



## **Minutes of the 14<sup>th</sup> Meeting of the Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM14)**

The 14<sup>th</sup> Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM14) and the International Microbial Sustainable Use Conference was organized by one of the ACM members, Bioresource Collection and Research Center (BCRC) of Food Industry and Development Institute (FIRDI), at NTHU International Convention Center, Taipei from 4<sup>th</sup> to 6<sup>th</sup> December 2017.

**Date:** December 4 (Monday)-6 (Wednesday), 2017

**Venue of the Meeting:**

- NTUH International Convention Center, No. 2, Xuzhou Rd, Zhongzheng District, Taipei, Taiwan
- Food Industry Research and Development Institute(FIRDI), No. 331, Shih-Pin Road, Hsinchu, Taiwan

**Meeting Homepage:** <http://acm14.bcrc.firdi.org.tw/?title=ACM+14>

**Participants:**

Members: Total of 16 organizations from 11 countries and regions participated

- CGMCC/China
- InaCC/Indonesia
- JCM/RIKEN/Japan
- NBRC/Japan
- KCTC/KRIBB/Korea
- KNRRRC/Korea
- KACC/Korea
- Universiti Putra Malaysia/Malaysia
- IGEB-MAS/Mongolia
- PNCM/BIOTECH/Philippines



- USTC/Philippines
- BIOTEC/ Thailand
- TISTR/Thailand
- VTCC/ Vietnam
- BCRC/Taiwan
- Iranian Biological Resource Center/Iran (Observation member)

#### Special Speakers:

- Dr. Ipek Kurtböke, President, World Federation for Culture Collections (WFCC), Australia
- Dr. Shung-Chang Jong, International Affair Specialist of American Type Culture Collection (ATCC), USA
- Dr. Wen-Hsiung Li, Academician, Academia Sinica, Taiwan
- Dr. Chiu-Chung Young, National Chair Professor, Ministry of Education of ROC (lifetime honor), Taiwan
- Dr. Chii-Cherng Liao, Director-General, Food Industry Research and Development Institute (FIRDI), Taiwan
- Dr. Lily Eurwilaichitr, Deputy Executive Director, National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand
- Dr. Moriyuki Hamada, Curator, Culture Collection Division, Biological Resource Center, NITE (NBRC), Japan
- Ms. Rie Funabiki, Chief, International Affairs Division, Biological Resource Center, NITE (NBRC), Japan
- Dr. Chin-Chu Chen, Vice General Manager, Grape King Bio LTD, Taiwan

#### Program summary

- Welcome Remarks
  - Inauguration of the 14<sup>th</sup> ACM Meeting and International Conference
  - International Microbial Sustainable Use Conference
1. The World Federation of Culture Collections from 1947 Onwards  
Serving for Sustainable Futures



2. A Scientific Symbiosis between ATCC and Government Outsourcing Contracts
  3. Selecting Superb Microbial Hosts for Producing Metabolites and Peptides
  4. Research and Application of Soil Microorganisms in Agriculture
  5. Lactic Acid Bacteria: From Culture Collection to Industry Development in Taiwan
  6. TBRC: Infrastructure for Bioeconomy Development in Thailand
  7. Isolation and Taxonomy of Non-Filamentous Actinobacteria from Seashore Environments
  8. Japan's Domestic Measures for Access and Benefit-Sharing
  9. Neurohealth manifestations rendered by erinacine-A enriched *Hericium erinaceus* mycelia
- Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM)
    1. Special session for ISO/TC276 issue
    2. ACM Member Reports
    3. ACM Task Force Meeting
    4. General Assembly
    5. Closing Ceremony
    6. FIRDI Video / BCRC Lab Tour



## Day 1

- Welcome Remarks: The 14<sup>th</sup> Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM14) and the International Microbial Sustainable Use Conference were opened with opening remarks made by Dr. Gwo-Fang Yuan, the director of Bioresource Collection and Research Center (BCRC), Food Industry Research and Development Institute(FIRDI).
- Inauguration of the conference: The 14<sup>th</sup> ACM meeting and International Symposium were inaugurated and welcome address was given by Dr. Ipek Kurtböke, President of World Federation for Culture Collections (WFCC), Dr. Chao Jung Chen, Deputy Director-General of Department of Life Sciences of the Ministry of Science and Technology, Taiwan, and Dr. Chii-Cherng Liao, Director-General of Food Industry Research and Development Institute (FIRDI).
- International Microbial Sustainable Use Conference: As part of the ACM meeting, an International Symposium “International Microbial Sustainable Use Conference” was also organized. The symposium included six special seminars and one section for the microorganism preservations and sustainable use. The detail of their topics was as shown below and this symposium was held on one days.
- Special Seminars
- Dr. Ipek Kurtböke: The World Federation of Culture Collections from 1947 Onwards Serving for Sustainable Futures
- Dr. Shung-Chang Jong: A Scientific Symbiosis between ATCC and Government Outsourcing Contracts
- Dr. Wen-Hsiung Li: Selecting Superb Microbial Hosts for Producing Metabolites and Peptides
- Dr. Chiu-Chung Young: Research and Application of Soil Microorganisms in Agriculture



- Dr. Chii-Cherng Liao: Lactic Acid Bacteria: From Culture Collection to Industry Development in Taiwan
- Dr. Lily Eurwilaichitr: TBRC: Infrastructure for Bioeconomy Development in Thailand
- Section for Microorganism Preservations and Sustainable Use
  - Dr. Moriyuki Hamada: Isolation and Taxonomy of Non-Filamentous Actinobacteria from Seashore Environments.
  - Ms. Rie Funabiki: Japan's Domestic Measures for Access and Benefit-Sharing.
  - Dr. Chin-Chu Chen: Neurohealth manifestations rendered by erinacine-A enriched *Hericium erinaceus* mycelia.



## Day 2

- Asian Consortium for the Conservation and Sustainable Use of Microbial Resources
- Special session for ISO/TC276 issue: Dr. Katsutoshi Fujita introduced the aims of this section first. The aims were to
- Share what is being discussed at the ISO/TC 276 Biotechnology, especially bio-banking.
- Share the trend of international standardization of BRC management.
- Share the globalization of quality control of BRC management including data information.

The program in this section was as following,

- Dr. Katsutoshi Fujita: Trend of international standard on microbial management in ISO/TC 276 Biotechnology
- Mr. Paul Jung: Current development of ISO/DIS 20387, the International Standard for biobanking

Mr. Jung introduced the ISO/DIS 20387. ISO/DIS is designed to assess the competence of biobanks in handling biological resources and used by the biobanks to improve their operation. ISO/DIS 20387 is a Draft International Standard. The comments for ISO/DIS 20387 need to be resolved within a 16-week time frame. The working group meeting were held in Rome and additional face-to-face meeting will be held in Berlin in January 2018.

- Dr. Lina Huang : ISO 17025 accreditation and BCRC activities
- Many *ex situ* microbial collections have obtained external certifications. Being a core facility for bio-industries in Taiwan, BCRC provides bio-resources and related service including material deposit and distribution, microbial and cell identification and detection, and application researches for bio-resources exploitation. BCRC has been certified for ISO 9001 management system since 2000 and continually improves its processes to meet the requirements of customers. It was accredited in 2007 in respect of laboratory according to the criteria of ISO/IEC 17025:2005 by the Taiwan Accreditation Foundation (TAF). In 2012, it was further accredited in respect of Reference Material



Producers (RMP) according to the criteria of ISO Guide 34:2009 for reference bacteria, fungi, and cell lines. In 2016, two new test items, the qualitative detection for genetically modified soybeans and soybean-related products and identification of lactic acid bacteria, passed the ISO 17025 accreditation, which enhances the credibility of the contract service of BCRC. BCRC is now actively pursuing full accreditation to ISO 17025:2017 and ISO 17034:2016, and will expand to the biobanking standard (ISO 20387) in the near future.

- Members Report: Member reports had been made describing annual activities and their achievement from 15 member organizations and one observer organizations from Iranian Biological Resource Center, Iran. The topics were listed as following.
  - Dr. Man, Cai CGMCC/China
  - Dr. Atit Kanti, InaCC/Indonesia
  - Dr. Mitsuo Sakamoto, JCM/RIKEN/Japan
  - Dr. Katsutoshi Fujita, NBRC/Japan
  - Dr. Cha Young Kim, KCTC/KRIBB/Korea
  - Dr. Misook Kim, KNRRRC/Korea
  - Dr. Soo-Jin Kim, KACC/Korea
  - Dr. Tan Geok Hun, UNiCC/Universiti Putra Malaysia/Malaysia
  - Dr. Enkh-Amgalan Jigjiddorj, IGEB-MAS/Mongolia
  - Dr. Rosario Monsalud, PNCM/BIOTECH/Philippines
  - Dr. Mark Kevin P. Devanadera, USTCMS/Philippines
  - Dr. Sutipa Tanapongpipat, BIOTEC/Thailand
  - Dr. Pornpoj Srisukchayakul, TISTR/Thailand
  - Dr. Thao Nguyen, VTCC/ Vietnam
  - Dr. Sung Yuan Hsieh, BCRC/Taiwan
  - Dr. Mohammad Ali Amoozegar, Iranian Biological Resource Center/Iran (Observation member)



- ACM Task Force Meeting: Dr. Chii-Cherng Liao gave a welcome to all distinctive guests. ACM Task Force Meeting was held by Mrs. Rie Funabiki. The Task Force was discussed as follows.
- **Asian BRC Network:** Dr. Supawadee introduced new structure and new members of TF. The chair of this Task Force, Dr. Ken-ichiro Suzuki (NBRC, Japan) retired. There were new chair and members. WDCM GCM is an open network. They link GCM to NCBI and have cooperation with GBIF, MycoBank. GCM help 35 collections to create their own online catalogues. ABRCN data portal website was <http://www.abrcn.net/index.html>. There were 10 collections joined ABRCN. The catalogue data is lack of update and new collection is also not updated. Please regularly update the data and welcome other collections joined ABRCN.

#### Q&A

- Dr. Atit Kanti: They only have excel data and ask how to import data to the database. **Response:** Just email the data to the chair and they will develop an easy and one system to import the data.
- Dr. Shung-Chang Jong: ATCC will join the ABRCN recently.
- Ms. Rie Funabiki: How many countries are interested in the network? **Response:** 15 organizations.
- **Human Resource Development (HRD-TF):** Dr. Rosario G. Monsalud reported annual activities of this year. She mentioned that she was the chair of HRD since 2010 and it will be better to have a new chair of HRD.
- **Management of Material Transfer (MMT-TF):** Dr. Katsuhiko Ando reported the challenge and solution of this task force. Dr. Jung-Sook Lee from KRIBB, Korea and Ms. Rie Funabiki from NITE, Japan will be the new chairs of MMT-TF.
- **Mutual Aid Association for mBRC (MAA-TF):** Dr. Takahide Ishida presented the objective of this taskforce and the first year report. In the Q&A section, lots of collections including BCRC, TISTR, said that there were some modifications in the *in-situ* access and *ex-situ* access in their countries. The information listed in the slides was not correct. They suggested more





information could be get by email or discussion. Dr. Shung-Chang Jong mentioned that they treat microbial resources as human beings and they give ID for each transfer microbial resources in ATCC. Dr. Cha Young Kim suggested that more members to join this task force will be better.

- **General Assembly:** The chair and bi-chair of this section was Dr. Gwo-Fang Yuan and Dr. Enkh-Amgalan Jigjiddorj. In general assembly, reports and discussions were made regarding the following agenda; (1) Adoption of 13<sup>th</sup> ACM minutes, (2) New member applicants, (3) Election of the ACM Secretariat in 2018, (4) AOB, and (5) Announcement of ACM15.

#### Agenda 1: Adoption of 13th ACM minutes

Ms. Rie Funabaki reported the minutes of 13<sup>th</sup> Asian Consortium (ACM13) hosted by Microbial Type Culture Collection and Gene Bank (MTCC) on November 8 - 10, 2016 at CSIR-Institute of Microbial Technology (CSIR-IMTECH), Chandigarh, India. Some minor corrections were done. All participants confirmed the contents and adopted the minutes.

#### Agenda 2: New member applicants

The following organizations accepted as new members at the General Assembly and their new membership was announced.

- Iranian Biological Resource Center/Iran (IBRC)
- Microbial Culture Collection (MCC), National Centre for Cell Science (NCCS), Department of Biotechnology, Government of India

#### Agenda 3: Election of the ACM Secretariat in 2018

- Terms of Current Secretariat: Oct 2015-Oct 2018
- Nomination and application for the Secretariat is open to all members
- Nomination & application for the Secretariat is open to all member organizations Voting & Announcement will be done at ACM15 in 2018.



#### Agenda 4: AOB

There is a discussion about MAA-TF task force.

After discussion among the members, the conclusion was

1. Relax the regulation for access? No.
2. Mentioning the importance of microbiology and Art 8 of Nagoya Protocol: Vietnam, Malaysia and Mongolia.
3. Draft can be prepared by secretariat and ask opinions from all ACM members.
4. Consult with Dr. Ipek
5. Diagram of ABS law of countries?
  - No publication of the diagram.
  - Application of the law can be case by case. So, start from case study.
  - The data in this task force was not shown in other place and only circulate among member as a draft need to be discussed.
6. The objective of MMT-TF and MAA-TF are too similar. Two task forces should discuss and merge the two task forces or not.
7. The chairs of the two task forces will discuss to each other and discuss with other ACM members next ACM.

#### Agenda 5: Announcement of ACM15

The next ACM annual meeting, ACM15 (September 2018), would be held in Ulaanbaatar, Mongolia, hosted by Institute of General and Experimental Biology, Mongolian Academy of Sciences (IGEB-MAS). The 16<sup>th</sup> ACM annual meeting would be held by Microbial Culture Collection Unit (UNiCC), Institute of Bioscience, Universiti Putra Malaysia (UPM).

#### **Closing Ceremony**

**FIRDI Video / BCRC Lab Tour**



APPENDIX 1. Schedule of the 14<sup>th</sup> Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM14) and the International Microbial Sustainable Use Conference

**International Microbial Sustainable Use Conference**

<b>Monday, December 4, 2017</b>		
<b>Time</b>	<b>Session</b>	<b>Chair</b>
08:00   09:00	<b>Reception/Registration</b>	
09:00   09:50	<b>Opening Ceremony/Welcome Speech /Photo time</b>	
<b>Special Seminar</b>		
09:50   10:30	<b>Topic : The World Federation of Culture Collections from 1947 Onwards Serving for Sustainable Futures</b> <b>Dr. Ipek Kurtböke</b> ♦President, World Federation for Culture Collections (WFCC) ♦Senior Lecturer, School of Science & Education, University of the Sunshine Coast	Dr. Takao Iino ♦Japan Collection of Microorganisms (JCM), RIKEN, Japan
10:30   10:50	<b>Tea Break</b>	
10:50   11:30	<b>Topic : A Scientific Symbiosis between ATCC and Government Outsourcing Contracts</b> <b>Dr. Shung-Chang Jong</b>	Dr. Chii-Cherng Liao ♦Director-General, Food Industry Research and Development Institute



	<ul style="list-style-type: none"> <li>◆International Affair Specialist of American Type Culture Collection (ATCC)</li> </ul>	(FIRDI), Taiwan
11:30   12:10	<p>Topic : <b>Selecting Superb Microbial Hosts for Producing Metabolites and Peptides</b></p> <p><b>Dr. Wen-Hsiung Li</b></p> <ul style="list-style-type: none"> <li>◆Academician, Academia Sinica</li> <li>◆Distinguished Research Fellow, Academia Sinica</li> </ul>	
12:10   13:10	Lunch Break	
13:10   13:50	<p>Topic : <b>Research and Application of Soil Microorganisms in Agriculture</b></p> <p><b>Dr. Chiu-Chung Young</b></p> <ul style="list-style-type: none"> <li>◆Academician, Academia Sinica</li> <li>◆National Chair Professor, Ministry of Education of ROC (lifetime honor)</li> <li>◆Chair Professor, Department of Soil and Environment Sciences, National Chung Hsing University, Taichung, Taiwan</li> </ul>	<p>Dr. Gwo-Fang Yuan</p> <ul style="list-style-type: none"> <li>◆Director, Bioresource Collection and Research Center(BCRC), Food Industry Research and Development Institute(FIRDI)</li> </ul> <p>Dr. Cha Young Kim</p> <ul style="list-style-type: none"> <li>◆Director, Korean Collection for Type Cultures (KCTC), Research Institute of Bioscience and Biotechnology (KRIBB) , Korea</li> </ul>
13:50   14:30	<p>Topic : <b>Lactic Acid Bacteria: From Culture Collection to Industry Development in Taiwan</b></p> <p><b>Dr. Chii-Cherng Liao</b></p> <ul style="list-style-type: none"> <li>◆Director-General, Food Industry Research and Development Institute (FIRDI), Taiwan</li> </ul>	
14:30	Topic : <b>TBRC: Infrastructure for</b>	



15:10	<b>Bioeconomy Development in Thailand</b> <b>Dr. Lily Eurwilaichitr</b> ♦Deputy Executive Director, National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand	
15:10   15:30	Tea Break	
<b>Microorganisms Preservations and Sustainable Use</b>		
15:30   16:00	Topic : <b>Isolation and Taxonomy of Non-Filamentous Actinobacteria from Seashore Environments</b> <b>Dr. Moriyuki Hamada</b> ♦Curator, Culture Collection Division, Biological Resource Center, NITE (NBRC), Japan	Dr. Lily Eurwilaichitr ♦Deputy Executive Director, National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand
16:00   16:30	Topic : <b>Japan's Domestic Measures for Access and Benefit-Sharing</b> <b>Ms. Rie Funabiki</b> ♦Chief, International Affairs Division, Biological Resource Center, NITE (NBRC), Japan	Dr. Manabu Suto ♦Director, International Affairs Division, Biological Resource Center, NITE (NBRC), Japan
16:30   17:00	Topic : <b>Neurohealth manifestations rendered by erinacine-A enriched Hericium erinaceus mycelia</b> <b>Dr. Chin-Chu Chen</b> ♦Vice General Manager, Grape King Bio LTD, Taiwan	Dr. Manabu Suto ♦Director, International Affairs Division, Biological Resource Center, NITE (NBRC), Japan
17:00   17:30	<b>Discussion &amp; Closing Ceremony</b>	



18:30	<b>Conference Dinner</b> <b>Taipei World Trade Center Club</b>
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**The 14<sup>th</sup> Asian Consortium for the Conservation and Sustainable Use of Microbial Resources**

Tuesday, December 5, 2017		
Time	Session	Chair
<b>Special session for ISO/TC276 issue</b>		
09:00   09:05	<b>Introduction of the special session</b>	
09:05   09:25	Topic : <b>Trend of international standard on microbial management in ISO/TC 276 Biotechnology</b> Dr. Katsutoshi Fujita ♦ Researcher, Biological Resource Center, NITE (NBRC), Japan	Dr. Katsutoshi Fujita ♦ Researcher, Biological Resource Center, NITE (NBRC), Japan
09:25   09:50	Topic : <b>Current development of ISO/DIS 20387, the International Standard for biobanking</b> Mr. Paul Jung ♦ Researcher MSc, Dept of Standardization and Certification, Korea National Research Resource Center (KNRRC)	
09:50   10:15	Topic : <b>ISO 17025 accreditation and BCRC activities</b> Dr. Lina Huang ♦ Curator, Bioresource Collection and Research Center(BCRC), Food Industry Research and Development	



	Institute(FIRDI), Taiwan	
10:15   10:30	<b>General Discussion</b>	
10:30   11:00	<b>Tea Break</b>	
<b>ACM Member Report</b>		
11:00   12:30	<b>Member 01-06</b>  Dr. Man, Cai CGMCC/China Dr. Atit Kanti, InaCC/Indonesia Dr. Mitsu Sakamoto, JCM/RIKEN/Japan Dr. Katsutoshi Fujita, NBRC/Japan Dr. Cha Young Kim, KCTC/KRIBB/Korea Dr. Ki Hyun Ryu, KNRRC/Korea	Dr. Gwo-Fang Yuan ♦Director, Bioresource Collection and Research Center(BCRC), Food Industry Research and Development Institute(FIRDI)
12:30   13:30	<b>Lunch Break</b>	
13:30   15:00	<b>Member 07-12</b>  Dr. Soo-Jin Kim, KACC/Korea Dr. Tan Geok Hun, Universiti Putra Malaysia/Malaysia Dr. Enkh-Amgalan Jigjiddorj, IGEB- MAS/Mongolia Dr. Rosario Monsalud, PNCM/BIOTECH/Philippines	Dr. Atit Kanti ♦Indonesian Culture Collection (InaCC), Research Center for Biology, Indonesian Institute of Sciences (LIPI)



	Dr. Mark Kevin Devanadera, USTC/Philippines Dr. Sutipa Tanapongpipat, BIOTEC/ Thailand	
15:00   15:30	Tea Break	
15:30   17:00	<b>Member 13-16</b>  Dr. Pornpoj Srisukchayakul, TISTR/Thailand Dr. Thao Nguyen, VTCC/ Vietnam Dr. Sung Yuan Hsieh, BCRC/Taiwan Dr. Mohammad Ali Amoozegar, Iranian Biological Resource Center/Iran (Observation member)	Dr. Enkh-Amgalan Jigjiddorj, ♦Head of Laboratory, Laboratory of Microbiology, Institute of General and Experimental Biology, MAS, Mongolia
18:00	<b>Dinner Buffet</b> Sheraton Grand Taipei Hotel-Kitchen 12	

Tuesday, December 6, 2017	
Time	Session
<b>Task Force Meeting and General Assembly</b>	
08:00-10:00	Taipei to Hsin-Chu BCRC/FIRDI
10:00   12:00	<b>ACM Task Force Meeting</b>
12:00-13:00	Lunch Break
13:00   14:00	<b>General Assembly</b> Chair: Dr. Gwo-Fang Yuan (BCRC) Vice-Chair: Dr. Enkh-Amgalan Jigjiddorj





	Convene by Rie Funabiki of the ACM Secretariat <Agendas> 1. Adoption of 13 <sup>th</sup> ACM13 Minutes 2. New member applicants 3. Election of the ACM Secretariat in 2018 4. AOB 5. Announcement of ACM15
14:00-14:30	<b>Closing Ceremony</b> Remarks from Dr. Gwo-Fang Yuan (BCRC)
14:30-15:00	Tea Break
15:00-17:00	<b>FIRDI Video / BCRC Lab Tour</b>
1730	1. <b>Dinner</b> (Fleurlis Hotel) 2. <b>Transportation to Airport</b>