

## INTRODUCTION

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). In this sense, the Brazilian Collection of Environmental and Industrial Microorganisms (CBMAI) is concentrating its effort to work in accordance with the BRC's requirements.

**Keywords:** Biological Resource Centre, CBMAI, high quality biological material

## CBMAI COLLECTION

### History

- 2002 - CBMAI was founded in the CPQBA (Campinas State University - UNICAMP) as part of the Division of Microbial Resources (DRM)
- 2002 - Registered at WFCC → WDCM 823
- 2004 – CBMAI was recognized by Brazilian government (CGEN) as a genetic resources depository → deliberation n° 81, November 18<sup>th</sup>, 2004 (MP 2186-16)
- 2007 – Member of the Brazilian BRCs Network Project (FINEP 01.06.1227.01)
- 2008 – Partner of the “Demonstration Project for a Global Biological Resource Centre Network” - German Federal Ministry of Research and Education (BMBF)

### Mission

CBMAI is a service collection with the mission of acting as a BRC, doing research and offering quality services in the microbiological field for the industrial and academic sectors as for the society.

### Operation and Management

- International protocols (CABRI, OECD, WFCC)
- Data management system → SICOL
- Quality system: based on ISO 17025 and OECD BPG for BRCs

### Quality Policy

To maintain and ensure the quality of the researches and technical services provided by meeting the requirements of internationally recognized standards such as ISO/IEC 17025:2005 and OECD Best Practice Guidelines for Biological Resource Centres and by complying with national and international regulations and legislation. In order to achieve this, CBMAI is committed to continuous improvement of our activities.

### Biological Material

CBMAI collection holds microbial strains (filamentous fungi, yeasts and bacteria) for biotechnological, educational and taxonomic applications and contains microbial biological material restricted to risk groups 1 and 2 according to WHO's classification.

- Main collection: 1,100 micro-organisms, mainly from different Brazilian biomes
- Research collection: 50,000 metagenomic clones (*E. coli*) and 2,000 microbial strains derived from extreme environments (marine, Antarctic and oil reservoirs)

### Research Areas

- Isolation and Screening
- Preservation
- Bioprospection
- Systematics and Taxonomy
- Molecular Ecology
- Genomics and Metagenomics

### Services

- Deposit and Distribution
- Preservation
- Taxonomic characterization
- Typing (genetic fingerprinting)
- Microbial communities characterization (metagenomics)

### Staff

Dr. Lara Durães Sette	CBMAI Curator
Dr. Fabiana Fantinatti-Garboggini	CBMAI Quality Mediator
Dr. Valéria Maia de Oliveira	DRM Coordinator
Milena Binatti Ferreira	CBMAI Technician
Samantha Gonçalves da Fonseca	CBMAI Technician
Giselle Kobata Kimura	CBMAI Technical Support

### Main challenges toward the establishment of a BRC

To be fully recognized as a BRC, CBMAI is concentrating its efforts to overcome some gaps such as:

- Adequacy of infrastructure: CBMAI is changing the installations to a new building (400 m<sup>2</sup>)
- Staff increase: CBMAI needs more human resources
- Fully comply with the OECD Best Practice Guidelines for BRCs

### Support:

