

## **BRAZILIAN COLLECTION OF ENVIRONMENTAL AND INDUSTRIAL MICROORGANISMS (CBMAI): TOWARDS THE ESTABLISHMENT OF A BIOLOGICAL RESOURCE CENTRE**

Author(s) Lara Durães Sette<sup>1</sup>, Fabiana Fantinatti Garboggini<sup>1</sup>, Milena Binatti Ferreira<sup>1</sup>, Paulo Menezes de Holanda Barros<sup>2</sup>, Valeria Maia de Oliveira<sup>1</sup>

Institution(s) 1. UNICAMP, Universidade Estadual de Campinas, Rua Alexandre Cazelatto, 999 - Vila Betel, Paulinia, SP - CEP 13140-000, Brazil 2. TECPAR, Instituto de Tecnologia do Paraná, Curitiba, PR, Brazil

### **Abstract:**

In order to meet modern demands for advancements of biotechnology and life sciences, the Organisation for Economic Cooperation and Development – OECD, in 2001, has introduced a new concept of repositories and providers of high quality biological materials and information: the Biological Resources Centres (CRBs). The Brazilian Collection of Environmental and Industrial Microorganisms (CBMAI) was founded in 2002 with the mission of acting as a service collection, doing research and offering quality services in the microbiological field for the industrial and academic sectors. CBMAI is registered at WFCC as WDCM 823 and since 2004 the collection has been recognized by Brazilian government (Genetic Heritage Management Council - CGEN) as a genetic resources depository. In 2008 CBMAI was selected for participating in the Brazilian Service Collections Network Project (FINEP/MCT), resulting on its participation in the “Demonstration Project for a Global Biological Resource Centre Network”. CBMAI collection holds microbial strains for biotechnological, educational and taxonomic applications and contains microbial biological material restricted to risk groups 1 and 2 according to WHO’s classification. Currently, the collection holds about 1,100 micro-organisms in the main collection. Additionally, CBMAI houses an independent collection (research collection) containing strains derived from research projects under the coordination and/or participation of its researchers. This research collection contains about 50,000 metagenomic clones (*E. coli*) and 2,000 microbial strains derived mainly from extreme environments (marine, Antarctic and oil reservoirs). The microbial resources are preserved by freeze drying, cryopreservation and Castellani methods according to international protocols. Data and informatics are managed and stored through the software Sicol. To be fully recognized as a BRC, CBMAI is concentrating its efforts to overcome some gaps such adequacy of infrastructure and staff increase. However, CBMAI is already operating in harmony with ISO 17025 standard, OECD Best Practice Guidelines for Biological Resource Centres requirements and in compliance with national regulations and legislation. In addition, CBMAI is indeed committed with the continuous improvement of its activities. Financial support: FINEP/MCT, FAPESP and PETROBRAS

**Key words:** CBMAI, Biological Resource Centre, high quality biological material