

Global Catalogue of Microorganisms: Towards the Global Cooperation

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Microbial resources are one of the most important natural resources in the world, which is the scientific basis to support the development of biotechnology and life sciences. Culture collections are like the libraries of these living microbial materials. A hub which can combine these culture collections in different countries becomes a necessity. World Federation for Culture Collection (WFCC) is the community of those long term conservation and research facilities that brings together more than 600 collections in 68 countries. WFCC-MIRCEN World Data Centre of Microorganisms (WDCM), the heart of WFCC, once hosted in Australia and Japan, plays as a hub providing a database of microorganisms, analysis of its function and a platform of communication.

WDCM has been managed by a new host, Information Center, Institute of Microbiology, Chinese Academy of Sciences from 2011. After the relocation of WDCM, WDCM has worked out online reference strain catalogue which helps users to find local sources of the reference strains by citing all collections and providing contact details and the collection's unique reference. Furthermore, WDCM is developing an Analyzer of Bio-Resources (ABC) as one of the very important services provided to WFCC members, which provides searching and statistics tools for Culture collections or strains.

The increasing demands on culture collections for authenticated, reliable biological material and associated information have paralleled the growth of biotechnology. However, only nearly one-sixth of collections registered in WDCM have their online catalogue, which greatly hinders the visibility and hence the accessibility of strains. Thus, WDCM started an international project called WFCC Global Catalogue of Microorganisms (GCM) to construct a data management system and a global catalogue to help organize, unveil and explore the data resources of its member collections. GCM is expected to be a robust, reliable and user-friendly system to help culture collections to manage, disseminate and share the information related to their holdings. It also provides a uniform interface for the scientific and industrial communities to access the comprehensive microbial resource information.