NEWS OF THE WORLD

NEW MICROBIAL CULTURE COLLECTION AT PUNE, INDIA

The Microbial Culture Collection (MCC) was established by the Department of Biotechnology (DBT), Government of India, in April 2009 at one of its premier research institutes, the National Centre for Cell Science (NCCS) in Pune, with a broad charter to preserve, characterize and authenticate microbial resources. MCC is now an affiliate member of the World Federation for Culture Collections and registered with the World Data Centre for Microorganisms. In April 2011, MCC was recognized by the World Intellectual Property Organization, Geneva, Switzerland, as an International Depository Authority (IDA) for the deposit of patent microorganisms under the Budapest Treaty.

MCC holds one of the largest culture collections in the world and offers numerous services to its customers (see boxed highlights). MCC was originally created to serve the preservation and supply requirements of the DBT's microbial prospecting project, under which >150,000 bacterial cultures were collected from diverse ecological niches in India, such as soils from Western Ghats & North East, mangroves, marine environment, industrial effluent polluted sites, and insect guts. At present, MCC has successfully preserved all these cultures. A major effort is now underway to identify and characterize these safe deposit cultures using rRNA gene sequencing and fatty acid methyl ester (FAME) analyses. About 8000 cultures have already been identified using 16S rRNA sequencing. In addition, MCC will soon begin to supply these cultures to industrial partners selected for various bioactivity screening programs. Recently, MCC has begun to accept other deposits, and it currently holds 43 cultures (26 bacteria and 17 fungi) under general deposit and five cultures as an IDA. The MCC is already offering rRNA gene sequence based microbial identification services to academic and industrial clients. In the last year, ~2000 samples of bacteria and fungi have been identified. Very soon, MCC expects to offer additional identification services, such as phenotypic characterization, FAME analysis, G+C mol%, and DNA–DNA hybridization. MCC is also working toward obtaining ISO certification for its service activities so as to achieve highest quality standards.

The Team at the Microbial Culture Collection, Pune, India

Along with providing high-quality services to its customers, MCC faculty and staff also conduct active research in microbial ecology and systematics. Currently, its 48 members include 12 scientists with diverse expertise. They are working in specific areas to improve the quality of services at MCC. In addition, MCC is actively involved in training new staff to carry out research in microbial ecology and systematics by conducting workshops and symposia at both local and national level. Further, MCC is continually recruiting new team members to keep up with rising customer demands.

MCC has undergone a major transition since its establishment. For almost three years, it was housed in a 6000 sq. ft start-up facility located 15 km north of NCCS, Pune. In March 2012, it moved to an interim facility on the main NCCS campus. In early 2013, MCC is expected to move locally to a much larger (40,000 sq. ft.) long-term facility, where additional services will be offered. Concurrently, MCC will transform into an autonomous institute under DBT, tentatively named as the National Centre for Microbial Resource and Research, and will continue to provide the highest standard of services along with focused research on microbial ecology and systematics.

By following internationally accepted guidelines and validated protocols, MCC is strongly committed to providing the highest quality services for microbial preservation and identification and supplying of authentic cultures. MCC intends to become a premier microbial resource centre in India with a strong focus on in-house research and periodic training of personnel. For further details on the services offered, fee structure and other information; please visit the MCC website at http://www.nccs.res.in/mcc.

Kamlesh Jangid & Yogesh S Shouche

Submit ideas for News of the World features in future issues to Barny Whitman (whitman@uga.edu)

SERVICES OFFERED BY MCC

Deposit Services

General Deposit for Public Access

Safe Deposit

IDA Deposit

Supply of Cultures

Identification Services

16S/18S rRNA gene sequencing (both partial and complete)

Phenotypic characterization

Phylogenetic trees

Coming soon: FAME analysis; BIOLOG system (oxidation pattern of 95 C substrates); API NE, API 50 CH, API ZYM, Vitek; G+C mol% (T_m and HPLC); DNA–DNA hybridization.

Educational Services

Training

Workshops

Symposia

Address

Microbial Culture Collection, National Centre for Cell Science, Pune University Campus, Pune 411007, Maharashtra, India

Tel: +91 20 25708237

Fax: +91 20 25692259

Email: mcc@nccs.res.in

Web: http://www.nccs.res.in/mcc