

**ANNUAL REPORTS
OF
INTERNATIONAL CENTER FOR BIOTECHNOLOGY
OSAKA UNIVERSITY**

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The Annual Report is published to record the activity of the International Center for Biotechnology (ICBiotech) and issued once in each fiscal year. It contains scientific articles, progress reports, letters, and announcement from the Center. This volume includes publications by the former participants in UNESCO courses. The editor welcomes the submission of appropriate articles from all persons who are concerned with the activity of the Center. All the contributions, however, will be reviewed by editors before their acceptance. The scientific paper herein should be treated as personal communications and not treated as original publications. The Annual Report is distributed upon request to the International Center for Biotechnology, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan (e-mail: info_icbio@icb.osaka-u.ac.jp).

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ACTIVITIES OF ICBiotech

ACTIVITIES OF INTERNATIONAL CENTER FOR BIOTECHNOLOGY FOR FY2015

The International Center for Biotechnology (ICBiotech) was founded in April 1995 as an independent institute in Osaka University with a mission to pursue academic advancement and collaborative research in biotechnology. ICBiotech has its origin from the “International Center of Cooperative Research Center in Microbial Engineering Japan (ICME)” which was established in the Faculty of Engineering, Osaka University in April 1978, through renaming to “International Center of Cooperative Research in Biotechnology (ICBiotech)” in April 1985 with the recognition of the wide acceptance and success of ICME’s activities and achievements.

ICBiotech is dedicated to promote international cooperation among Asian countries in the aspects of research and educational advancement in the field of Biotechnology by propelling academic interactions in Asian countries, and is committed to industrial biotechnology studies by means of microbial engineering and related sciences, focusing on the sustainable utilization of abundant natural resources in Southeast Asian countries.

ICBiotech serves as the seat of education and research in Asia, with the support of the Ministry of Education, Culture, Sports, Science and Technology (Monbu-kagaku-sho, MEXT), the Japan Society for the Promotion of Science (JSPS), the Japan Science and Technology Agency (JST), the Japan Student Service Organization (JASSO), and the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO), with the cooperation of Department of Biotechnology, Graduate School of Engineering, Osaka University, and researchers from prestigious universities nationwide and abroad.

In 2002 Mahidol University-Osaka University Collaborative Research Center for Bioscience and Biotechnology: MU-OU:CRC was set up at Faculty of Science, Mahidol University as a collaborative research center to accomplish multidisciplinary research in the field of Bioscience and Biotechnology.

The activities of the ICBiotech include:

1. Research and Education

The main area of research is industrial biotechnology rooted in microbial engineering, whilst centering on the sustainable use of agricultural and forest resources in bioresource-rich countries such as those in Southeast Asia. Research is underway in the field of cell engineering with the objectives of analyzing the cellular functions of bacteria, fungi and plants, and developing and using functions of these cells for management and rational use of biological resources that exist on our planet. ICBiotech covers three areas of Biotechnology:

- 1) Discovery of new functions from biological resources.
- 2) Bio-conversion and process engineering of biological resources.
- 3) Conservation of biological resources.

For under graduate and post graduate courses, ICBiotech is involved in the education activities of Department of Biotechnology, Graduate School of Engineering as collaborating laboratories and currently covers several fields of biotechnology in education and research: Molecular Microbiology laboratory chaired by Prof. Takuya Nihira and Applied Microbiology laboratory chaired by Prof. Kazuhito Fujiyama.

2. Participating in FrontierLab@OsakaU 'Scientific Empowerment Program for International Students' which was created for international students to conduct thematic studies and achieve results under the guidance of supervisors while acquiring skills necessary for continuing research in one of Osaka University's internationally renowned science and technology laboratories for a period of up to 12 months.
3. Acting as collaborating laboratories with Department of Biotechnology, Graduate School of Engineering, Osaka University for 'Biotechnology Global Human Resource Development program', a five-year program for master's and doctor's degrees. The aim of this program is to expose graduate students (privately financed as well as the Japanese Government Scholarship students) to state-of-the-art research skills and in-depth knowledge of advanced biology, chemistry and physics to harness the potential of biotechnology.
4. Having been administrating and implementing the "UNESCO Biotechnology School in Asia" (2012-) at Department of Biotechnology, Graduate School of Engineering, Osaka University, taking over the long-termed "International Post-Graduate University Course in Microbiology" (1972-2003) and Postgraduate Inter-University Course in Biotechnology (2004-2007) with total of 459 alumni spreading all over Asia.
5. Serving as the secretariat for the UNESCO Regional Network for Microbiology and Biotechnology in Southeast Asia in accordance with a proposed memorandum resulting from a Consortium Meeting of the Project "Tropical Bio-Resources and Green Chemistry Strategy" (Osaka 2003).
6. Working as a member of the global network "Microbiological Resource Centers" (MIRCENs) operated by UNEP, UNESCO and ICRO; and as an original member of the "Regional Network for Microbiology in Southeast Asia" operated under the auspices of UNESCO through the Fund-In-Trust of the Japanese Government (J-FIT).
7. Promoting international cooperative researches in biotechnology with the Southeast Asian countries related to Biotechnology, under the support of Monbu-kagaku-sho Grant-in-Aids for International Scientific Research. In addition, ICBiotech cooperates in developing international organization and conducting academic seminars related to biotechnology.
8. Publishing Annual Reports of ICBiotech periodically.

Steering Committee

Chairman Prof. Takuya Nihira (Director of ICBiotech)

Committee Members

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Prof. Tsuyoshi Inoue (Graduate School of Engineering)

Prof. Hajime Watanabe (Graduate School of Engineering)

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Collaborative Professor

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Dr. Ir. Irfan Dwidya Prijambada

(Universitas Gadjah Mada, Indonesia)

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I. COOPERATIVE RESEARCH STATION (CRS) IN SOUTHEAST ASIA

The ICBiotech, Osaka University launched out the Cooperative Research Station (CRS) in Southeast Asia at Chalermprakiat Building, Faculty of Science, Mahidol University in 2002 through the generous support by Mahidol University. The CRS's space and equipments are made available for Southeast Asian and Japanese researchers to undertake cooperative onsite researches on the development of the abundant natural biological and genetic resources and their sustainable utilization in Southeast Asian countries through JSPS core university program (ended in 2005), JST Special Coordination Funds for Promoting Science and Technology (2006-2009) and JSPS Asian CORE Program (2009-2014). The CRS also functioned as a lecturing and research station of the UNESCO International Post-graduate Inter-University program, which Osaka University operated in coordination with Thai universities. The CRS is considering support to the alumni of Osaka University and provision of university information for recruitment of students for study in Osaka University.

Mahidol University (MU) and Osaka University (OU) together established the Mahidol University-Osaka University Collaborative Research Center (MU-OU:CRS) for Bioscience and Biotechnology at Faculty of Science, Mahidol University in 2002, to strengthen the research cooperation in these fields which are amongst the most active fields of study and research in both universities.

Currently, MU-OU:CRS has coordinated a research projects under the jointly support of National Research Council of Thailand (NRCT), National Center for Genetic Engineering and Biotechnology (BIOTEC) and The Japan Society for the Promotion of Science (JSPS). Researchers from Mahidol University, Chulalongkorn University, Kasetsart University, King Mongkut's University of Technology Thonburi and BIOTEC participate in this project.

CRS is conducting researches on

1. Strain improvement of *Bacillus thuringiensis*.
2. Screening of actinomycetes for bioactive compound.
3. The soil metagenome for screening of potential polysaccharide-degrading enzymes.
4. Cell culture system for screening of bioactive compounds from Streptomycetes and environmental fungi.
5. Quorum sensing interference: Novel biocontrol strategies for pathogenic bacteria.

II. UNESCO COURSE

”UNESCO International Post-Graduate University Course in Microbiology” (1973-2003) plus the “UNESCO Postgraduate Inter-University Course in Biotechnology” (2004-2007) was one of the two long-term training courses held in Japan launched in response to the recommendations concluded at a UNESCO General Conference Meeting. After the operation of 33 batches for developing human resources in Asia, total 459 young researchers from all over Asian countries are now playing active and leading roles in current biotechnology research and education in the region to contribute to the development of their own country, and consequently to Asian countries, and the establishment of the closer and stronger network in the region.

UNESCO Biotechnology School in Asia (JFIT Project)

The “UNESCO Biotechnology School in Asia” was launched in October 2012. This program 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 of the scientific training for young Asian university-graduates in the field of Biotechnology and related areas resulting in achieving master degree, and the participants are expected to make significant contributions to an educational or scientific institution in the coming years in their home countries. It aims also to strengthen the network activities among the biotechnology scientists in the region.

Opening Ceremony of the UNESCO Biotechnology School in Asia “Cohort 2014”

July 28, 2015 at Ichō Kaikan, Osaka University

Opening	Prof. Takuya Nihira	Director, ICBiotech
Welcome address	Prof. Toshio Hirano	President, Osaka University
Address	Dr. Shahbaz Khan	Director, UNESCO Office in Jakarta
Address	Mr. Dusit Manapan	Consul General, Royal Thai Consulate-General, Osaka
Address	Prof. Iwan Dwiprahasto	Vice Rector of Academic Affairs, Universitas Gadjah Mada, Indonesia
Address	Mr. Wisnu Edi Pratigny	Consul General, Consulate-General, the Republic of Indonesia in Osaka
Address	Ms. Maria Teresa L. Taguiang	Consul General, Consulate General, the Republic of the Philippines Osaka-Kobe
Address	2014 cohort participants	3 min x 11 participants
Closing	Prof. Kazuhito Fujiyama	ICBiotech
Photo session		
Welcome Lunch		

[3rd: 2014 cohort students] (Aug 2014 – July 2016)

Nationality	Name	Affiliation	Allocated University
Laos	Sinpakone Singhalath	National U of Laos	ITB, Indonesia
Laos	Niphaphone Boum Venevongsot	National U of Laos	UGM, Indonesia
Vietnam	Nguyen Ngoc Thi Minh	U of Science, HCM	KMUTT, Thailand
Cambodia	Prum Chann Ratha	Royal U of Phnom Penh	KMUTT, Thailand
Cambodia	Sreylen Meas	Royal U of Phnom Penh	KMUTT, Thailand
Laos	Oulay Phoupasong	National U of Laos	KMUTT, Thailand
Mongolia	Dorjkhand.Gunchinbat	Mongolian U of Sci. and Technol.	Mahidol U, Thailand
Laos	Sysouvanh Boubpha	National U of Laos	Chulalongkorn U, Thailand
Thailand	Poungsombat Phornphatcharanan	KMUTT	Nihira Lab, Osaka U
Indonesia	Adinda Darwati Kadar	ITB	Fukusaki Lab, Osaka U
Philippines	Kris Gerard R. Alvarez, R. M.	UPLB	Nagai Lab, Osaka U

Schedule

July 24	Orientation, Final presentation of 2013 participants
July 25	Beer factory (Asahi Beer)
July 27	Presentation of Biotechnology Global Human Resource Development Program Lab Experiment
July 28	Opening ceremony, Lab tour / Research Center for Ultra-High Voltage Electron Microscopy
July 29	Lecture (Dr. Kanematsu, Dr. Fujiyama), Workshop on Collaboration between Osaka U and Japanese companies for global human resource development in the field of biotechnology
July 30	Factory visit (Shimadzu Co.), Culture activity –Kyoto (Shimadzu)
July 31	Lecture (Dr. Kawasaki), Seminar (Shimadzu Co.)
August 3	Lecture (Dr. Nirianne, Dr. Koga), Cultural activity, Lab experiment
August 4	Lecture (Dr. Sastia, Dr. Walter, Dr. Harada), Presentation (2014 Participants)
August 5	Team tasks (preparation), Lecture (Dr. Ike), Team tasks (presentation) Closing ceremony
August 6	Leaving Osaka, Japan

III. WORKSHOP

The 3rd Workshop on Collaboration between Osaka University and Japanese companies for global human resource development in the field of biotechnology

July 29, 2015

4th floor, International Center for Biotechnology, Osaka University

Sponsorship; International Center for Biotechnology, Osaka University

Co-sponsored; International Research Initiative for Frontier of Industrial Biotechnology, Osaka University

Schedule (13:00-19:00)

13:00-Introduction

14:00- Keynote lecture “Working in a mid-size Japanese Company”

Mazumder Tapan Kumar (YAEGAKI Bio-industry, Inc.)

14:30- Introduction of companies: 1. House Foods Group

2. Ezaki Glico

15:10- Break

15:30- Presentation

1. Ms. Li Menglu (D2, China)
2. Ms. Nursyafiqah Mohamad Ishak (D1, Malaysia)
3. Ms. Ivy Grace Umadhay Pait (D3, Philippines)
4. Ms. Jinjing Li (M2, China)
5. Mr. Tsai Yung Yu (M2, Taiwan)

16:00- Brief introduction of participating companies:

Ajinomoto General Foods, Inc., B.E.Marubishi Co., Ltd., Ezaki Glico Co., Ltd., Hakutsuru

Sake Brewing Co., Ltd., House Foods Group Inc., Oriental Yeast Co., Ltd., Shionogi & Co., Ltd., Sunstar Inc., Suntory Spirits Limited., Takara Bio Inc., Tamanoi Vinegar Co., Ltd., Ueno Fine Chemicals Industry.

17:20- Mixer (1st floor of ICBiotech)

**The 4th Workshop on Collaboration
between Osaka University and Japanese companies
for global human resource development in the field of biotechnology**

January 18, 2016

4th and 5th floor, International Center for Biotechnology, Osaka University

Sponsorship; International Center for Biotechnology, Osaka University

Co-sponsored; International Research Initiative for Frontier of Industrial Biotechnology, Osaka University

Schedule (15:00- 19:30)

15:00- Introduction of companies

- 1) Ajinomoto General Foods, Inc.
- 2) Ezaki Glico Co., Ltd.
- 3) House Foods Group Inc.
- 4) Fuji Oil Co., Ltd.

15:45- Presentation by international students

- 1) Frontier Biotechnology (D2, Vietnam)
- 2) Frontier Biotechnology (D2, Vietnam)
- 3) Frontier Biotechnology (D2, Bangladesh)
- 4) Frontier Biotechnology (D2, Indonesia)
- 5) Frontier Biotechnology (M2, Vietnam)

16:25- Introduction of companies

- 1) Ueno Fine Chemicals Industry, Ltd.
- 2) Shionogi & Co., Ltd.
- 3) Toray Industries, Inc.
- 4) Rohto Pharmaceutical Co., Ltd.
- 5) Kaneka Corporation
- 6) Kao Corporation

17:20- Guidance

18:00- Mixer (1st floor of ICBiotech)

IV. JASSO STUDENT EXCHANGE SUPPORT PROGRAM (SSSV) (Scholarship for Short-Term Visit/ Short-Term Stay Program)

This is a field study program jointly operated with GLOCOL (Global Collaboration Center), Osaka University and several universities in Thailand. In 2015, 20 first year master's degree students of Osaka University visited 4 universities and 1 institute in Thailand between August 3 and September 7, and 21 postgraduate students from Thailand visited Osaka University between September and December, which enhanced mutual interactions.

Students from Osaka U

Name	Lab	Allocated U	Assigned Supervisor
Kohei Adachi	Kanaya	KMUTT	Dr. Chakrit Tachaapaikoon
Asae Takeo	Nihira	BIOTEC	Dr. Kobkul Laoteng
Haruka Yamanoi	Nihira	MU	Dr. Watanalai Panbangred
Toshiya Tomioka	Nihira	KMUTT	Dr. Songsak Wattanachaisaereekul
Chihiro Futoi	Nihira	KU	Dr. Arinthip Tamchaipinet
Mizuki Yamakuri	Ohtake	CU	Dr. Alisa Vangnai
Taishi Nakai	Harashima	MU	Dr. Chuenchit Boonchird
Yutaka Minote	Fukui	KU	Dr. Piyada Juntawong
Takuto Arao	Watanabe	KMUTT	Dr. Werasak Surareungchai
Jun Miura	Watanabe	MU	Dr. Puey Ounjai
Riku Yamamoto	Kino-oka	KMUTT	Dr. Anak Khantachawana
Nobuhiko Kondo	Kino-oka	KUMTT	Dr. Kwanchanok Viravaidya
Yurika Mabira	Fujiyuama	KU	Dr. Savitree Limtong
Akiko Maeda	Fujiyama	KU	Dr. Ingorn Kimkong
Yuki Obata	Fujiyama	MU	Dr. Puchapat Sojikul
Kenji Matsumoto	Fujiyama	CU	Dr. Tanapat Palaga
Kohei Matsunaga	Fukusaki	BIOTEC	Dr. Sutipa Tanapongpipat
Kohta Nakatani	Fukusaki	KMUTT	Dr. Nitnipa Soontornkul
Daichi Hirata	Muranaka	KU	Dr. Chatchawan Chantrasuriyarat
Yukina Yoshioka	Fujiyama	CU	Dr. Rungaroon Waditee

Students from Thai Universities to Osaka U

Name	Thai U	Thai Supervisor	Assigned Supervisor
Pritsana Sawutdechakul	CU	Tanapat Palaga	Dr. Nagai
Racha Tabtim	CU	Alisa Vangnai	Dr. Honda
Rapeewan Sowanpreecha	CU	Panan Rerngsamran	Dr. Nihira
Yutthasin Nopparatpaisit	CU	Suchada Chanprateen Napathorn	Dr. Muranaka
Marnutsada Tenghoung	Kasetsart U	Arinthip Thamchaipinet	Dr. Muranaka
Supattra Thammasom	Kasetsart U	Arinthip Thamchaipinet	Dr. Nihira
Jeerapan Boonyarit	Kasetsart U	Savitree Limtong	Dr. Fujiyama
Monthira Chan-In	Kasetsart U	Savitree Limtong	Dr. Watanabe
Pattaraporn Chantathaweewat	Kasetsart U	Savitree Limtong	Dr. Fujiyama
Supaporn Mondech	Kasetsart U	Savitree Limtong	Dr. Fujiyama
Pitchapa Rattanaburi	Mahidol U	Jirarat Wongkongkatap	Dr. Fukusaki
Junya Leiim	Mahidol U	Thunyarat Pongtharangkul	Dr. Honda
Napathip Lertpreedakorn	Mahidol U	Chuenchit Boonchird	Dr. Sugiyama
Tatpong Boontawon	Mahidol U	Chuenchit Boonchird	Dr. Fujiyama

Suphanun Phuphanitcharoenkun	Mahidol U	Suparek Borwornpinyo	Dr. Kino-oka
Adtaporn Poonsawas	KMUTT	Nitnipa Soontorngun	Dr. Sugiyama
Phakhinee Thianheng	KMUTT	Khanok Ratanakhanokchai	Dr. Fujiyama
Kulnipa Tanarungrangsee	KMUTT	Natta Laohakunjit	Dr. Nihira
Pimployp Ratanaamnuaychai	KMUTT	Yaowaluck Maprang Roshorm	Dr. Fukui
Sira Jampa-ngern	KMUTT	Anak Khantachawana	Dr. Kino-oka
Chuaykhongthong Thitapha	CU	Panan Rerngsamran	Dr. Fujiyama

V. JST Japan-Asia Youth Exchange Program in Science (SAKURA Exchange Program in Science)

Purpose of the Program: Promoting science and technology is a key engine to materialize a bright future of Asia and it is vitally important to enhance the exchange of youths in Asian countries and Japan who will play a crucial role in the field of science and technology. Based on this concept, “Japan-Asia Youth Exchange Program in Science” (SAKURA Exchange Program in Science) is the program for enhancing exchanges between Asia and Japan of the youths who will play a crucial role in the future field of science and technology through the close collaboration of industry-academia-government by facilitating short-term visits of competent Asian youths to Japan. This program aims at raising the interest of Asian youths toward the leading Japanese science and technologies at Japanese universities, research institutions and private companies.

List of students (September 6-15, 2015)

Country	Name	Country	Name
Lao PDR	Thanh Phommasack	Mongolia	Ariya Banzragchgarav
Lao PDR	Thiphachanh Suvanasan	Mongolia	Bataa Dolgormaa
Cambodia	Sok Bophal	Taiwan	Tzu-Hsien Yeh
Cambodia	Mom Panha	Taiwan	Kuan-Heng Tu
Brunei	Siti Hakimah Binti S. M. Musa	Taiwan	Wei Lu

Schedule

September 7	Orientation
September 8	Lecture: Industrial application of enzymes (Dr. Kenji Okano)
September 9	Lab tour at Nihira Lab, ICBiotech.
September 10	Lab tour: Riken Spring 8, Super Computer “Kei”
September 11	Visiting company: Shimadzu
September 14	Presentation of task, certificate award

VI. SCIENTIST EXCHANGES

Record of Scientist Exchange (FY2015)

From Japan to counterpart countries

Name	Affiliation	Visiting Period	Host Organization
Takuya Nihira	Director, Prof., ICBiotech, Osaka U	Apr. 4 – 13, 2015	Thailand
		May 31 – June 10, 2015	Thailand
		July 10 - 12, 2015	Thailand
		Aug. 3 - 10, 2015	Thailand
		Aug. 31 – Sept. 5, 2015	Thailand
		Oct. 6 – 13, 2015	Thailand
		Nov. 8 – 14, 2015	Philippines
		Nov. 16 – 17, 2015	Thailand
		Jan. 27 – Feb. 3, 2016	Vietnam, Thailand
		Mar. 9 – 16, 2016	Thailand
		Mar. 21 – 24, 2016	Thailand
Kaazuhito Fujiyama	Prof., ICBiotech, Osaka U	June 25-28, 2015	Vietnam
		Aug. 31 – Sept. 5, 2015	Aachen TH, Germany
		Oct. 8 – 11, 2015	Thailand
		Nov. 15 – 19, 2015	Indonesia, Thailand
		Feb. 28 – Mar. 4, 2016	Thailand
Shigeru Kitani	Assoc. Prof., ICBiotech	Oct. 29 – Nov. 2, 2015	Vietnam
		Dec. 13 – 19, 2015	Thailand
Ryo Misaki	Lecturer, ICBiotech	June 25-28, 2015	Vietnam
Asae Takeo	Nihira Lab	(JASSO) SSSV Aug. 3- Sept. 7, 2015	BIOTEC, Thailand
Kohei Matsunaga	Fukusaki Lab		BIOTEC, Thailand
Mizuki Yamakuri	Ohtake Lab		CU, Thailand
Kenji Matsumoto	Fujiyama Lab		CU, Thailand
Yukina Yoshioka	Fujiyama Lab		CU, Thailand
Kohei Adachi	Kanaya Lab		KMUTT, Thailand
Toshiya Tomioka	Nihira Lab		KMUTT, Thailand
Takuto Arao	Watanabe Lab		KMUTT, Thailand
Riku Yamamoto	Kino-oka Lab		KMUTT, Thailand

Nobuhiko Kondo	Kino-oka Lab	(JASSO) SSSV Aug. 3- Sept. 7, 2015	KUMTT, Thailand
Kohta Nakatani	Fukusaki Lab		KMUTT, Thailand
Chihiro Futoi	Nihira Lab		KU, Thailand
Yutaka Minote	Fukui Lab		KU, Thailand
Yurika Mabira	Fujiyama Lab		KU, Thailand
Akiko Maeda	Fujiyama Lab		KU, Thailand
Daichi Hirata	Muranaka Lab		KU, Thailand
Haruka Yamanoi	Nihira Lab		MU, Thailand
Taishi Nakai	Harashima Lab		MU, Thailand
Jun Miura	Watanabe Lab		MU, Thailand
Yuki Obata	Fujiyama Lab		MU, Thailand

Between counterpart countries

Name	Affiliation	Visiting Period	Host Organization
High School Students	India, Thailand, Philippines	May 11, 2015	JST Sakura Sci. Program
Haseena Khan	U of Dhaka, Bangladesh	May 12-16, 2015	Nihira Lab., ICBiotech
Mohammad Riazul Islam	Inst. for Med. Microbiol., Immunol. & Parasitol., Bangladesh	May 12-16, 2015	Nihira Lab., ICBiotech
Pirapan Polburee	Kasetsart U, Thailand	June 15, July 16, 2015	Internship Program
Jasmine Corbin	UC, Davis, USA	June 16, 2015	Fujiyama Lab. (JSPS)
Vo Thi Hong Phuong	Vietnam	July 7, Aug. 6, 2015	Internship Program
Thanh Phommasack	National U of Laos	(JST) SAKURA Science Program Sept. 6-15, 2015	ICBiotech
Thiphachanh Suvanasan	National U of Laos		
Sok Bophal	Royal U of Phnom Penh		
Mom Panha	Royal U of Phnom Penh		
Siti Hakimah Binti S. M. Musa	U Brunei Darussalam		
Ariya Banzragchgarav	National U of Mongolia		
Bataa Dolgormaa	National U of Mongolia		
Tzu-Hsien Yeh	Natl Cheng Kung U, Taiwan		
Kuan-Heng Tu	Natl Tsing Hua U, Taiwan		
Wei Lu	Natl Tsing Hua U, Taiwan		

Pritsana Sawutdeechaikul	CU, Thailand	(JASSO) SSSV Sept. – Dec., 2015 (Periods are different in each student)	Nagai Lab., Osaka U
Racha Tabtim	CU, Thailand		Honda Lab., Osaka U
Rapeewan Sowanpreecha	CU, Thailand		Nihira Lab., ICBiotech
Yutthasin Nopparatpaisit	CU, Thailand		Muranaka Lab., Osaka U
Marnutsada Tenghoung	Kasetsart U, Thailand		Muranaka Lab., Osaka U
Supattra Thammasom	Kasetsart U, Thailand		Nihira Lab., ICBiotech
Jeerapan Boonyarit	Kasetsart U, Thailand		Fujiyama Lab., ICBiotech
Monthira Chan-In	Kasetsart U, Thailand		Watanabe Lab., Osaka U
Pattaraporn Chantathaweewat	Kasetsart U, Thailand		Fujiyama Lab., ICBiotech
Supaporn Mondech	Kasetsart U, Thailand		Fujiyama Lab., ICBiotech
Pitchapa Rattanaburi	Mahidol U, Thailand		Fukusaki Lab., Osaka U
Junya Leiim	Mahidol U, Thailand		Honda Lab., Osaka U
Napathip Lertpreedakorn	Mahidol U, Thailand		Sugiyama Lab., Osaka U
Tatpong Boontawon	Mahidol U, Thailand		Fujiyama Lab., ICBiotech
Suphanun Phuphanitcharoenkun	Mahidol U, Thailand		Kino-oka Lab., Osaka U
Adtaporn Poonsawas	KMUTT, Thailand		Sugiyama Lab., Osaka U
Phakhinee Thianheng	KMUTT, Thailand		Fujiyama Lab., ICBiotech
Kulnipa Tanarungrangsee	KMUTT, Thailand		Nihira Lab., ICBiotech
Pimploy Ratanaamnuaychai	KMUTT, Thailand		Fukui Lab., Osaka U
Sira Jampa-ngern	KMUTT, Thailand		Kino-oka Lab., Osaka U
Chuaykhongthong Thitapha	CU, Thailand	Fujiyama Lab., ICBiotech	
Irma Isnafia Arief	Bogor Agric. U. Indonesia	Oct. 26 – Nov 20, 2015	Fujiyama Lab., ICBiotech
Raymond Rodriguez	UC, Davis	Dec. 8-11, 2015	Seminar at ICBiotech
Ninh Thi Ngoc	VAST, Vietnam	Jan. 7- Feb 4, 2016	Fujiyama Lab., ICBiotech
Kosonh Xayphakatsa	BEI, Laos	Jan. 7, 2016	Nihira Lab., ICBiotech
Ir. Liliek Sulistyowati	Brawijaya U, Indonesia	Feb. 4, 2016	Nihira Lab., ICBiotech
Hagus Tarno	Brawijaya U, Indonesia	Feb. 4, 2016	Nihira Lab., ICBiotech
Hoang Van Vinh	Vietnam National U	Feb. 17, 2016	Nihira Lab., ICBiotech
Pannamthip Pitaksajjakul	Mahidol U, Thailand	March 1, 2016	Fujiyama Lab., ICBiotech
Wilarat Puangmanee	Mahidol U, Thailand	March 1, 2016	Fujiyama Lab., ICBiotech

VII. GUESTS/VISITORS

Name	Affiliation	Staying Period
Skorn Mongkolsulk	Mahidol U, Thailand	April 21, 2015
Patcharee Lertrit	Mahidol U, Thailand	April 21, 2015
Watanalai Panbangred	Mahidol U, Thailand	April 21, 2015
Boonchaoen Sirinaovakul	KMUTT, Thailand	April 21, 2015
Boosaya Bunnag	KMUTT, Thailand	April 21, 2015
Anak Khantachawana	KMUTT, Thailand	April 21, 2015
85 High School students	Taipei Municipal Jianguo Senior High School, Taiwan	April 24, 2015
Sung Been Moon	Yonsei U, Korea	May 11, 2015
Yun Mook Lim	Yonsei U, Korea	May 11, 2015
Jung Sook Lee	Yonsei U, Korea	May 11, 2015
Haesook Youm	Yonsei U, Korea	May 11, 2015
Wang Sub Lee	Yonsei U, Korea	May 11, 2015
Soojin Kim	Yonsei U, Korea	May 11, 2015
Somchai Chauvatcharin	Mahidol U, Thailand	June 24, 2015
Opor Sonpung	KMUTT, Thailand	July 7, 2015
Anak Khantachawana	KMUTT, Thailand	July 16, 2015
Shabaz Kahn	UNESCO Jakarta Office	July 28, 2015
Iwan Dwiprahsto	U of Gadjadara, Indonesia	July 28, 2015
Maria Teresa L. Taguiang	Philippine Consulate General	July 28, 2015
Wan Wardatul Amani Binti Wan Salim	International Islamic U Malaysia	Aug. 6, 2015
Noor Illi Mohamad Puad	International Islamic U Malaysia	Aug. 6, 2015
Hadi Purwanto	International Islamic U Malaysia	Aug. 6, 2015
B.A.Chopade	Dr.Babasaheb Ambedkar Marathwada U	Sept. 9, 2015
Jian-Jiang Zhong	Shanghai Jiao Tong U, China	Oct. 30, 2015
Ir. Syamsidah Rahmawati	Lembaga Ilmu Pengetahuan Indonesia	Dec. 11, 2015
Yopi	Lembaga Ilmu Pengetahuan Indonesia	Dec. 11, 2015
Nguyen Van Be	Can Tho U, Vietnam	March 3, 2016
Nguyen Vo Chau Ngan	Can Tho U, Vietnam	March 3, 2016
Van Pham Dan Thuy	Can Tho U, Vietnam	March 3, 2016

Nguyen Van Cong	Can Tho U, Vietnam	March 3, 2016
Nguyen Cong Ha	Can Tho U, Vietnam	March 3, 2016
Duong Minh Vien	Can Tho U, Vietnam	March 3, 2016
Nelson B. Arboleda Jr.	De La Salle U, Philippines	March 25, 2016
Melanie Y. David	De La Salle U, Philippines	March 25, 2016
Emelina H. Mandia	De La Salle U, Philippines	March 25, 2016
Bambang Wibawarata	U of Indonesia	March 31, 2016
Rosari Saleh	U of Indonesia	March 31, 2016
Sri Mardiyati	U of Indonesia	March 31, 2016
Heri Hermansyah	U of Indonesia	March 31, 2016

VIII. COMMITTEE MEETING

Steering Committee Meetings of ICBiotech were convened as follows:

- July 17, 2015: Discussion on inviting a Visiting Research Scholar and assigning title of professor:
Mr. Junji Tayama, Japan (August 1, 2015 – March 31, 2016).
- September 9, 2015: Discussion on inviting a Visiting Research Scholar:
Ms. Dian Anggraini Suroto, Indonesia (October 1, 2015 – September 30, 2016).
- October 27, 2015: Discussion on inviting a Visiting Research Scholar:
Dr. Kosonh Xayphakatsa, Laos (January 8, 2016 – February 9, 2016),
Dr. Hoang Van Vinh, Vietnam (February 17, 2016 – March 18, 2016).
- December 3, 2015: Discussion on inviting a Part-time Lecturer:
Dr. Shigenori Kanaya, Japan (April 1, 2016 – March 31, 2017).
- March 7, 2016:
Report on:
 - UNESCO Biotechnology School in Asia and its opening ceremony
 - JST Sakura Exchange Program in Science
 - 3rd and 4th Workshops (29th July 2015, and 18th January 2016) on Collaboration between Osaka University and Japanese Companies
 - JASSO Short-stay and Short-visit program 2015 (3rd August – 7th September, 2015)
 - Two Visiting Research Scholars (Dr. Kosonh Xayphakatsa from Laos and Dr. Hoang Van Vinh from Vietnam) staying at ICBiotech during the FY2015
 - Adjunct Professor for the FY2016
 - Evaluation committee meeting (7th March 2016)
 Discussion on:
 - Selection of members of the evaluation committee
 - Conferring the title on visiting professors from abroad for FY2016
 - Conferring the title on visiting professors assigned from Japanese universities for FY2016
 - Inviting a visiting research scholar