



Instituto Adolfo Lutz

Núcleo de Coleção de Micro-organismos

São Paulo /SP - Brazil

Dr. Elizabeth Harummyy Takagi



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Instituto Adolfo Lutz - IAL

- ▶ Central Laboratory of public health
- ▶ Collections of microorganisms are originated:
 - ▶ Work and research in the laboratories
 - ▶ Aquisition of strains
 - ▶ Exchanges with other collections

Núcleo de coleção de micro-organismos (NCMO)

- ▶ 1940 - the collection of culture
- ▶ 1970 - establishment (Decree of structuring the IAL)
- ▶ 2010 - name changed to Núcleo de Coleção de Micro-organismos

Holding strains until now

Strains isolated in Brazil

▶ Bacteria	3685	-	2952
▶ Fungi	131	-	121
▶ Yeasts	120	-	110
▶ Protozoa	15	-	15

< 80 different
genus

Núcleo de Coleção de Micro-organismos - IAL is a public governamental service collection

- ▶ Strains are used routinely by technical centers of the IAL for testing, quality control and scientific research, as well as being made available to the public, access industries, universities and laboratories

Núcleo de Coleção de Micro-organismos

- ▶ Member of the World Federation for Culture Collection - WFCC – since 1972, under number 282
- ▶ Faithful Depository Collection of Brazilian genetic microorganism biodiversity - CGEN 017/09 – since 2009

Núcleo de Coleção de Micro-organismos

Routine:

- ▶ Maintenance of strains (250/month)
- ▶ Supply of strains (20-30/month)
- ▶ Supply bioindicators to control sterilization process (120-160/month)
- ▶ Freeze-drying of other material – serum samples (80-120/month)
- ▶ Deposit of strains (790/4 years)

Núcleo de Coleção de Micro-organismos

Implementation activities – 2008 -2012

- ▶ Phenotypic authentication of all batches – analysis certificate
- ▶ Cryopreservation
- ▶ Biosafety

Núcleo de Coleção de Micro-organismos

Implementation activities – 2008 -2012

- ▶ Standardization of technical and administrative documents
- ▶ Quality control and quality assurance – receipt, production and supply
- ▶ Deposit of strains – officialization specific document

Apart of the service collection maintained by NCMO...

- ▶ routine and research collections were formed over the years in the laboratories of the institution by its researchers and currently about 200.000 microorganisms are stored in Bacteriology, Parasitology and Mycology and Virology laboratories.

These strains are used in: reference controls in diagnostic methods, research projects, such as the characterization of new clones related to microbial resistance and/or apiedmiological diversity, technological development for production and control of vaccines among other applications.

Since 2008

- ▶ hiring of researchers in the areas of collections;
- ▶ organize the collections for research and routine;
- ▶ purchasing equipment;
- ▶ aid for specific event participation (Collections Symposium);
- ▶ project approval infrastructure adequacy;
- ▶ characterization of NCMO strains;

In 2010

- ▶ Policy Guidelines were established for the Biological Collections of IAL
- ▶ Rules of procedure of the Committee of biological collections of the Instituto Adolfo Lutz-CCBIAL- -19,
- ▶ Appointment of members of the Committee of biological collections of the Instituto Adolfo Lutz Curators

Biological collections committee policies – IAL

Objetives:

- ▶ Promote and perform actions which aim to ensure the guard and the quality of micro-organisms according to national and international recommendations of crop collections operation
- ▶ Collections policies deployment - IAL
- ▶ Ensure compliance with internal regulations - CBIAL
- ▶ Institutionalization of stains of interest in public health – Brazillian Resource Collection participation

Biological collections committee policies – IAL

- Monthly meetings
- Discussions about donations, products and projects related to collections
- Documents elaboration – deposit of strains

Biological collections committee policies – IAL

- ▶ Getting funding for:
- ▶ Infrastructure projects
- ▶ Authentication-related projects and incorporation of strains
- ▶ Participation in the Brazilian Resource Collection

Future works:

- ▶ Quantification of unit forming colony (UFC)
- ▶ Molecular biology for identification and characterization
- ▶ Development of new products and online catalogue
- ▶ Get together all the microbial collection of Instituto Adolfo Lutz
- ▶ Enjoy the Brazilian National Program of Biological Centre Resources

Research in NCMO

- ▶ Genotypic Characterization of strains of *Fonsecaea* spp. isolated from clinical samples of patients with Chromoblastomycosis. Studies on susceptibility and resistance to antifungals with clinical correlation.
- ▶ Studies on *Leptospira* identification and development of long time preservation.

Thank you

Elizabeth Harummy Takagi

harummy@ial.sp.gov.br

colecaoial@ial.sp.gov.br