



Integrated Biorepository of H3Africa in Uganda

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Overall goal

To develop a state- of-the-art world class
biorepository

- Well annotated quality assured biospecimens (ISBER)
- Available to African & International researchers

*Enhance genomic discovery projects as it relates to Africa and
beyond*



Specific aims

Phase I

- ✓ Build organizational structure
- ✓ Train human resource
- ✓ Improve existing infrastructure
- ✓ Develop protocols
- ± Pilot-test above frame-work

Phase II

- Renovations and alterations to the existing infrastructure
- ✓ Expand human capacity through further training
- Scale up to handle 400,000 samples by end of 2019



Progress so far



Progress - Governance & organization structure

**H3Africa Consortium Governance Structures e.g. DBAC,
Biorepository Consultants, ELSI**

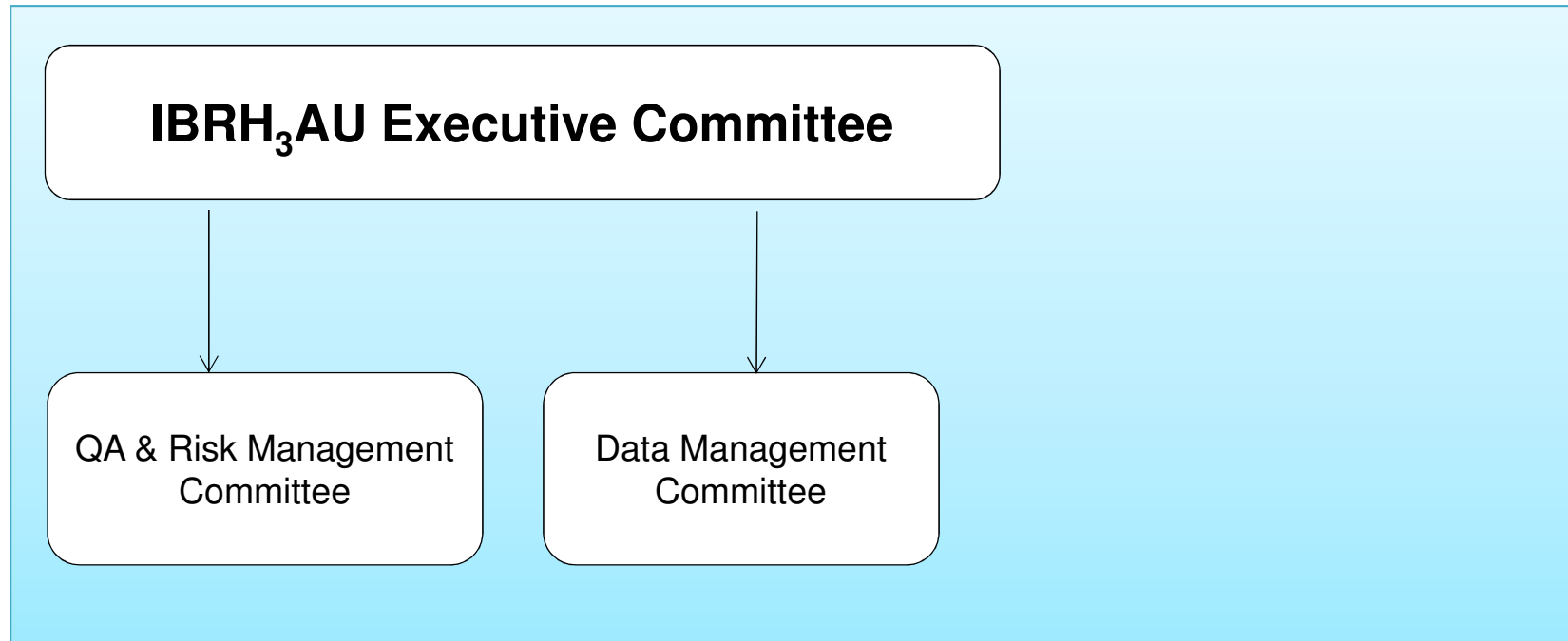


Figure 1. Shows the revised Governance structure of the IBRH₃AU

Regulatory: National approval



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

RECLEAR/01

1st November 2013

Professor Moses Joloba
Chair, Department of Medical Microbiology &
Principal Investigator, Integrated Biorepository of H3Africa Uganda
College of Health Sciences, Makerere University
KAMPALA

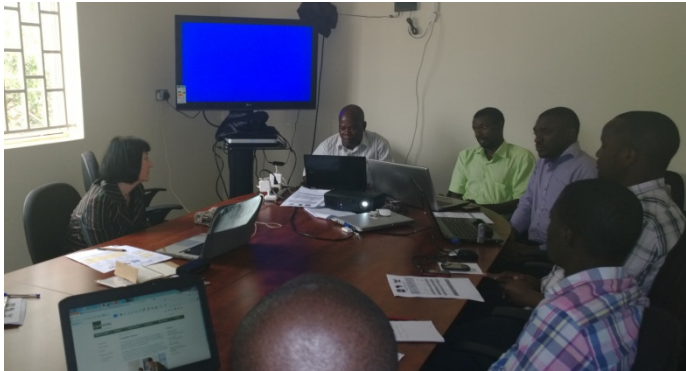
Dear Professor Joloba,

**Re: Establishment of an Integrated Bio-repository at the College of Health Sciences,
Makerere University**

I am pleased to inform you that Uganda National Council for Science and Technology (UNCST) has no objection to your proposal to establish an Integrated Bio-repository at the College of Health Sciences, Makerere University. UNCST believes the proposed bio-repository will enable the country and the region to develop capability for advanced genomics and other related areas of research and development.



Progress - Management and science training



IBRH₃AU url is live

IBRH₃AU Integrated Biorepository H3Africa Uganda

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- OUR MANAGEMENT

Welcome to IBRH₃AU Biorepository

IBRH₃AU is an intergrated biorespository under the H₃Africa Biorespository Initiative located at Makerere University College of Health Sciences (MakCHS) a Center of Academic Excellence, Health Care and Collaborative Research. MakCHS was historically established as an informal paramedical teaching center within Mulago National Referral & Teaching Hospital in the late 1890's by Sir Albert Cook, it has evolved into a constituent college. Today, MakCHS boasts of conducting some of the most relevant and high-impact research in infectious and

IBRH₃AU Director/PI

Progress – Infrastructure improvement



Progress – Standardization of operations



Response Analysis for the ISBER Self-Assessment Tool (SAT)

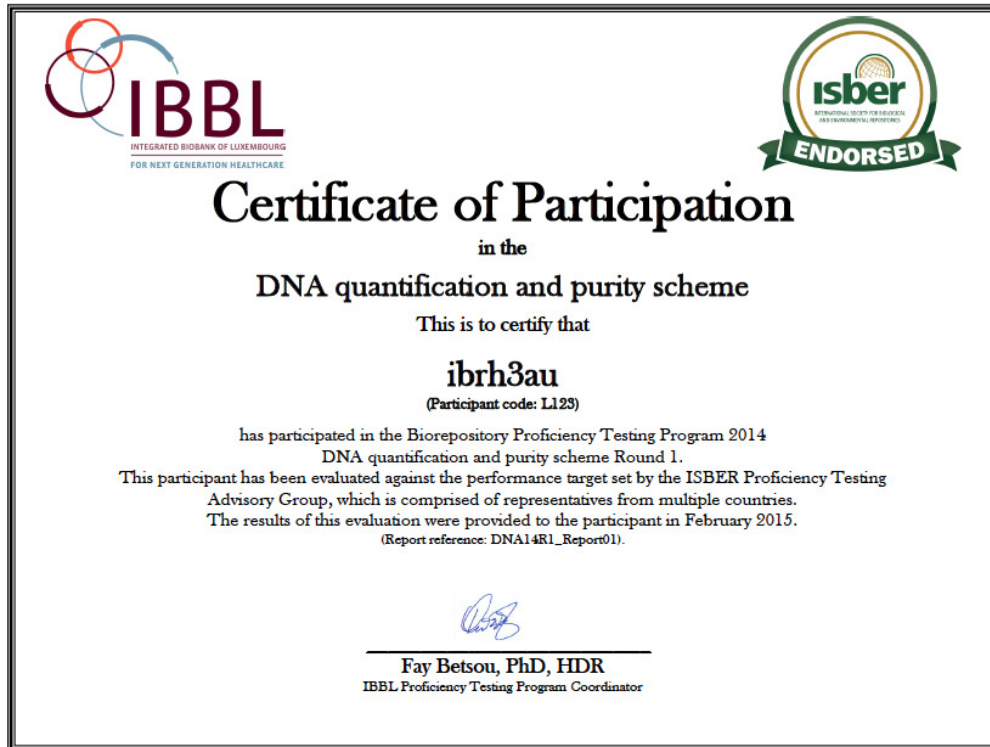
January 21, 2014

Dear Integrated Biorepository of H3Africa Uganda,

Your risk-balanced assessment score is **86.7%** (for reference, a perfect score is 100%). Questions which you indicated as Not Applicable are not taken into account in your score calculation.



Progress – QMS & EQA



DNA Extraction from Whole Blood

This is to certify that

ibrh3au

(Participant code: L123)

DNA quantification and purity scheme

This is to certify that

ibrh3au

(Participant code: L123)

RNA Integrity Scheme

This is to certify that

ibrh3au

(Participant code: L123)

Cell Viability Scheme

This is to certify that

ibrh3au

(Participant code: L123)

RNA Extraction from Whole Blood

This is to certify that

ibrh3au

(Participant code: L123)



Progress – Feasibility & Pilot studies



- Courier – World Courier, DHL
- Turn around time 3-7 days
- Controlled ambient temperature and Dry ice was successfully delivered
- Refrigerated shipments were problematic with both couriers
- Use of preconditioned shipping boxes offered better alternative
- DNA quality uneven



Progress – Feasibility & Pilot studies

CAfGEN-Retr-UGR0373-104899-PBMC-15SEP2014-13:00-F-16

①

②

③

④

⑤

⑥

⑦

⑧

1. Protocol/study name
2. Study Type
3. Participant ID Number
4. Unique Sample Identification (auto-generated)
5. Aliquot Type
6. Date and Time collected
7. Gender of participant
8. Age of participant



Next Steps

- Pilot study with real biological samples – starts June 2015
- University of Luxembourg Certificate Principles of Biobanking – June 6 - July 1 2015
- Complete the alterations and renovations – end of July 2015
- Equipping the biorepository – by end of Oct 2015
- Full scale operations – Oct 2015

Barriers

- Limited local expertise in biorepository management and science; **reason we are training**
- Lack of institutional and national framework for biorepositories; **reason we are engaging UNCST**
- Limited availability of infrastructure and equipment; **reason we are building**
- Ethics, legal and regulatory issues; **suprisingly we have national approval to operate.**





Thank You !!!

