

# **Training course of Microbial Resources Information Management and Utilization for Developing Countries**

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**Bureau of International co-operation Chinese  
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## Personal Information

I am Santiago Jaramillo Mejia. I am an engineer agronomist (2007) of University of Applied and Environmental Sciences, U.D.C.A. (Bogotá, COLOMBIA) and Ph.D (2014) in Molecular Biology and Biotechnology, National University of San Martín, UNSAM. San Martín, state of Buenos Aires, ARGENTINA. Did my Ph.D in “Standards officer and development of technologies of low cost for the production of edible mushrooms of the genus *Pleurotus*”. I have experience in the production of species of this genus and other genus like *Lentinula edodes*, *Agrosive aegerita*, *Ganoderma lucidum* among others. Also helped in the development of SPAWN for the production of edible mushrooms, this service belongs to the laboratory of mycology and mushrooms cultivation of the IIB-INTECH.

At the university I am responsible for teaching courses such as: cultivation of mushrooms (species of the genus *Pleurotus*) and I collaborate with the Organization of the national workshop for mushroom growers since 2009.

I am the curator of IIB-INTECH Collection of Fungal Cultures (ICFC) since March 2016.

IIB-INTECH Collection of Fungal Cultures (ICFC), Chascomús, Buenos Aires, Argentina.

## Abstract

A total of fifteen participants from 11 countries (Argentina, Brazil, Bulgaria, China, Fiji, Greece, India, Iran, Romania, Russia, and Thailand) participated in the training course of microbial resources information management and utilization for developing country hosted by WFCC-MIRCEN world data centre for microorganisms (WDCM), Institute of Microbiology, Chinese Academy of Science (IMCAS). The objective of this training was to train participants on the following topics; 1) Basic knowledge and practice on the collection and identification of microbial resources; 2) Function introduction and data application example of Global Catalogue of Microorganism; 3) Introduction and operation of the microbial resource data management system; 4) Bioinformatics knowledge and tools; and 5) Development database platform among the collections. Participants from the collections have expertise in different area of microbial which will be helpful for our collection to improve our laboratory protocols.

**Keywords:** Culture Collection, Database, GCM, Microorganism.

## 1. Brief introduction of the culture collection

Motivated by the need of having a culture collection to store the biological material of Fungi specifically the edible mushrooms native to others countries for research and development in the country. Professor Edgardo Alberto is the founder of our

Culture Collection and it was established in 1998. The collection is located in the laboratory of Mycology and Mushrooms Cultivation laboratory belonging to IIB-INTECH (Institute of Biotechnological Researchers - Technological Institute of Chascomús) Buenos Aires, Argentina.

In 2002 the collection was registered with World Federation for Culture Collections (WFCC) with the name of IIB-INTECH Collection of Fungal Culture, acronym (ICFC) with registered number 823.

Our culture collections have 842 strains constitute 80 different genera, among which most predominant is *Pleurotus* with 197 strains followed by the genus *Agaricus* with 168 strains and *Agrosive* with 117 strains. These three genera make up 75% of the collection and the remaining 25% is composed mainly of the genera *Trichoderma* with 57 strains, *Gymnopillus* with 33 strains, *Lentinula* with 22, *Polyporus* with 22, *Lentinus* with 17 strains while *Flamulina* constitutes 8 strains.

The majority of strains were isolated from different ecosystems of Argentina and few of the strains are originated from other countries. Our culture collection also provides spawn of different species of edible mushrooms for commercial purposes. We at ICFC also prepare spawn of fungi to use in the fermentation of food.

### **The Microorganisms Bank**

The National University of San Martín (UNSAM) planning to establish a biological resource centre for the storage microorganisms for the scientific and research purposes.

## **2. Benefit from the training course**

- Exchange of expertise and knowledge among the collections.
- Interaction with participants and faculty at CAS for future collaborations.
- Preservation methodologies used by other collections for the preservation of different biological material.

## **3. Suggestion on WDCM work**

WDCM should continue the effort of up grading data management system in culture collection around the world. It also should search for the strategies to support the small culture collection through financial sponsorship, collaboration and joint project and outsourcing services.

## **4. Comments or suggestion on the training course**

- The training was very well organized and I have very few suggestions as follow:
- Few lectures were short, it would be appropriate to have at least 1h lectures.
- Internet connection was not working most of the time.
- Few lecture were out of the objectives of the proposed training
- More interactive practice sessions are preferred.

## **5. Suggestion on further cooperation between WDCM and the collections**

Our collection is interested to share our database in future with the WDCM to strengthen our collaboration among with scientific community.