



**CENTRE HOSPITALIER UNIVERSITAIRE  
UNIVERSITY TEACHING HOSPITAL**

**DEPARTMENT OF MEDICAL BIOLOGY CHUB**

Information for the customers of the  
Laboratory of Butare University Teaching Hospital

**July 2013**

Welcome to the Clinical Department of Medical Biology of Butare University Teaching Hospital. The following information is intended to patients seeking laboratory services at CHUB laboratory, physicians at CHUB and other hospitals in the country, healthcare facilities referring patients, higher education institutions placing their students in clerkship, researchers and research institutions wishing to carry out laboratory tests at CHUB laboratory and all programmes that may need clinical laboratory services.

The Department of Medical Biology of Butare University Teaching Hospital has embarked in a quality improvement programme, in line with national initiatives and African Regional WHO Office guidelines. We have designed a quality Management System to strengthen the respect of our values and support the achievement of our mission and the attainment of our vision, for the benefit of our customers, thus contributing to the objectives of the Rwandan healthcare system, in line with the Economic Development and Poverty Reduction Strategy (EDPRS), the vision 2020 and the Millennium Development Goals. Our vision, mission, objectives, values and spectrum of activities are as follows:

**Vision:** To attain national, regional and international highest standards of clinical, teaching and research laboratory.

**Mission:** To provide comprehensive and high quality referral laboratory services, for clinical, teaching, research and supervision purposes.

**Objectives:** The objectives of the Department of Medical Biology CHUB are:

1. To meet the needs of clinical laboratory services of Butare University Teaching Hospital and other hospitals in the country;

2. To meet the needs for laboratory training of medical, laboratory, pharmacy and other allied health sciences university students;
3. To meet the needs of graduate and postgraduate research and collaborative research;
4. To meet the needs of the Ministry of Health and other stakeholders operating in the healthcare services;
5. To meet the requirements of the national standards and international standards, particularly those of the World Health Organization;
6. To meet the needs of supervision of laboratories in district hospitals;
7. To upgrade medical and laboratory practice at Butare University Teaching Hospital.

**Values:** The Department of Medical Biology of Butare University Teaching Hospital guarantees laboratory services characterized by:

- Accurate test results;
- Timely result communication;
- Customer Satisfaction.

## **Activities carried out by the laboratory**

The Laboratory of Butare University Teaching Hospital is a 24 h laboratory. Urgent clinical laboratory tests can be ordered after working hours, during night, week-end and holiday duties. We are determined to meet or exceed the expectations of our customers for clinical laboratory. Our activities comprise:

**1. Clinical laboratory services** in the services of Anatomical Pathology, Bacteriology, Biochemistry, Genetics, Hematology, Immuno-serology, Parasitology and Molecular Biology.

### **2. Research**

- Laboratory doctoral Research for PhD students on sandwich programmes
- Collaborative research through international partnership
- Final year research for NUR students from the Faculty of Medicine and from the Faculty of Science doing their memoir research in the laboratory.

### **3. Practical laboratory training**

Supervision of clerkship is done in the laboratory for medical students (NUR), students in pharmacy (NUR), and students in laboratory (KHI).

### **4. Supervision of district hospital laboratories.**

Regular visits are done in district hospitals to supervise their laboratories, in the framework of CHUB activities or in partnership with the National Reference Laboratory.

## **Staffing and scope of activities per service**

1. **Head of the Clinical Department of Medical Biology CHUB:** Prof. Dr Jean Bosco Gahutu, MD, PhD in Medical Sciences (Physiology), FHEA (UK); Phone: 0783340040; E-mail: [jgahutu@nur.ac.rw](mailto:jgahutu@nur.ac.rw)
2. **Deputy Head of the Clinical Department of Medical Biology and Laboratory Manager CHUB:** Dr Claude Bayingana, BSc, MSc, PhD in Microbiology; Phone: 0782896940; E-mail: [cbayingana@nur.ac.rw](mailto:cbayingana@nur.ac.rw)
3. **Laboratory Quality Manager:** Jean Marie Vianney Ngendakabaniga, A0 Laboratory Technologist
4. **Laboratory Safety Officer:** Jean Damascene Buregeya, A0 Laboratory Technologist
5. **Laboratory Store Manager:** Faustin Hakizimana, A0 Laboratory Technologist
6. **Laboratory Secretary:** Marie Rose Mushimiyimana, A0 Computer Science, A2 Secretariat

## 7. Service of Anatomical Pathology

*Head of Service:* Dr Ssendikadiwa Bwogi Emmy, MBChB, MMed in Anatomical Pathology

*In Charge of the Service:* Vestine Tuyizere, A1 Laboratory Technician.

*Laboratory Technologists and Technicians:*

Vincent Ngirinshuti, A0 Laboratory Technologist,

Jimmy Wilson Tuyishime, A0 Laboratory Technologist

JMV Nshimiyemungu, A1 Laboratory Technician

*Secretary:* Cassilde Mukamugema, A2 Secretary

*Available Laboratory Tests:*

- Biopsies
- Fine Needle Aspiration
- Cytomorphology
- Autopsy

## 8. Service of Molecular Biology

*Head of service:* Dr Claude Bayingana, BSc, MSc, PhD in Microbiology

*In Charge of the HIV unit:* Felix Habarugira, A0 laboratory Technologist

*Laboratory Technologists, HIV unit:*

Francisco Bacon Benimana, A0 Laboratory Technologist

Alphonse Nshimiyimana, A0 Laboratory Technologist

Jacques Niyonzima, A0 Laboratory Technologist

*Available laboratory tests:* HIV viral load

Dry blood spot (HIV Early Infant Diagnosis)

*In Charge of the TB unit:* Jean Damascene Buregeya, A0 Laboratory Technologist

*Laboratory Technologists, TB unit:*

Felicien Bizimana, A0 Laboratory Technologist

Illuminee Musanganfura, A0 Technologist

*Available laboratory tests:* Multidrug-resistant tuberculosis diagnosis

TB culture on solid (Lowenstein-Jensen) and liquid media

TB Drug sensitivity test

Ziehl-Neelsen Stain

## **9. Service of Genetics**

*Head of Service:* Dr Annette Uwineza, MD, in PhD training (Genetics)

*In Charge of the Service:* Janvier Ndinkabandi, A1 Laboratory Technician

*Laboratory Technician:* Seraphine Murorunkwere, A1 Laboratory Technician

*Available laboratory tests:*

Caryotype

DNA Extraction

## **10. Service of Bacteriology**

*Head of service:* Dr Claude Bayingana, BSc, MSc, PhD in Microbiology

*In Charge of the Service:* Jean Damascene Buregeya, A0 Laboratory Technologist

*Laboratory Technologists and Technicians:*

Alain Iradukunda Mahoro, A0 Laboratory Technologist

Chantal Umubyeyi, A1 Laboratory Technician

Nadine Safi, A1 Laboratory Technician

Jean Ntawizigira, A1 Laboratory Technician

Beatrice Kagwesage, A2 Laboratory Technician in A1 upgrading

*Available laboratory tests:*

- Blood sample: Hemoculture
- Urine sample: Urinalysis: cytobacteriological examination of urine
- Vaginal Swab: Cytobacteriological examination
- Stool sample: Coproculture
- Sputum: Cytobacteriological examination of sputum
- Cerebrospinal fluid and Effusion fluids (pleural fluid, ascites...)
  - Cytobacteriological examination
  - Indian ink
- Pus swab: Cytobacteriological examination, culture
- Throat swab: Cytobacteriological examination
- Others: culture

## **11. Service of Biochemistry**

*Head of service:* Jean Claude Mugisha, BSc, MSc in Biochemistry

*In Charge of the Service:* Valens Karenzi, A0 Laboratory Technologist

*Laboratory Technologists and Technicians:*

Innocent Sangwa, A0 Laboratory Technologist

Gervais Twagiramungu, A0 Laboratory Technologist

Jean Marie Mpongo, A1 Laboratory Technician

David Ilunga, A1 Laboratory Technician

Thaddee Mushengezi, A1 Laboratory Technician

*Available laboratory tests:*

*Blood sample:* Glucose, Glycosylated Hb A1c, Urea, Creatinine, Uric acid, LDH, CPK, Total acid phosphatase, Prostatic acid phosphatase, CKMB, Lipase, Amylase, Total protein, Albumin, Globulins, Albumin/Globulin Ratio, Triglycerides, Total Lipids, Total cholesterol, Cholesterol esters, phospholipids, LDL Cholesterol, HDL Cholesterol, Ferritin, Transferrin, Serum iron, TIBC, Calcium, Sodium, Potassium, Chloride, Phosphorus, Magnesium, Lithium, Total Bilirubin, Direct Bilirubin, Indirect Bilirubin, ALT (GPT), AST (GOT), Gamma GT, Protein Electrophoresis, Hb Electrophoresis.

*Arterial blood sample:* Blood Gas Analysis: pH, PCO<sub>2</sub>, PO<sub>2</sub>, O<sub>2</sub> Sat., Bicarbonate, Base Excess

*Body and Effusion Fluids (CSF, Pleural effusion, ascites...):* Protein, Glucose, Chloride, Pandy, Rivalta, LDH, Albumin

*Urine:* Qualitative protein test, Quantitative 24 hour protein test, One micturition quantitative protein test, Qualitative glucosuria, Quantitative glucosuria, Ketone bodies, Bilirubinuria, Urobilinuria, Urobilinogen, Bile salts, pH, Density, Amylase, Total Estrogen, 17-ketosteroids, 17-OHsteroids, Sodium, Potassium, Calcium, Phosphorus, Urate, Urea, Creatinine.

## **12. Service of Hematology**

*Head of service:* Dr Florence Masaisa, MD, MMed Internal Medicine, PhD in Medical Sciences (Hematology)

*In Charge of the Service:* Valens Karenzi, A0 Laboratory Technologist

*Laboratory Technicians:*

Janvier Bizimana, A1 Laboratory Technician

Jean Bosco Sibomana, A1 Laboratory Technician

Marcelline Akizanye, A1 Laboratory Technician

*Available laboratory tests:*

*Blood sample:* Full Blood Count (Complete Blood Count & Leukocyte Differential Count)

Erythrocyte Sedimentation Rate

Peripheral Blood Film.

*Hemostasis:* Activated partial thromboplastin time (APTT), Fibrinogen, Prothrombin time, Thrombin time, Bleeding time, Clotting time, Sickle cell test.

*Myelogramme*

*Spermogramme*

*Cytology of fluids:*

- Pleural effusion
- Articular fluids
- Cerebrospinal fluid (CSF)

### **13. Service of Immuno-Serology**

*Head of service:* Dr Nadine Rujeni, BSc, PhD (Immunology)

*In Charge of the Service:* Vincent Muhayimana, A1 Laboratory Technician

*Laboratory Technologists and Technicians:*

Vedaste Kubwimana, A0 Laboratory Technologist

Alexis Kamanzi, A1 Laboratory Technician

Jean Pierre Munyanziza, A1 Laboratory Technician

Christine Nyirabirori, A1 Laboratory Technician

Celestin Mbarushimana, A2 Laboratory Technician in A1 upgrading.

*Available laboratory tests:*

*CD4 count*

*Blood transfusion:* ABO and Rhesus Blood Grouping; Compatibility Test

*Viral Serology*

Hepatitis B: HBs Ag, Anti-HBs Ab, Anti-HBc Ab, Anti-HBe Ab

Hepatitis C: Anti-HCV Ab

Rubella: IgM, IgG

Infectious Mononucleosis test

*Bacterial serology*

Syphilis: VDRL/RPR, TPHA

Streptococci: ASLO

Typhoid Fever: Widal-Felix

Helicobacter pylori: IgG, IgA

Brucellosis

*Autoimmune disease serology*

- Rheumatoid factor
- Waaler-Rose

*Inflammatory serology:* CRP

*Parasitic serology:* Total IgE

Toxoplasmosis: IgM, IgG

*Fungal serology:* Cryptococcal Ag

*Hormonal assays:* FSH, LH, Progesterone, Estradiol, Prolactin, Testosterone, T3, T4, TSH, hCG.

*Other tests:*

Alpha-fetoprotein

Prostatic Specific Antigen

Pregnancy test

## **14. Service of Parasitology**

*Head of service:* Dr Nadine Rujeni, BSc, PhD (Immunology)

*In Charge of the Service:* Jean Damascene Buregeya, A0 laboratory Technologist

*Laboratory Technologists and Technicians:*

Clarisse Mukashyaka, A0 Laboratory Technologist

Olivier Icyishatse, A0 Laboratory Technologist

Rachel Nyirahakizimana, A1 Laboratory Technician

Theogene Bahizi, A2 Laboratory Technician in A1 upgrading

*Available laboratory tests:*

*Blood Sample:*

Thick/thin smear

Wet preparation (search for Filaria)

*Stool sample:*

- Wet preparation (direct examination)
- Stool Concentration
- Ziehl-Neelsen modified stain (search for cryptosporidium)

We look forward to fruitful collaboration with all stakeholders for the benefit of the patients.

Huye, July 2013

**Prof. Dr Jean Bosco Gahutu**, Head of the Clinical Department of Medical Biology CHUB