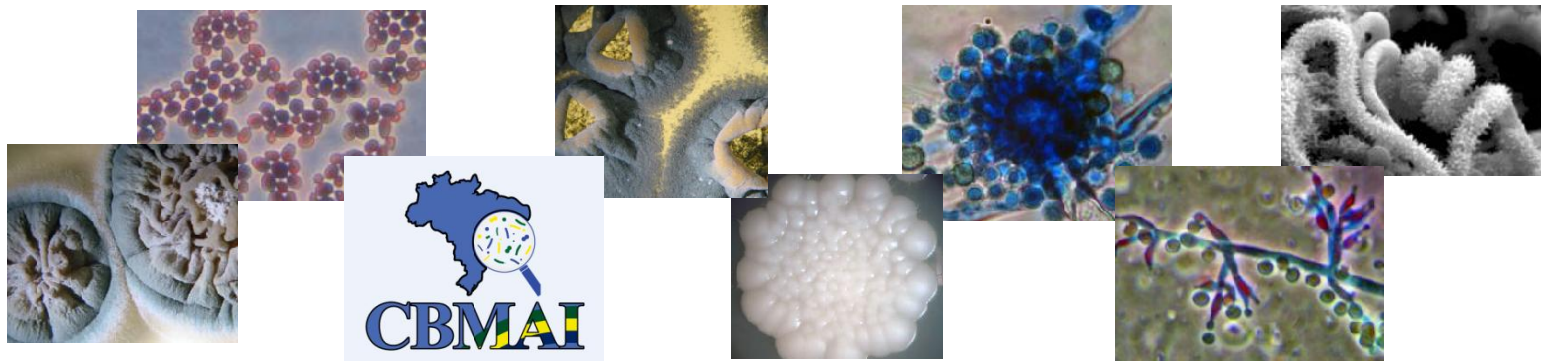


# Brazilian Collection of Environmental and Industrial Microorganisms (CBMAI): Towards the Establishment of a Biological Resource Centre



**Lara D. Sette\***,  
Fabiana Fantinatti-Garboggini, Milena B. Ferreira, Paulo M. Holanda  
Barros & Valéria M. Oliveira



## History

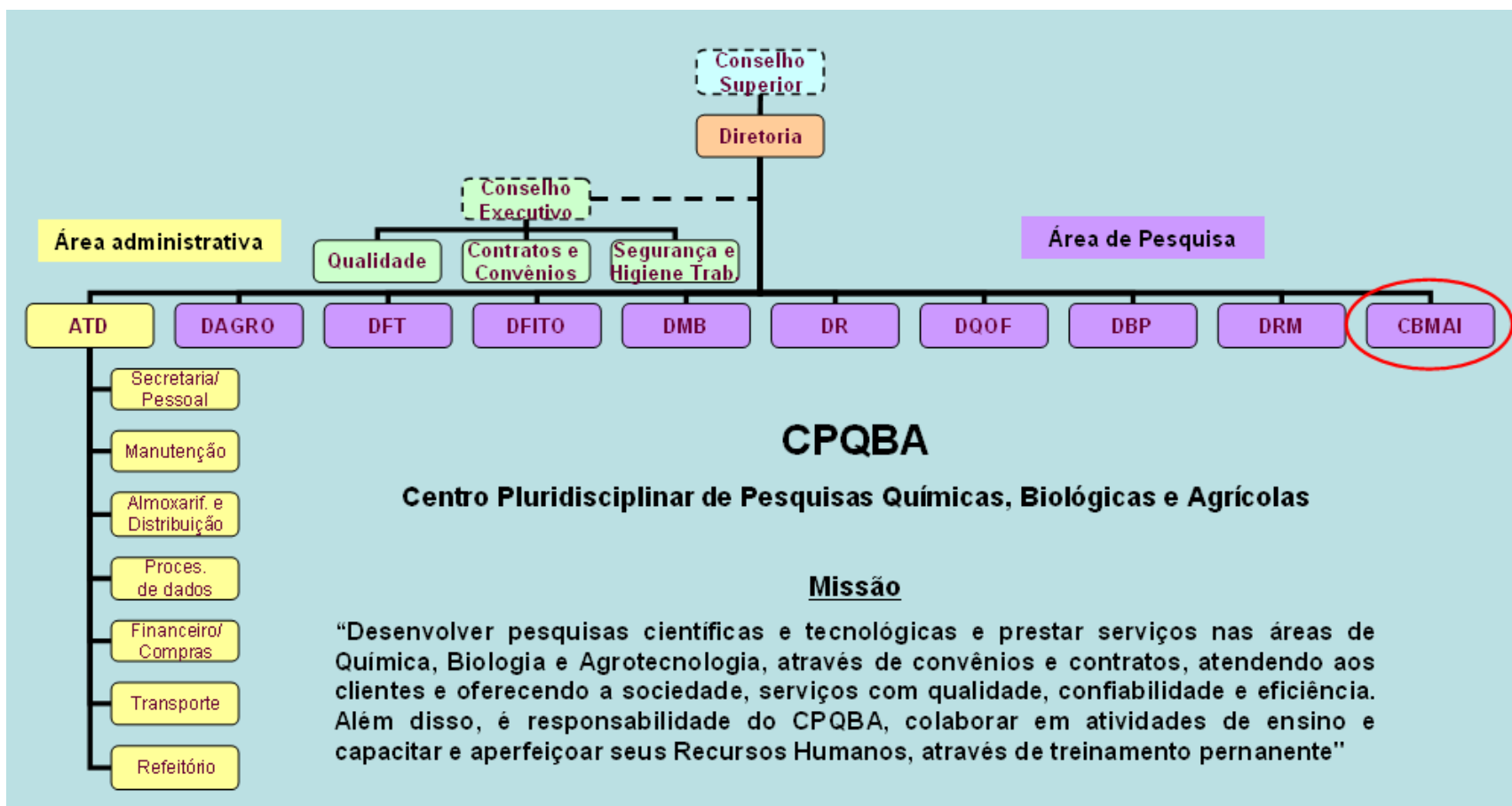
- 2002 - CBMAI was founded in the CPQBA (Campinas State University - UNICAMP) as part of the Division of Microbial Resources - DRM)
- 2002 - Registered at WFCC → WDCM 823
- 2004 - Registered at CGEN as genetic resources depository → deliberation n° 81, November 18th, 2004 (MP 2186-16).
- 2007 - Member 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.

# Institutional support

- CBMAI is officially recognized as part of the CPQBA/UNICAMP and it is included in the CPQBA strategic planning





## Operation and Management

- International protocols (CABRI, OECD, WFCC)
- Data management system → SICOL
- Quality system
  - NBR ISO 17025:2005
  - OECD BPG for BRCs

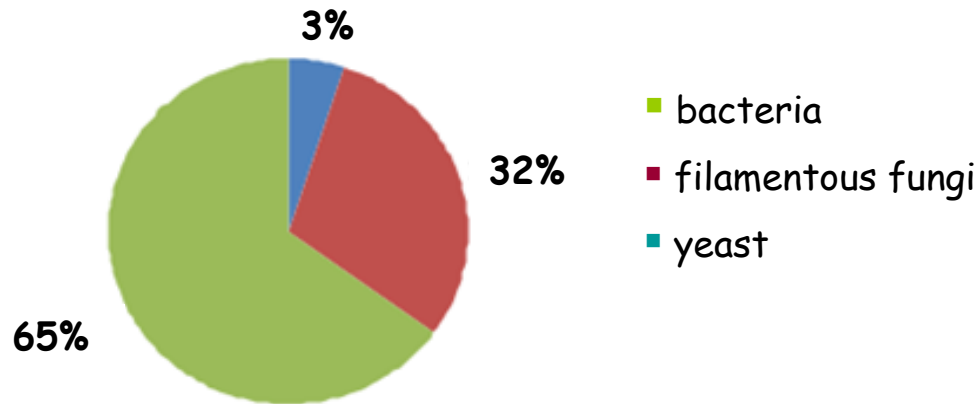
## Quality Policy

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 its activities



## Biological material

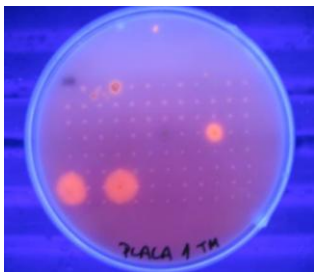
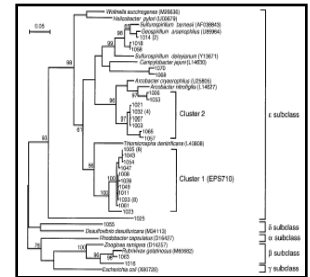
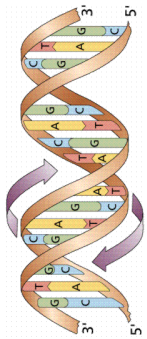
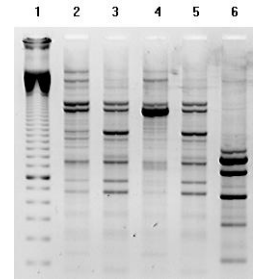
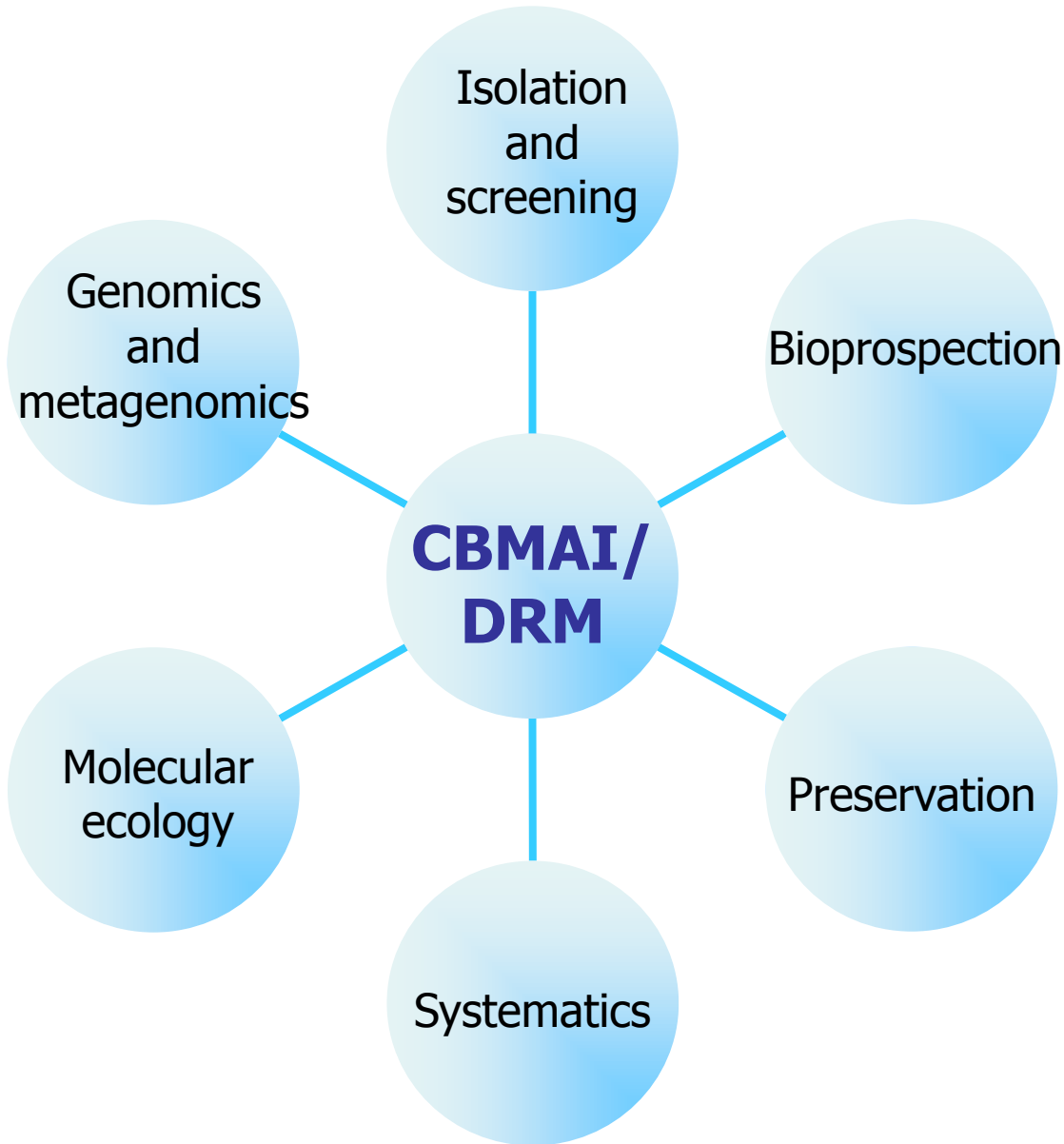
- Bacteria, yeasts and filamentous fungi
  - Risk groups 1 and 2 (WHO)
- Genetically Modified Organisms (GMOs)
  - Risk groups 1 and 2 (CTNBio)
- Number of microorganisms in the collection
  - Main collection = 1,200 strains



- Research collection
    - ✓ 50,000 metagenomic clones
    - ✓ 2,000 microbial strains
- } extreme environments



# Research Areas





## CBMAI/DRM Research

### Ongoing Projects (11)

- 1 FINEP
- 1 ANNEL
- 3 PETROBRAS
- 3 CNPq
- 4 FAPESP

### Researcher staff

- Researcher = 3
- Post-Doc = 2
- PhD = 6
- Master = 9
- Technician = 3

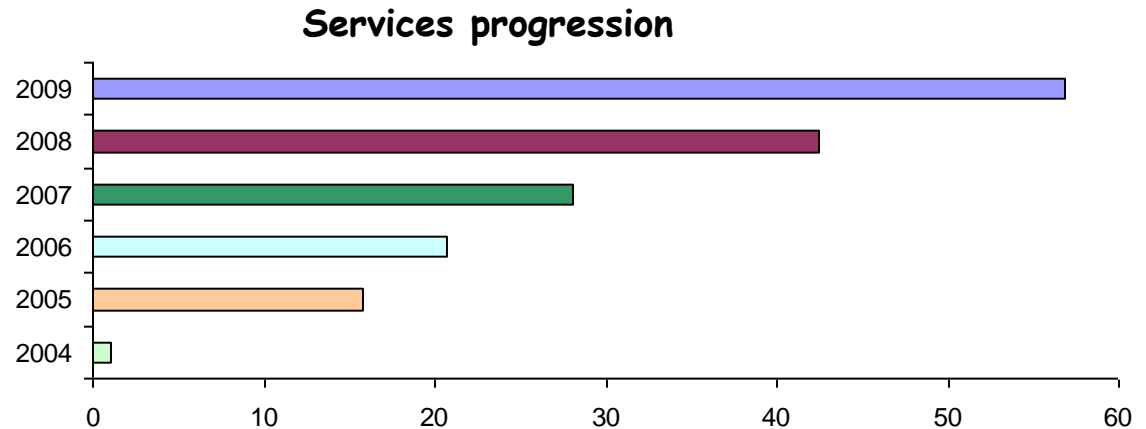
### Projects in negotiation (3)

- 1 European Community
- 1 FAPESP
- 1 PETROBRAS



## Services

- Deposit
- Distribution
- Preservation
- Counting
- Taxonomic characterization (molecular and conventional)
- Typing (genetic fingerprinting)
- Characterization of microbial communities from environmental samples (genetic fingerprinting and genomic libraries)
- Consultancy







## CBMAI/DRM Staff (CPQBA/UNICAMP)

Prof. Dr. Ivo M. Raimundo Jr.  
Prof. Dr. Sérgio Persio Ravagnani

CPQBA Director  
CPQBA Associated Director

Rita de C. V. P. Biancalana  
Sandra Maria Pierro Restani  
Damaris Batista da Silva

Director Assistant  
Financial  
Supply

Edilberto Prince Portugal  
Adilson Sartorato  
Cláudia Steckelberg  
Alexandre N. Ponezi  
Glyn Mara Figueira  
Auditors (6)

CPQBA Integrated Management Coordinator  
Quality Manager  
Occupational Health and Safety Manager  
Environmental Manager  
Social Responsibility Manager

Lidia Carmen Perez Dias  
Laura Suse Valock Alves  
Luís Otávio Martins

Secretary  
Secretary  
Warehouse

**Dr. Lara Durães Sette**  
**Dr. Fabiana Fantinatti-Garboggini**  
**Dr. Valéria Maia de Oliveira**

**CBMAI Curator/DRM Researcher**  
**CBMAI Quality Mediator/DRM Researcher**  
**DRM Head and Researcher**

**Milena Binatti Ferreira**  
**Samantha Gonçalves da Fonseca**  
**Giselle Kobata Kimura**

**CBMAI Technician**  
**CBMAI Technician**  
**CBMAI Technical Support**

+ 4 general services technicians and 1 computer assistant



## Main Challenge



from a service collection to a BRC



## What is being doing

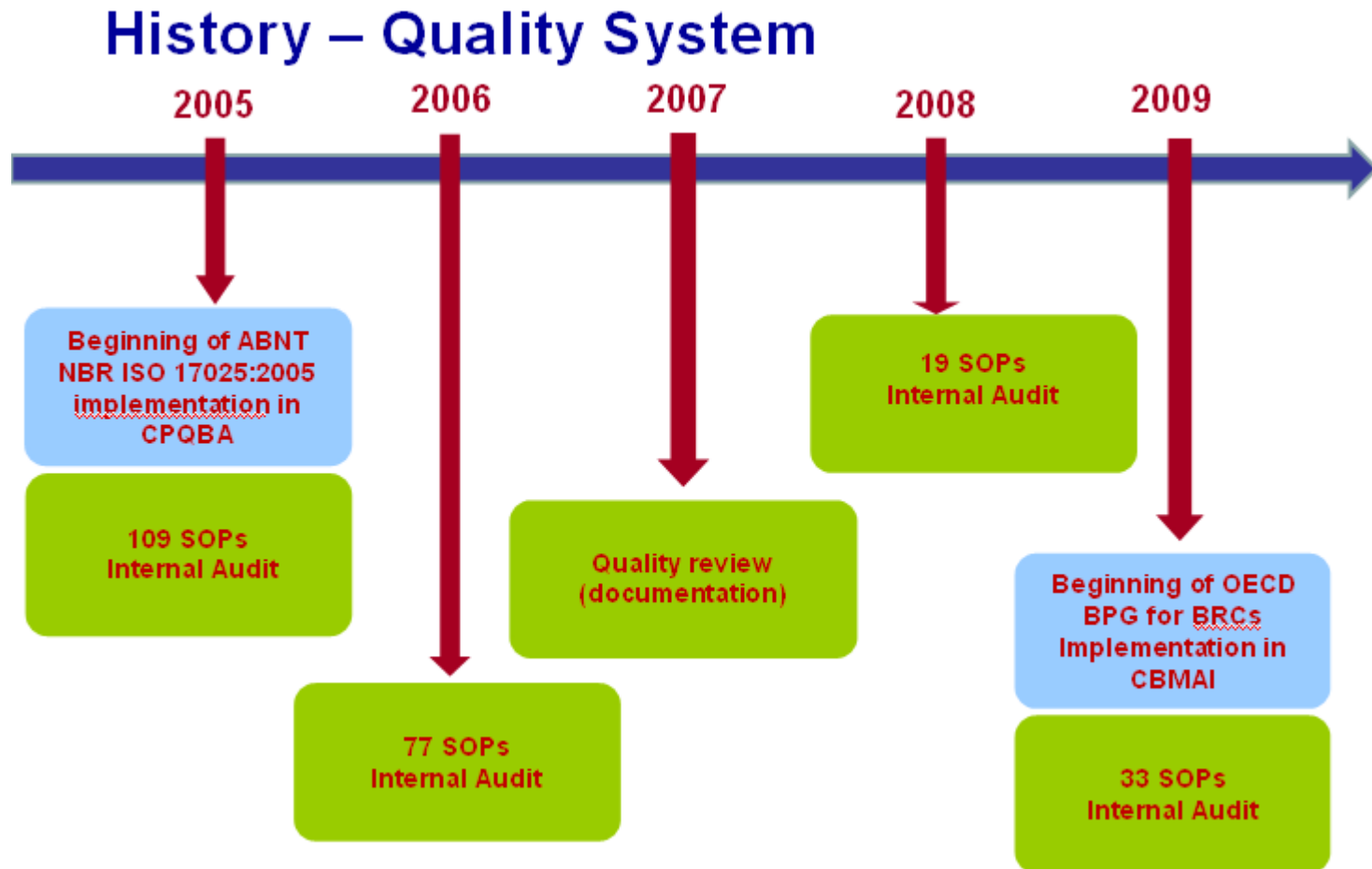
- Adequacy of infrastructure: CBMAI is changing the installations to a new facility (400 m<sup>2</sup>)
  - Biosecurity
  - Biosafety
  - Quality control
  
- Operation according to Brazilian legislation (biological material)
  - Sampling
  - Access
  - Transportation





## Quality management

- CBMAI is operating in accordance with the ISO 17025 requirements
- CBMAI is implementing OECD Best practice guidelines for BRCs





## Next steps

- Implementation of liquid-nitrogen preservation method
- Back up of the main collection
- Staff increase
- Fully comply with the OECD Best Practice Guidelines for BRCs

# Thanks!

[lara@cpqba.unicamp.br](mailto:lara@cpqba.unicamp.br)



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Support:

