

# The 15<sup>th</sup> Young Scientist Seminar



*Establishment of International Network  
for Tropical Bioresources and Their Utilization*

**NOVEMBER 13<sup>th</sup>-14<sup>th</sup>, 2018  
SEMINAR PARK, YAMAGUCHI, JAPAN**

## **Invitation**

On behalf of the Organizing Committee, we are pleased to invite you to the 15<sup>th</sup> Young Scientist Seminar (YSS) in Yamaguchi, Japan. This seminar will be held on 13<sup>th</sup> – 14<sup>th</sup> Nov 2018. The YSS aims to establish international network among young researchers including students, to broaden their knowledge about recent developments in scientific field around the world.

## **Venue**

The 15<sup>th</sup> YSS will be held at the Yamaguchi-ken Seminar Park, Yamaguchi, Japan. This is a prefectural facility to provide a wonderful environment to meet with colleagues in a relaxing atmosphere.

Yamaguchi prefecture is located in the westernmost tip of Honshu island, the 2<sup>nd</sup> most populous island in the world. Because of its geographical location and ocean current, it has long had cultural exchanges together ASEAN areas.

In addition, Yamaguchi Prefecture has become the stage of the turning point which makes a big change in the history of Japan many times. Yamaguchi city is situated in the center of the prefecture. It has been long called "Kyoto of the West" due to its cultural similarities with Kyoto, the capital of Japan in the 14<sup>th</sup> century.

The temperature in November ranges from 5°C in the morning to 17°C in the afternoon.

## **Organization Committee**

*Chairperson*  
*Master of ceremony*  
  
*Financial manager*  
*Transportation*  
*Audio visual and placement*  
*Abstract and Registration*  
*Accounting Clerk*  
*Public Relations*

Taito Sasaki  
Kousei Sakano  
Koutaro Inukai  
Marino Hara  
Makoto Higuchi  
Yusuke Shiota  
Chiaki Sakai  
Naho Ichikawa  
Takuto Yamasaki

## **Sessions**

The scientific program is composed of plenary, parallel and discussion session

## **Scope**

The scientific scope of the seminar follows most of the well received features of the previous events not only in the area of utilization of tropical bioresources but also in the biological field.

## **Advisory Committee**

Dean, Prof. Dr. Jun KOBAYASHI  
Prof. Dr. Mamoru YAMADA  
Prof. Dr. Shinichi ITO  
Prof. Dr. Masayoshi SHIGYO  
Prof. Dr. Tsuyoshi IMAI  
Prof. Dr. Kenji MATSUI  
Assoc. Prof. Dr. Toshiharu YAKUSHI  
Assoc. Prof. Dr. Hisashi HOSHIDA  
Assist. Prof. Dr. Tomoyuki KOSAKA  
Assist. Prof. Dr. Kazunori SASAKI  
Assist. Prof. Dr. Naoya KATAOKA  
Ms. Naoko MIYAJI

## **Language of the Seminar**

The official language of the Seminar is English and no translation facilities are available.

## **Seminar Theme**

Establishment of international research network for tropical bioresources and their utilization

## **Social Program**

An icebreaker party will be taken place in the evening of the 13<sup>th</sup> Nov, 2018

## **Insurance**

All delegates are advised to take out their own health and life insurance for the duration of the Seminar.

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## **Microbial community characteristics of halotolerant hydrogen producing bacteria from salt pan and salt damaged soil in Thailand**

**Dyah Asri Handayani Taroepratjeka<sup>1,2</sup> and Tsuyoshi Imai<sup>1</sup>,**

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Biohydrogen production has been extensively studied by researchers all over the world for its promising use as an alternative energy source. Previous studies have shown that biohydrogen production from lignocellulosic biomass was possible with the aid of bacteria. But the process requires pretreatment with alkaline (NaOH) and heat, and also enzyme hydrolysis before the bacteria can digest the cellulosic biomass. The high concentration of NaOH after the process makes it unfavorable for most of bacteria to live. However, halotolerant bacteria can survive in high salinity condition, whereas this condition increase osmotic pressure and provide inhibition to most other bacteria's activity.

The bacteria in this study have been cultivated from soil samples of salt damaged soil in Khon Kaen, Thailand, and commercial salt pan field near Bangkok, Thailand and kept at anaerobic saturated (26%) sodium condition for three years. These halotolerant bacteria are capable to produce hydrogen under saturated salt (NaCl) condition without methane (CH<sub>4</sub>) by-products.

In this study, we compared the difference of the microbial community characteristics of the original soil samples and the acclimatized cultures which have been kept at saturated condition. The characterization of the microbial community was using 16-rRNA-based molecular techniques, including Polymerase Chain Reaction-based Denaturing Gradient Gel Electrophoresis (PCR-DGGE) and sequencing.

PCR-DGGE has confirmed distinguish band pattern differences between the original soil samples and acclimatized cultures.