 cohort, and the participants included the 2013 cohort, advisors of the 2012 cohort, and Thai Academic Consortium (TAC) members. The presentation session was followed by a luncheon and several social activities to



foster interactions among the UNESCO students from various cohorts.

On 28 July 2014, the four students at Osaka University reported the results of their studies and received a certificate of completion of The UNESCO Biotechnology School in Asia 2012. The slides of both the interim reports in Thailand and the final reports in Japan are in the Reports chapter.



Presentation by Ms. Chalisa Juturapaktratak



Mr. Mark Anthony Alfredo Badua

All 11 students finished their Master's courses and obtained their Master's degrees by 2014. The results of this program are shown in Appendix 6, and the academic transcripts of the participants are provided in Appendix 7.

UNESCO Biotechnology School in Asia



United Nations
Educational, Scientific and
Cultural Organization



Multi-country operation program

Master degree-awardable program

Combined budget support by local/domestic and UNESCO budget

A. Introduction

The "UNESCO Biotechnology School in Asia," newly launched in October 2012, follows the termination of the UNESCO International Postgraduate University Course in Microbiology (1973–2003) and the UNESCO Postgraduate Inter-University Course in Biotechnology (2004–2007). The new program (hereafter, the 'Course') is an activity of the "UNESCO Extra-budgetary Program for Human Resources and Research Network in Sciences and Technology" supported by the Japanese Fund-In-Trust (JFIT).

The Course is a program for the scientific training of young Asian university graduates in the field of biotechnology and related areas, culminating in the completion of a Master's degree. The Course participants are expected to make significant contributions to an educational or scientific institution in the coming years in their home countries. The Course also aims to strengthen the network activities among the biotechnology scientists in the region. The Course training is implemented through inter-university cooperation in five countries (Japan, Indonesia, Philippines, Thailand and Vietnam) involving five Japanese universities (Tohoku University, The University of Tokyo, Kyoto University, Osaka University and Kyushu University), two universities in Indonesia (Gadjah Mada University and Bandung Institute of Technology), four universities in the Philippines (University of the Philippines [Los Baños, Diliman and Manila], De La Salle University, University of Santo Tomas, and Ateneo de Manila University), four universities and an institution in Thailand (Chulalongkorn University, Kasetsart University, King Mongkut's University of Technology Thonburi, Mahidol University, and the National Center for Genetic Engineering and Biotechnology [BIOTEC, National Science and Technology Development Agency]), and two universities in Vietnam (Vietnam National University–Hanoi and –Ho Chi Minh City). The International Center for Biotechnology (ICBiotech, Osaka University) works as the secretariat. In particular, the Course is expected to involve contributions from several leading researchers in Asian countries (as supervisors) who are alumni of one of the UNESCO Courses in Microbiology or in Biotechnology.

More information is available at the ICBiotech homepage at <http://www.icb.osaka-u.ac.jp/>.

B. Purpose

The purpose of the Course is to provide the participants with a more advance education as well as methodical preparation for their own research and/or

educational activities in the field of biotechnology and related areas. The Course focuses mainly on biotechnology-related education and research, particularly related to "Sustainable Utilization of Bioresources in Asia."

Course participants, after successfully completing the required credits, will receive a Master's degree from their university in Indonesia, Philippines, Thailand or Vietnam.

C. Program

The UNESCO Biotechnology School in Asia 2012 consists of two-year Master's-degree awardable courses (August/September 2012 to July/August 2014).

Participants from Cambodia, Laos, Myanmar or Mongolia will enroll in the Master's courses of universities in Indonesia, Thailand or Vietnam. During the first year of the Master's course, the participants (all of whom are Bachelor's degree-holding young researchers/post-graduate students from Asian countries) will follow the curricula of Master's-level courses designed to equip them with contemporary knowledge and familiarity with technology that will further develop their skills for advanced research. Only after the successful completion of the required 1st-year credits are the participants allowed to move into the 2nd year of the Master's course.

Between the 1st and 2nd years of the Course, all of the participants are brought to Osaka University for a training period of 10 days to attend advanced biotechnology lectures as well as lectures concerning biodiversity, intellectual property rights and business development, which will help prepare the participants as future leaders in the field of biotechnology.

After the training period at Osaka University, the participants from Cambodia, Laos, Myanmar, Mongolia, or Vietnam (category a) will return to their 1st-year university to continue the 2nd year of the Master's course. The participants from Indonesia, Philippines, Thailand and Vietnam (category b) will remain in Japan to continue their 2nd year. The Program Outline of the Course is attached to this Prospectus as Appendix 1.

D. Working Language The working language of the Course is English. Some knowledge of Thai or Bahasa Indonesia will be helpful in daily life, but it is not essential for participation in the Course.

E. Admission Requirements

The Course will be open to young scientists/students of Asian Member States of UNESCO.

- 1) Applicants should have at least a Bachelor's degree in the field of biotechnology or a related area from a university, or they should be completing such a Bachelor's degree before their enrollment. For those still at the undergraduate level, a letter or recommendation by a supervising professor that confirms the applicant's expected graduation is required. (For applicants aiming to attend Gadjah Mada U, Bandung Institute of Technology and Vietnam universities, only those who have completed Bachelor's degree at the application stage can be considered). Since this program is not designed for postdoctoral research fellows, Ph.D. holders are not eligible to apply.
- 2) Applicants are required to possess certified proficiency in the use and understanding of the English language (see section F-5 below). A certificate of English proficiency (TOEFL, TOEIC, IELTS) is required.
- 3) Applicants must not be older than **30** years as of **October 1, 2012**.

Participants are expected to continue and pursue further educational and/or research activities in their own countries after finishing the Course and to participate actively in the Course alumni activities.

F. Application

Each applicant should submit (by airmail) a completed application form (Appendix 2) together with the documents listed below (only in English) (1 original set and 5 sets of copies) to the Secretary General, Office of the UNESCO Course, c/o the International Center for Biotechnology, Osaka University (full address given below). The deadline for the receipt of application documents is **15 April, 2012**.

Privately created application forms will be rejected. The application form can be downloaded as a Word or PDF file from the ICBiotech website:

http://www.icb.osaka-u.ac.jp/index_e.html

The application form must have as attachments the following documents, which will not be returned to the applicant:

- 1) Six copies of a 'head shot' photograph of the applicant from the shoulders up (4 cm x 6 cm, similar to a passport photo) taken within 6 months before the application date
- 2) A certificate of health (Appendix 4)
- 3) Academic records issued by the applicant's university (at both the undergraduate and postgraduate levels, if applicable)

- 4) A copy of the applicant's latest diploma
- 5) A certificate of proficiency in English (TOEIC, TOEFL or IELTS certificates are preferable)
- 6) Permission for an academic leave of absence or sabbatical; if employed, it is necessary to provide a letter from the Dean or Director of the applicant's institution or organization stating that the applicant's leave from the present position is officially approved.
- 7) Recommendation letters from two references (Appendix 5), one of which should be the applicant's supervising professor. The second reference, preferably and where possible, may be from an alumnus of the UNESCO Course in either Microbiology or Biotechnology.
- 8) A list of the scientific papers and thesis written/published by the applicant. A summary of each paper should also be included.

G. Mailing Address

All materials for the application should be sent to the following address:

Secretariat Office for the UNESCO Course
 International Center for Biotechnology Osaka
 University 2-1 Yamadaoka, Suita
 Osaka 565-0871, Japan
 Phone: +81-6-6879-7455
 Fax: +81-6-6879-7454
 E-mail: uncourse@icb.osaka-u.ac.jp
 More information is available
 at: <http://www.icb.osaka-u.ac.jp/>

H. Selection

On behalf of the Course's organizers, the Selection Board, which consists of representatives of each academic consortium from Indonesia, Japan, Philippines, Thailand and Vietnam, will select a maximum of 8–9 participants to enroll in the Master's course for the 1st year, and a maximum of 5–6 participants to engage in research training in Japan for their M2 period for the 2012 cohort. Applications will be considered individually on an international competitive basis after careful examination of all submitted documents. There is no country quota. All applications received will be individually acknowledged. Each applicant will be informed, at the end of July 2012, of the results of the selection. The documents submitted by the applicants will not be returned.

I. Pledge

Each participant is required to sign the pledge attached to this prospectus (Appendix 6) once he/she is admitted to the Course.

J. Fellowship

UNESCO in conjunction with the aforementioned universities in Indonesia, Philippines and Thailand will offer each participant of the Course a scholarship*, tuition fee exemption, some support on other university fees, and a round-trip air ticket (economy class) between the applicant's home country (the nearest international airport) and the destination country to participate in the Master's course.

The amount of the monthly scholarship stipend is as follows:

- 1) During the stay in Indonesia, Thailand, or Vietnam: approximately 30,000 Japanese Yen**
- 2) During the stay in Japan: 120,000 Japanese Yen

***The scholarship is subject to change without notice.**

****The scholarship amount may differ due to the policy of the university in which the participant is enrolled.**

The participants (including those awarded a scholarship) must cover all of their own living expenses including accommodations and visa extensions.

The scholarship stipend, though sufficient for one person, does not cover the living expenses of family members. The Course is not responsible for the expenses of persons accompanying successful applicants.

K. Accommodations

The Secretariat of the Course will help to secure reasonable accommodations for the participants. There are no dormitories for the participants at Japanese universities. The rent must be borne by the participants themselves. Housing for those accompanied by family is very difficult to

find.

L. Medical Care

On traveling to the destination country to enroll in the assigned Master's course, the participants are requested to purchase in their home country a policy providing a minimum of 10 days' travel insurance to cover both unexpected bodily injury and diseases (Appendix 7).

Once he/she has enrolled in the Master's course of the relevant university, the participant should join an insurance program that would cover (1) the expenses incurred due to bodily injury by any fortuitous or external accident, and (2) the expenses for hospitalization, including the services of a professional nurse and surgery. Participants should discuss the insurance matter with his/her supervisor at the university after enrollment.

M. Degree

After satisfactory completion of the two-year Master's course, a Master's degree will be awarded to each participant by the assigned university.

Appendixes

Appendix 1: Program Outline

Appendix 2: Application Form

Appendix 3: List of Research theme in Japan (for category-b applicants only)

Appendix 4: Health Certification Form

Appendix 5: Recommendation Reference Form

Appendix 6: Pledge

Appendix 7: Insurance Notification Form

International Center for Biotechnology, Osaka University
2-1 Yamadaoka, Suita, Osaka 565-0871, Japan

Phone: +81-6-6879-7455

Fax: +81-6-6879-7454

E-mail: uncourse@icb.osaka-u.ac.jp

Web: <http://www.icb.osaka-u.ac.jp/>



UNESCO Biotechnology School in Asia 2012

Program Outline

1. Number of possible participants:

Category a) 8-9 trainees (nationality of Cambodia, Laos, Myanmar, Mongolia, or Vietnam etc) to enroll into the Master course of Indonesia, Thailand, or Vietnam, and keep studying for 2 years in the course.

Category b) 5-6 trainees (nationality of Indonesia, Philippines, Thailand or Vietnam) to be trained for their M2 period in Japan.

2. For the period of August/September 2012 – July/August 2014 (approximately 2 years).

Applicants belonging to category a) will enroll into one of the below Master courses from August/September 2012, and will complete the master course on July/August 2014. (Academic calendar may be different for each university and country)

The scholarship during the M1 period will principally come from the accepting university/country, and that during the M2 period will come from UNESCO budget.

Choose five destination university/country from the table below, and describe them with order of preference in your application form.

University or Institute	Abbreviation	Available slots	Name of Master Program taught in English	Country
Gadjah Mada U	GM	1 slot	Biotechnology course, at School of Graduate Studies	Indonesia
Bandung Institute of Technology	ITB	1 slot	Biotechnology course, at School of Life Science and Technology	Indonesia
Chulalongkorn U.	CU	1 slot	International Program of Applied Microbiology, at Department of Microbiology, Faculty of Science	Thailand
King Mongkut's U. of Technology Thonburi	KMUTT	2 slots	Biotechnology course, at Division of Biotechnology, School of Bioresources and Technology	Thailand
Kasetsart U.	KU	0-1 slot	Microbiology course, at Department of Microbiology, Faculty of Science	Thailand
Mahidol U.	MU	2 slots	Biotechnology course, at Department of Biotechnology, Faculty of Science	Thailand
Vietnam National U Hanoi	VNU-H	0-1 slot	Biotechnology course, at Institute of Microbiology and Biotechnology	Vietnam
Vietnam National U Ho Chi Minh City	VNU-HCM	0-1 slot	Biotechnology course, at Department of Biotechnology, International University	Vietnam

3. In the transfer period from M1 to M2 (tentatively in August 2013, for the period of 10 days), opening of the Biotechnology School 2012 and lectures will be given at International Center for Biotechnology, Osaka U, Osaka, Japan.

Participants belonging to both category a) and category b) will gather at Osaka U.

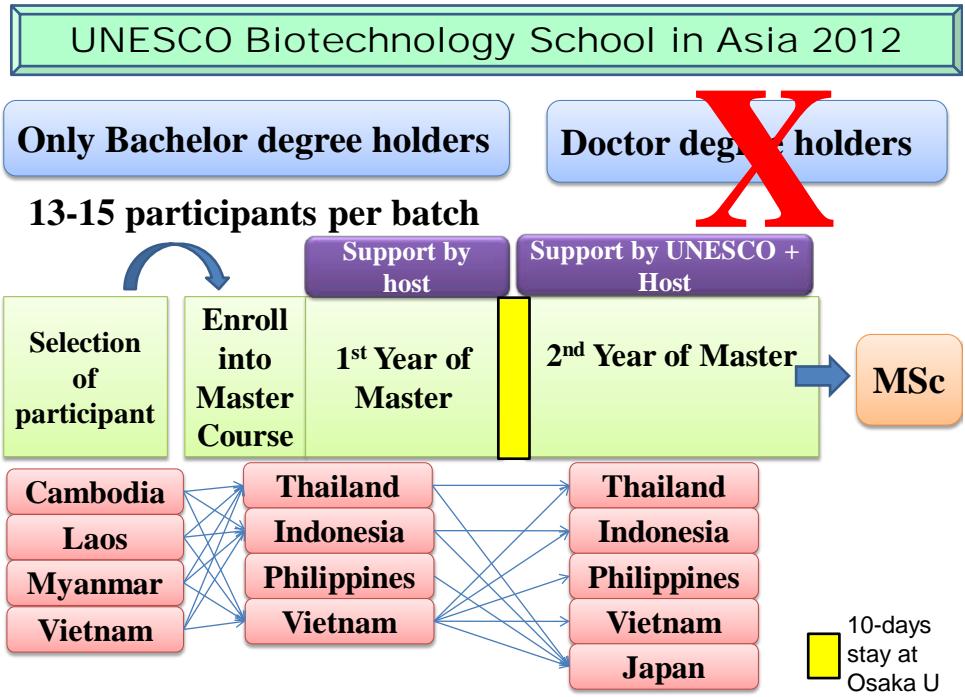
Principally, air-fee as well as the daily expenses including accommodation fee for the 10-days stay in Osaka will be covered by the UNESCO budget.

4. After the 10-days stay in Osaka, participants belonging to category a) will go back to the country where he/she has been spending the M1 period, and continues his/her M2 period to complete the master program.

5. Participants belonging to category b) will keep staying in Japan to do advanced research in universities in Japan until July/August 2014, and will return to their original university to complete the master

program. Research themes in Japan is shown in Annex 3. Applicants in the category b) should choose three research themes, and describe them with your order of preference in your application form.

6. Schematic outline of the program



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UNESCO BIOTECHNOLOGY SCHOOL IN ASIA 2012

Application for Admission

Paste your passport photograph (taken within the past 6 months) here.

Photo (4 x 6 cm)

Please write in English. Type or print in BLOCK LETTERS.

Proper nouns/unique nouns should be written in full (not abbreviated).

Date: (Year) (Month) (Day)

Name in full: _____ Family name First name Middle name					Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female		
Name in Chinese characters, if available. _____							
Nationality			Marital status <input type="checkbox"/> Single <input type="checkbox"/> Married		Date of birth Year Month Day		Age
Mailing address (Current address)	_____						
Postal code	_____	_____					
Telephone	_____	_____	_____	_____	_____	_____	
	Country Code	Area Code	Local No.		Ext.		
Facsimile	_____	_____	_____	_____	_____	_____	
E-mail address	_____						
Present status, with the name of the university (Faculty and Department) attending, or of employer	_____						
Name of the international airport in your country to depart to Indonesia/Thailand/Viet Nam	_____						
Address of nearest Japanese embassy to get your Japanese visa	_____						

Academic Background				
	Name and address of school	Period of attendance	Degree or diploma awarded	Required years of schooling
Elementary education or Elementary school		From: To:		years
Secondary education or Lower secondary school		From: To:		years
Upper secondary school		From: To:		years
Higher education Undergraduate level (Department, Faculty and University)		From: To:		years
Postgraduate level (Department, Faculty, and University)		From: To:		years
				years
				years
Total years of schooling mentioned above				years

GPA at your university*				
At both the undergraduate level and post-graduate level. *such as 3.5/4.0 (full score)				
	Name of school	Period of attendance	Your GPA	The university's maximum GPA
Undergraduate		From To		
Postgraduate		From To		

*The application will be effective only if the applicant's academic transcript is attached.

Employment Record

(Begin with the most recent employment, if applicable)

Name and address of organization	Period of employment	Position	Type of work

Language Proficiency

(Evaluate your level by fill adding an X where appropriate)

	Excellent	Good	Poor
English			
Bahasa Indonesia			
Thai			

Language Qualification (TOEFL, TOEIC, IELTS or other)

Name of the test			
Date of the test	Year Month Day	Score/Classification	
Name of the test			
Date of the test	Year Month Day	Score/Classification	

Name:

Application form (Category a) 3/6

Family Background				
Name	Relationship	Age	Occupation	Name of organization

Person to be notified in case of emergency	
Name in full	_____
	Family name First name Middle name
Postal address	
Telephone	
Facsimile	
E-mail address	
Relationship	
Occupation	

Immigration records to Japan/Indonesia/Thailand/or Vietnam	
Date	Purpose
From To	
From To	
From To	
From To	

Choice of University and Country			
Choice of university and country to enroll in the relevant master course	University		Country
	1		
	2		
	3		
	4		
	5		

Indonesia (Gadjah Mada U or Bandung Institute of Technology); Thailand (Chulalongkorn U, Kasetsart U, King Mongkut's U Technology Thonburi [KMUTT], or Mahidol U); Vietnam (VN National U Hanoi, or VN National U Ho-Chi Minh City)

Research Background	
Thesis title for undergraduate study	
Thesis title for postgraduate study (if applicable)	
List of research achievements	
List your research publications, item by item, stating author names, title of the publication, publication year, journal or book name, volume, and pages (from start to end).	
1)	
2)	
3)	
4)	
5)	

Name:

Application form (Category a) 5/6

References

(List two individuals who are familiar with your personality and ability, one of whom should be the applicant's supervisor. One of the references, preferably and where possible, may be an alumnus of the previous UNESCO Postgraduate University Course in Microbiology)

Name	Position	Affiliation and address

Briefly describe your prospects for work/research in your home country after finishing the Course.

Certification

I certify that the foregoing statements are true and complete to the best of my knowledge and belief, and I understand that any willfully false statement is sufficient cause for the rejection of my application; or if I have been admitted to the UNESCO Biotechnology School in Asia, for the dismissal from the Course.

Date: _____ **Signature of applicant:** _____

Date: _____ **Signature of supervisor:** _____

Appendix4

selection committee for UNESCO Biotechnology school in Asia 2012 cohort

Prof. Dr. Takuya Nihira	Osaka University	Japan
Prof. Dr. Watanalai Panbangred	MU	Thailand
Assoc. Prof. Dr. Khanok Ratanakhanokchai	KMUTT	Thailand
Assoc. Prof. Dr. Sawit Trakulnaleumsai	KU	Thailand
Assist. Prof. Dr. Rungaroon Waditee Sirisattha	CU	Thailand
Dr. Arjaree Nilavongse	MU-OU:CRC, MU	Thailand
Prof. Irfan D. Prijambada	University of Gadjah Mada	Indonesia
Dr. Donny Widianto	University of Gadjah Mada	Indonesia
Prof. Tati Suryati Syamsudin,	ITB	Indonesia
Dr. Anggraini Barlian	ITB	Indonesia
Dr. Duong Van Hop	Vietnam National University, Hanoi	Vietnam
Dr. Nga Le	Vietnam National University, Ho Chi Minh C	Vietnam
Dr. Reynold Ebor, Dr. Francisco Elegado	UPLB	The Philippines

UNESCO Biotechnology School in Asia 2013 @ Osaka University

Schedule

	9:00–10:20	10:30–11:50	13:15–14:35	14:45–16:05
29 July	10:00 Self-introduction		Paperwork orientation	
30 July	Presentation: Frontier Biotechnology course			
31 July	Prof. Kaneko, Dr. Maekawa Yeast Genetic Resources and Yeast Biology	Dr. Ito How can biotechnology be used for sustainable use and better production of special plant products in tropical Asia	Dr. Hara Urban Environment and Sustainability Issues– discussions from Asian perspectives	
1 Aug		Dr. Fujiyama Intellectual Property	Dr. Sumida (JBA) Research Cooperation in Compliance with the Convention on Biological Diversity	
2 Aug	Opening Ceremony			Interactive activities with Osaka U students
3 Aug	JSPS Asian Core seminar			
4 Aug	JSPS YSS seminar			
5 Aug	JSPS YSS seminar			
6 Aug	Prof. Fukusaki Factory visit: Shimadzu Corp.		Prof. Fukusaki Cultural visit	
7 Aug	Prof. Yoshida Biochemical Engineering	Prof. Yoshida Process Engineering	Dr. Misaki Introduction to advanced experimental techniques	
8 Aug		Prof. Yoshida Overview of ASEAN bio	Shimadzu Corp. Business: "Contribution to the future: New technology from Shimadzu"	Shimadzu: Mr. Hirano Analytical chemistry: "Shimadzu LCMS Product Portfolio"
9 Aug	Introduction of Master's research / Closing ceremony			

NOTE:

6–8 Aug

Discussion among participants, their supervisors and Osaka Univ. professors

Agenda:
Opening of the UNESCO Biotechnology School in Asia

(Master of Conference: Prof. Kazuhito Fujiyama)

Opening: Prof. Takuya Nihira, Director, International Center for Biotechnology,
Osaka University

Welcome Address: Dr. Toshio Hirano, President, Osaka University

Address: Dr. Hubert Gijzen, Director, UNESCO Jakarta

Address: Ms. Taka Horio, Assistant Secretary General of the Japanese National
Commission for UNESCO, MEXT, Japan

Address: Prof. Dr. Djoko Santoso, Director General, Ministry of Education and
Culture, Government of Indonesia

Address: H.E. Mr. Thanatip Upatising, Ambassador, Royal Thai Embassy

Address: Prof. Sakarindr Bhumiratana, President, King Mongkut's University of
Technology Thonburi

Address: Ms. Maria Teresa L. Taguiang, Consul General, Philippine Consulate
General

UNESCO Postgraduate Course: History and Future

Prof. Takuya Nihira, Director, International Center for Biotechnology,
Osaka University

Self-Introduction: The UNESCO Participants (11 participants)

Closing: Prof. Watanalai Panbangred, Mahidol University

Photo session

Appendix 6-3
List of 2012 cohort

	Name	Affiliation	Allocated Country	University for Study
Cambodia	BAN Mab	Royal University of Phnom Penh	Thailand	MU
Cambodia	CHHON Yanvary	Royal University of Phnom Penh	Thailand	KMUTT
Cambodia	SIENG Darith	Royal University of Phnom Penh	Thailand	MU
Cambodia	UNG Sivlin	Royal University of Phnom Penh	Thailand	KMUTT
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Laos	PHONEPASEUTH Phongphayboun	National University of Laos	Thailand	CU
Laos	SOULYAVONG Souphaline Liko	National University of Laos	Indonesia	ITB
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Vietnam	TRUONG Ngoc Quang	Vietnam National University-HC MC HCMC University of Technology	Thailand	KU from M2