



Fundação Oswaldo Cruz (Fiocruz)
Oswaldo Cruz Foundation

Centro de Pesquisas Gonçalo
Moniz / Gonçalo Moniz
Research Center

Fiocruz-Bahia

July, 2013



Ministério da Saúde

FIOCRUZ
Fundação Oswaldo Cruz

Oswaldo Cruz Foundation 1900 - 2013



Research

Education

Innovation and Production

Reference Services

Information and Communication

Planning and Management

History of Science and Health

STAFF: >12,000 / 1000 PHD

BUDGET: > USD 1 billion

RESEARCH: >1,500 projects

PUBLICATIONS: > 1,000 papers per year

TEACHING: >5 thousand students

PRODUCTION:

>130 million doses /vaccines

> 5 million diagnostic kits

> 4 billion medicines

The Gonçalo Moniz Research Center - CPqGM Salvador, Bahia, Brazil.

Aims at Promoting Human Health



Gonçalo Moniz Sodr  de Araç o
(GONÇALO MONIZ)

28-01-1870 / 01-06-1939



- **1957: Núcleo de Pesquisas da Bahia – NEP (Research Nucleus of Bahia)**
- **1970: Centro de Pesquisas Gonçalo Moniz – CPqGM**
- **1980: CPqGM as a Unit of Oswaldo Cruz Foundation**

Located in Salvador, 16.000m² total area, divided in 5 pavilions:

- **11 Laboratories**

- **Level III Biosafety Laboratory (Nb3)**
- **Epidemiological and Biostatistical Core**
- **3 Technological Platforms: Sequencing, Proteomic, Flow Cytometry**
- **2 Service Units: Electronic Microscopy and Histopathology**
- **Animal Facility**
- **Library**
- **Administrative Building**



Personnel

Staff scientists	35
Visiting scientists and collaborators	25
Technicians	47
Post-graduation students	209
Under-graduate students	120
Administrative personnel	43

Director: Manoel Barral Netto

Vice-Directors: Marilda Gonçalves (Research)

Patricia Veras (Teaching)

Valdeyer Reis (Management)



Mission

Produce and diffuse scientific and technological knowledge in health for the integrated development of research, teaching, information, technology and production of services, with the objective to give support to the Public Health System and contribute to a better quality of life for the population.

Aims to Promote Health

Carry out multidisciplinary research in several diseases which constitute major public health problems in Brazil

Graduate human resources in Health Sciences through *stricto sensu* post-graduation and other training programs

Supply federal, state and district government health institutions or programs with expertise, epidemiological data and/or specialized services

Main Research Areas

Molecular and Clinical Epidemiology

Immunopathogenesis to identify biomarkers

Antigens discovery with potential for diagnostic and vaccine

Bioprospection: screening of natural products for drug development

Cell Therapy

Ecological and Social Determinants of Health



Main research lines

Leishmaniasis:

- Pathogenesis
- Immunoprophylaxis
- Therapy
- Immunodiagnosis
- Epidemiology
- Identification of sub-cellular targets for therapy

Chagas' disease:

- Pathogenesis
- Therapy by autologous bone marrow transplantation
- Epidemiology
- Evaluation of new anti-parasite drugs
- Identification of sub-cellular targets for therapy

Leptospirosis:

- Molecular and Clinical Epidemiology
- Pathogenesis
- Immunodiagnosis
- Immunoprophylaxis



SPF Animal Facility

Main research lines

Schistosomiasis:

Molecular and Clinical Epidemiology
Immunopathogenesis
Pathogenesis

HIV- and HTLV-related diseases:

Molecular and clinical epidemiology
Immunity
Pathogenesis

Virus C hepatitis:

Molecular and clinical epidemiology
Immunopathogenesis
Validation and development of molecular tests for diagnosis and genotyping
Histopathology

Bacterial and viral meningitis:

Molecular and clinical epidemiology
Validation and development of molecular tests for diagnosis and genotyping



Advanced Laboratory of Public Health

Main research lines

Sickle cell anaemia:

Molecular and Clinical Epidemiology
Immunopathogenesis

Tuberculosis:

Molecular and Clinical Epidemiology
Immunopathogenesis

Bioprospection: screening of natural products for drug development

Bacterial urinary infection: molecular epidemiology

Giardiasis: identification of sub-cellular targets for therapy

Amebiasis: identification of sub-cellular targets for therapy

Trichomoniasis: identification of sub-cellular targets for therapy



Library Building

Masters and PhD Programs

1- Human & Experimental Pathology

In collaboration with the Federal University of Bahia

2- Biotechnology in Health & Investigative Medicine

Scientific Initiation:
Undergraduate Research Program



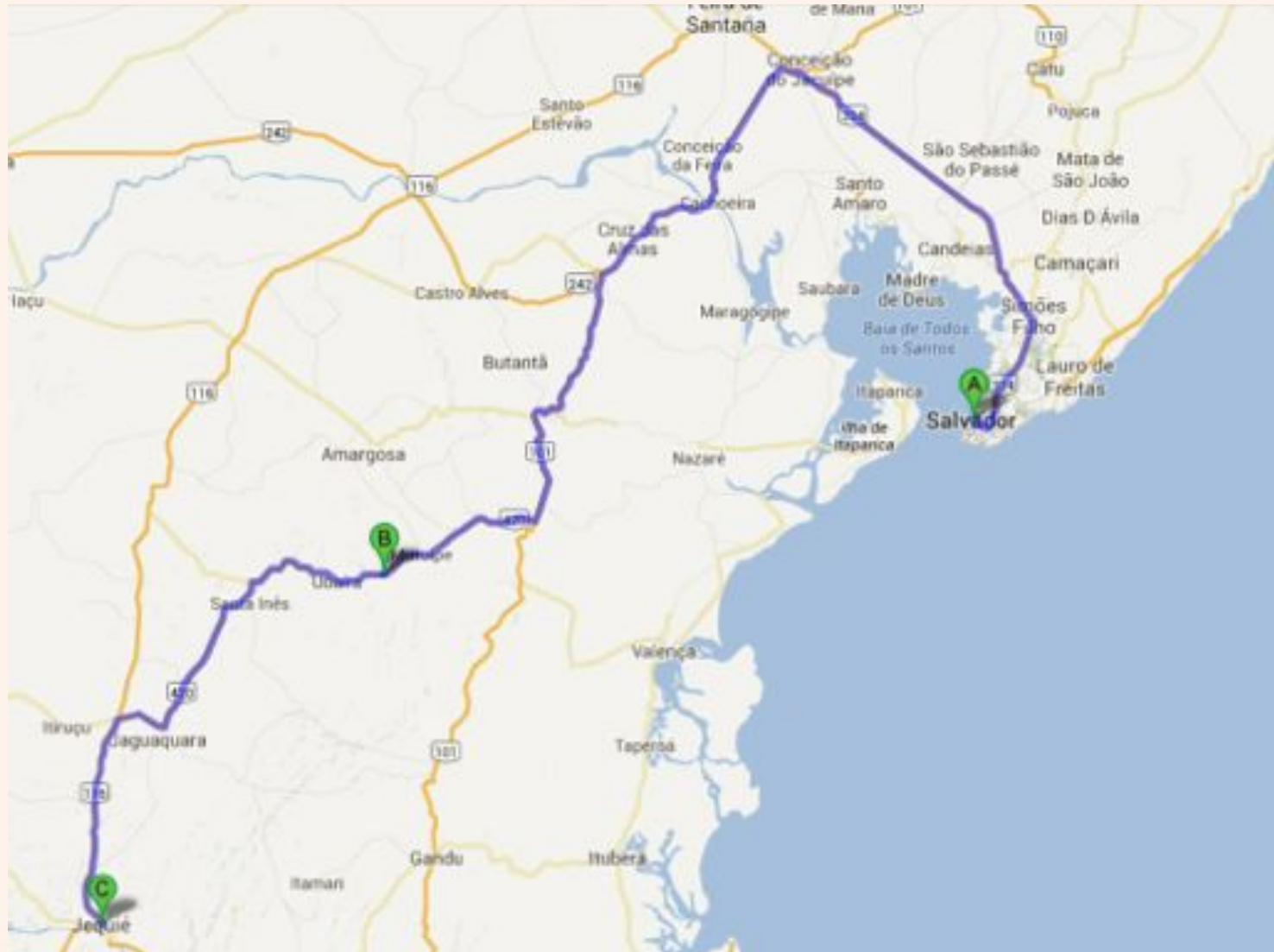
Library

Field Site Facilities

A- Salvador

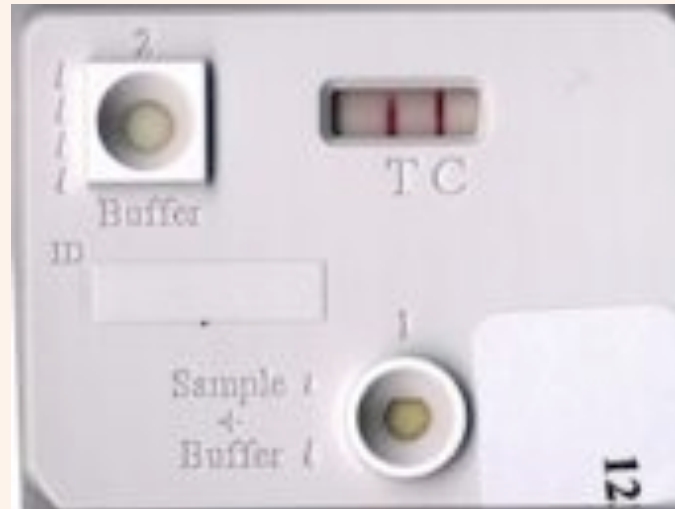
B- Jequiçá

C- Jequié



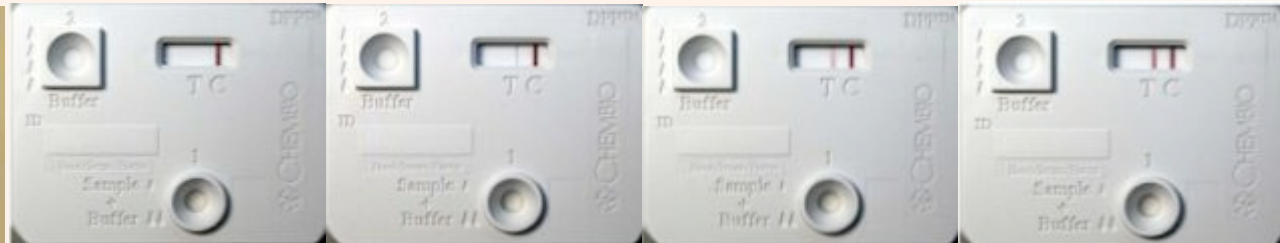
Recent Products

Test for Diagnosis of Leptospirosis



A

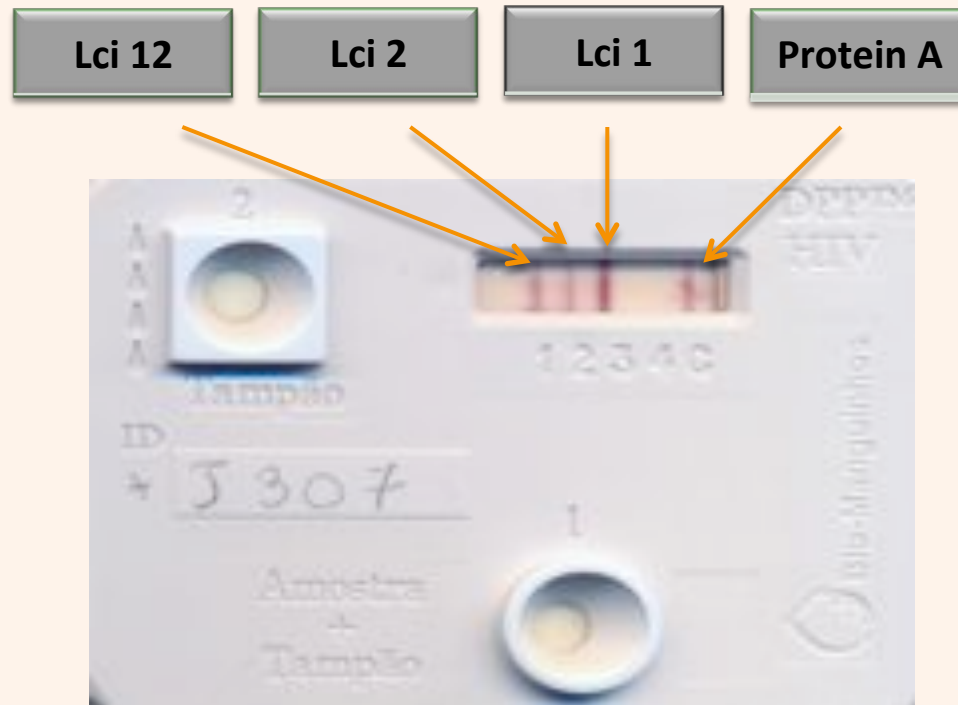
B



Score visual:		1+	2+	3+
Leitor manual:		3-20 U	21-40 U	>40 U

Recent Products

*Development of Rapid Test Multi-antigens for serodiagnosis
 Canine Visceral Leishmaniasis*



Recent Products

Development of vaccines based on the products of saliva *L. longipalpis* against leishmaniasis in dogs

Experimental Approach

Day 0

250µg IM

G1 - pNBO003 (LJM17) –salivary protein

G 2 - pNBO002 (LJL143) – salivary protein

G 3 - pNBO002 (LJL143) + pNBO003 (LJM17)

G4 - Saline

107 promastigotes
L. chagasi + SGS (5 pairs)
→ 100 µL



Day 28 and 42

108 of *Canarypoxvirus* IM

G1 - LJM17 (vCP2390) –salivary protein

G 2 - LJL143 (vCP2389) –salivary protein.

G 3 - LJL143 (vCP2389) + LJM17 (vCP2390)

G4 - Saline

40 Beagles ♂, ♀
10/group



ELISA: IgG anti-salivary proteins, anti-leish,
Citokynes, RT PCR – Parasite load