

## **The Young Scientist Seminar 2012**

In the framework of the JSPS Asian Core Program (2009 – 2013)

Bioresources: Potential & Applications

*Hanoi Meeting, October 4 -5<sup>th</sup>, 2012*

### **Hosted by:**

Institute of Microbiology and Biotechnology (IMBT)  
Vietnam National University Hanoi (VNUH)

### **In Association with:**

Osaka University (OU)  
Japan Society for the Promotion of Science (JSPS)

### **Venue:**

INSTITUTE OF MICROBIOLOGY AND BIOTECHNOLOGY  
Conference room 601  
Address: E2 Building, 144 Xuan Thuy, Ha Noi - Viet Nam  
Tel: (+84) 04. 3754 7407; Fax: (+84) 04. 3754 7407  
Website: www.imbt.vnu.edu.vn

### **Organizing Committee**

Assoc. Prof. Dr. Duong Van Hop (*IMBT, VNUH, Vietnam*)  
Prof. Dr. Takuya Nihira (*ICB, OU, Japan*)

### **Secretary**

#### ***Vietnamese Side***

1. Dr. Dinh Thuy Hang  
Institute of Microbiology and Biotechnology, VNUH  
Tel. +84 4 3754 7488; Fax: +84 4 3754 7407;  
E-mail: hangdinh\_cbhn@yahoo.com
2. Dr. Trinh Thanh Trung  
Institute of Microbiology and Biotechnology, VNUH  
Tel. +84 4 3754 7407; Fax: +84 4 3754 7407;  
E-mail: trinhtrung80@yahoo.com
3. Dr. Nguyen Kim Nu Thao  
Institute of Microbiology and Biotechnology, VNUH  
Tel. +84 4 3754 7407; Fax: +84 4 3754 7407;  
E-mail: thaonkn@gmail.com

#### ***Japanese Side***

1. Dr. Takuya Nihira  
International Center for Biotechnology, OSAKA UNIVERSITY  
2-1 Yamadaoka, Suita, OSAKA 565-0871  
Tel: +81-6-6879-7452; Fax: +81-6-6879-7454  
E-mail: nihira@icb.osaka-u.ac.jp

2. Dr. Hiroshi Kinoshita  
International Center for Biotechnology, OSAKA UNIVERSITY  
2-1 Yamadaoka, Suita, OSAKA 565-0871  
Tel: +81-6-6879-4086; Fax: +81-6-6879-7454  
E-mail: kinosita@icb.osaka-u.ac.jp
3. Ms. Seto Yuki  
International Center for Biotechnology, OSAKA UNIVERSITY  
2-1 Yamadaoka, Suita, OSAKA 565-0871  
Tel: +81-6-6879-7450; Fax: +81-6-6879-7454  
E-mail: seto@icb.osaka-u.ac.jp

## General Information

### Registration

Registration desk will be open from 8:00 to 8:30, October 4<sup>th</sup> 2012, in front of the conference room 601 at IMBT.

### Fee and expenses

No registration fee is required.

The travel and hotel expenses will be borne by the participants themselves.

Lunches and welcome dinner will be borne by the hosts.

### Hotel reservation

International participants are recommended to stay at the two hotels located in walking distances to the IMBT. Please pay attention to the limitation of the room availability, room sharing is highly recommended.

#### 1. The Luxeden Hotel:

Contact address:

18A Tran Thai Tong, Cau Giay – Hanoi, Vietnam

Tel. +84 4 3795 8925/26

Fax. +84 4 3795 8927

Website: [www.luxedenhotel.vn](http://www.luxedenhotel.vn)

Room rate:

Standard single: 40 USD

Standard twin: 48 USD

Superior twin: 54 USD

(Including tax and breakfast).

#### 2. Pan Horizon Hanoi:

Contact address:

157 Xuan Thuy, Cau Giay – Hanoi, Vietnam

Tel. +84 4 3833 5888 (ext. 6883)

Fax. +84 4 3834 1728

E-mail: [panhorizon@fpt.vn](mailto:panhorizon@fpt.vn)

Website: [www.panhorizon.vn](http://www.panhorizon.vn)

Room rate:

Single-bedroom apartment: 76 USD

Two-bedroom apartment: 100 USD

Three-bedroom apartment: 125 USD

(Including tax, breakfast and laundry service).

### Scientific Program

The YSS is held to present the current achievements on utilization of bio-resources and their products for applications in following areas:

- Industrial bio-production
- Agricultural development
- Environmental protection

### **Abstract**

Prospective authors of oral and poster presentations are required to submit their abstracts to [youngscientists2012@gmail.com](mailto:youngscientists2012@gmail.com) (cc to: [seto@icb.osaka-u.ac.jp](mailto:seto@icb.osaka-u.ac.jp)) by September 10<sup>th</sup>, 2012. Please use the Abstract Template provided for preparing your abstract.

### **Instructions for Oral and Poster Presentation**

The oral presentation format is 20 min (including 5 min for discussion). Presenters are encouraged to submit the presentation file (in MS PowerPoint 2003 or 2007 format) at the registration desk by 8:30 AM of October 4<sup>th</sup>, 2012.

The poster should be no larger than 90 cm width × 120 cm height. Poster presenters are required to hang their posters in the pointed areas no later than 10 AM of October 4<sup>th</sup>, 2012.

Oral and poster presentations of the YSS will be assessed by members of the advisory committee for the scientific content and presentation skill as well. The winners will be announced at the end of the seminar.

### **Evaluation Committee**

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| <b>1. Prof. Dr. Kozo Asano</b>           | <i>(Hokkaido University, Japan)</i>                |
| <b>2. Prof. Dr. Yasuhiro Igarashi</b>    | <i>(Toyama Pref. University, Japan)</i>            |
| <b>3. Prof. Dr. Takuya Nihira</b>        | <i>(ICB, Osaka University, Japan)</i>              |
| <b>4. Assoc. Prof. Dr. Duong Van Hop</b> | <i>(IMBT, Vietnam)</i>                             |
| <b>5. Prof. Dr. Watanalai Panbangred</b> | <i>(Mahidol University, Thailand)</i>              |
| <b>6. Dr. Kosonh Xayphakatsa</b>         | <i>(Biotechnology and Ecology Institute, Laos)</i> |
| <b>7. Dr. Sokunthia Thao</b>             | <i>(Royal University of Phnom Penh, Cambodia)</i>  |

### **Deadlines**

Submission of Abstracts:	September 10 <sup>th</sup> , 2012
Request for hotel reservation:	August 10 <sup>th</sup> , 2012
Request for invitation letter:	August 10 <sup>th</sup> , 2012

The information should be sent via E-mail to: [youngscientists2012@gmail.com](mailto:youngscientists2012@gmail.com)

## Program Schedule

### Day 1: October 4<sup>th</sup>, 2012

8:00 – 8:30	Registration			
<b>8:30 – 8:40</b>	<b>Opening Ceremony</b>			
	Welcome Address by			
	- Assoc. Prof. Dr. Duong Van Hop, Director of IMBT			
	- Prof. Dr. Takuya Nihira, Osaka University, Project leader			
08:40 – 09:20	Invited speaker (I-1)	Prof. Dr. Hisao Ohtake	Osaka University, Japan	The sustainable use of phosphorus - A new global challenge.
09:20 – 10:00	Keynote Lecture 1 (K-1)	Prof. Dr. Kozo Asano	Hokkaido University, Japan	Indigestible carbohydrates and intestinal microbiota.
<b>Section A: Microbial physiology</b>				
<i>Chairperson: Mr. Yasin Kitichantaropas*/ Mr. Keiichi Ishido**</i>				
10:00 – 10:20	Oral Presentation 1 (O-1)	Assoc. Prof. Dr. Minetaka Sugiyama	Osaka University, Japan	Mechanisms of lactic acid tolerance in <i>Saccharomyces cerevisiae</i> .
10:20 – 10:40	Oral Presentation 2 (O-2)	Mr. Yasin Kitichantaropas*	Mahidol University, Thailand	Cellular mechanisms for tolerance to environmental stresses in thermotolerant <i>Saccharomyces cerevisiae</i> .
<b>10:40 – 11:00</b>	<b>Coffee break</b>			
11:00 – 11:20	Oral Presentation 3 (O-3)	Ms. Sharmin Dilruba	Osaka University, Japan	Functional interrelationship of PP2C protein phosphatases as revealed by phenotypic analysis of a series of multiple disruptants in <i>Saccharomyces cerevisiae</i> .
11:20 – 11:40	Oral Presentation 4 (O-4)	Mr. Takenori Kanazawa	Osaka University, Japan	Characterization of <i>URA3</i> gene in oleaginous yeast <i>Rhodospiridium toruloides</i> DMKU3-TK16 for lipid engineering.

11:40 – 12:00	Oral Presentation 5 (O-5)	Mr. Keiichi Ishido**	Osaka University, Japan	Analysis of secondary metabolites in entomopathogenic fungi.
<b>12:00 – 13:30 Lunch &amp; Poster Presentations</b>				
<b>Section B: Whole cell catalyst and enzymes</b>				
Chairperson: Mr. Takashi Imagawa*/ Ms. Le Thi Hoang Yen**				
13:30 – 13:50	Oral Presentation 6 (O-6)	Assoc. Prof. Dr. Kohsuke Honda	Osaka University, Japan	Synthetic metabolic engineering - A novel and simple technology for freely designing an artificial metabolic pathway.
13:50 – 14:10	Oral Presentation 7 (O-7)	Ms. Nhuengtida Chanarpakorn	Mahidol university, Thailand	Enhanced regio-selective alkane hydroxylation via coupled enzyme system.
14:10 – 14:30	Oral Presentation 8 (O-8)	Mr. Takashi Imagawa*	Osaka University, Japan	Construction of the artificial pyruvate oxidation pathway by synthetic metabolic engineering.
14:30 – 14:50	Oral Presentation 9 (O-9)	Assist. Prof. Dr. Takao Ohashi	Osaka University, Japan	Glycoengineering in the fission yeast <i>Schizosaccharomyces pombe</i> - a promising technology for the production of glycoproteins.
<b>14:50 – 15:10 Coffee break</b>				
15:10 – 15:30	Oral Presentation 10 (O-10)	Ms. Pirapan Polburee	Kasetsart University, Thailand	Selection and taxonomic characterization of oleaginous yeast for lipid production from glycerol.
15:30 – 15:50	Oral Presentation 11 (O-11)	Ms. Le Thi Hoang Yen**	IMBT - VNU Hanoi, Vietnam	Study on xylanase from <i>Aspergillus niger</i> VN09-0119 isolated from a preserved forest in Vietnam.
15:50 – 16:10	Oral Presentation 12 (O-12)	Mr. Paripok Phitsuwan	King Mongkut's TU Thonburi, Thailand	<i>Tepidimicrobium xylanilyticum</i> BT14 produces multienzyme complexes to degrade plant cell wall.

16:10 – 16:30	Oral Presentation 13 (O-13)	Ms. Tran Thi Loan	IMBT - VNU Hanoi, Vietnam	Effects of some plant proteinase inhibitors from <i>Momordica coinchinensis</i> on several meat-spoilage bacteria.
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**19:00**      **Welcome Dinner** (Japanese –Vietnamese Restaurant Nagomi Hanoi)

**Day 2: October 5<sup>th</sup>, 2012**

08:30 – 09:10	Keynote lecture 2 (K-2)	Prof. Dr. Yasuhiro Igarashi	Toyama Pref. University, Japan	Microbial secondary metabolites: potential source of structural diversity for drug discovery.
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**Section C: Novel compounds**

*Chairperson: Mr. Linkai Yu\*/ Ms. Notthaporn Phrueksahiran\*\**

09:10 – 09:30	Oral Presentation 14 (O-14)	Assist. Prof. Dr. Naoya Oku	Toyama Pref. University, Japan	Complete stereochemistry of rakicidin A, an actinomycetal cytotoxic depsipeptide.
09:30 – 09:50	Oral Presentation 15 (O-15)	Ms. Notthaporn Phrueksahiran**	Mahidol University, Thailand	Screening and identification of antifungal metabolites from <i>Streptomyces</i> spp.
09:50 – 10:10	Oral Presentation 16 (O-16)	Ms. Nghiem Phuong Hien	IMBT - VNU Hanoi, Vietnam	Primary study on protease inhibitors from bacteria and actinomycete.
10:10 – 10:30	Oral Presentation 17 (O-17)	Mr. Linkai Yu*	Toyama Pref. University, Japan	The structures and activities of new anti-invasive compounds from <i>Streptomyces</i> sp.

**10:30 – 10:50**      **Coffee break**

**Section D: Biosynthesis**

*Chairperson: Ms. Fuqin Mu\*/ Ms. Chinatsu Shimafuji\*\**

10:50 – 11:10	Oral Presentation 18 (O-18)	Assist. Prof. Dr. Hiroshi Kinoshita	Osaka University, Japan	Development of the genetic techniques to utilize biosynthetic genes for secondary metabolites from filamentous fungi.
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11:10 – 11:30	Oral Presentation 19 (O-19)	Assist. Prof. Dr. Takeshi Zendo	Kyushu University, Japan	Screening and characterization of novel bacteriocins from lactic acid bacteria.
11:30 – 11:50	Oral Presentation 20 (O-20)	Ms. Chinatsu Shimafuji**	Kyushu University, Japan	In vitro catalytic activity of N-terminal and C-terminal domains in NukM, the modification enzyme of lantibiotic nukacin ISK-1.
11:50 – 12:10	Oral Presentation 21 (O-21)	Ms. Fuqin Mu*	Kyushu University, Japan	Analysis of gene cluster involved in production of the circular bacteriocin leucocyclicin Q by <i>Leuconostoc mesenteroides</i> TK41401.

**12:10 – 13:30 Lunch*****Section E: Whole cell metabolites and metagenome***

*Chairperson: Mr. Shinya Yamamoto\*/Dr. Phan Thi Phuong Hoa\*\**

13:30 – 13:50	Oral Presentation 22 (O-22)	Mr. Shinya Yamamoto*	Osaka university, Japan	Metabolite profiling of soy sauce using gas chromatography with Time-of-Flight Mass spectrometry and analysis of correlation with quantitative descriptive analysis.
13:50 – 14:10	Oral Presentation 23 (O-23)	Mr. Hirofumi Akiyama	Toyama Pref. University, Japan	Temperature-dependent metabolic change and exhaustive metabolite analysis in Thai endophytic <i>Microbispora</i> .
14:10 – 14:30	Oral Presentation 24 (O-24)	Mr. Kazuki Yamamoto	Toyama Pref. University, Japan	Analysis of secondary metabolism in a thermophilic Gram-positive bacterium <i>Thermosporothrix</i> belonging to the phylum <i>Chloroflexus</i> .
14:30 – 14:50	Oral Presentation 25 (O-25)	Dr. Phan Thi Phuong Hoa**	School of Medicine and Pharmacy, VNUH	Screening for actinomycetes isolated from soil with the ability to inhibit <i>Xanthomonas oryzae</i> pv. <i>oryzae</i> causing rice bacterial blight disease in Vietnam.
14:50 – 15:10	Oral Presentation 26 (O-26)	Dr. Wuttichai Mhuantong	NIBB, Thailand	Comparative analysis on metabolic capabilities of metagenomes from lignocellulose degrading

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				environments.
15:10 – 15:30	Oral Presentation 27 (O-27)	Mr. Keita Kato	Kyushu University, Japan	Microecological characterization of dominant <i>Lactobacillus</i> species in nukadoko, a fermented rice bran used for Japanese pickles.
15:30 – 15:50	Oral Presentation 27 (O-28)	Ms. Nguyen Thi Hoa	IMBT-VNU Hanoi, Vietnam	Degradation characteristics of Microcystin by isolated bacteria from Hoan Kiem lake, Hanoi
<b>15:50 – 16:30</b>	<b>Closing Ceremony</b>			
				- Presentation Award Ceremony
				- Closing Remark by Prof. Dr. Takuya Nihira

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\*, \*\* First and second Group-leaders of each scientific section, respectively.

## List of Poster Presentations

Code	Working group	Presenter	Title
<b>P-1</b>	<i>Section D: Biosynthesis</i>	<b>Mr. Sor Ratha</b> ( <i>Royal University of Phnom Penh, Cambodia</i> )	Potential of rotifers as bioindicator for freshwater quality: A case study in the upper part of Cambodian Mekong river basin.
<b>P-2</b>	<i>Section C: Novel compounds</i>	<b>Mr. Korm Sovannarith</b> ( <i>Royal University of Phnom Penh, Cambodia</i> )	Screening of <i>Streptomyces</i> active against plant pathogens
<b>P-3</b>	<i>Section C: Novel compounds</i>	<b>Mr. Keo Phommavong</b> ( <i>Biotechnology and Ecology Institute, Laos</i> )	Endophytic actinomycetes with inhibitory activity against bacterial pathogens
<b>P-4</b>	<i>Section C: Novel compounds</i>	<b>Ms. Bui Thai Hang</b> ( <i>College of Food Industry, Danang, Vietnam</i> )	Screening LAB for bacteriocin production from fermented foods in Vietnam
<b>P-5</b>	<i>Section A: Microbial physiology</i>	<b>Ms. Nguyen Thu Hoai</b> ( <i>Vietnam-Russia Tropical Center, Hanoi</i> )	Methane fermentation of seaweed in saline water condition
<b>P-6</b>	<i>Section C: Novel compounds</i>	<b>Mr. Dao Xuan Duong</b> ( <i>Hanoi Open University</i> )	Primary screening bacteriocin producing strains from Vietnamese vegetables
<b>P-7</b>	<i>Section C: Novel compounds</i>	<b>Ms. Tran Thi Trang</b> ( <i>IMBT, Hanoi, Vietnam</i> )	Diversity of subtilisin genes of bacteria isolated from some traditional fermented foods in Vietnam
<b>P8</b>	<i>Section B: Whole cell catalyst and enzymes</i>	<b>Ms. Phan Thi Mai</b> ( <i>University of Sciences, VNUH</i> )	Production and characterization of thermostable phytase from <i>Bacillus amyloliquefaciens</i> SP19.1 isolated from Hoang Lien National Park soil
<b>P9</b>	<i>Section B: Whole cell catalyst and enzymes</i>	<b>Ms. Tran Thi Le Quyen</b> ( <i>IMBT, Hanoi, Vietnam</i> )	Optimization of thermostable xylanase production by <i>Streptomyces misionensis</i> in solid-state fermentation
<b>P10</b>	<i>Section A: Microbial physiology</i>	<b>Ms. Luu Thi Phuong</b> ( <i>University of Engineering and Technology, VNUH</i> )	Study on characteristic green algae <i>Botryococcus</i> strains isolated in Vietnam