



12  
The Journey

21  
Major Achievements

17  
Research Management

34  
UNCST Current programmes

# RESEARCH REGISTRATION AND CLEARANCE

**THREE  
SIMPLE  
STEPS**



- 1** Submit a protocol to a local Research Ethics Committee (REC)/ Institutional Animal Care and Use Committees (IACUCs)/Uganda Wildlife Authority (UWA)/National Forestry Authority (NFA)/ National Biosafety Committee (NBC) for scientific assessment and ethical approval. Submit to a selected REC or IACUC through: <https://nrims.uncst.go.ug/> . Accredited RECs are listed here: <https://www.uncst.go.ug/research-ethics-committee-accreditation/>



- 2** After securing ethical approval, the Principal Investigator (PI) should complete the application process at <https://research.uncst.go.ug/>. Please attach the following documents along with your application:
1. Letter of introduction/recommendation from the organization of affiliation in Uganda (for foreign investigators only). The letter should mention the names of the foreign investigators and it should be addressed to the Executive Secretary, UNCST.
  2. An administrative clearance letter from the head of the organization where the research is going to be conducted. This should be addressed to the PI or Executive Secretary, UNCST.
  3. Admission letter for academic research (this applies to only East African students)
  4. CVs for each investigator on the study team. The CVs should be dated and signed or initialed on each page.
- 3** Once the study is approved, you will be prompted to make research administration and clearance fees for the study.

Amount:	<b>300 US Dollars or 50 US dollars for East African Students (except those pursuing post doc)</b>
Bank:	<b>Any Standard Chartered Bank</b>
Account title:	<b>Uganda National Council for Science and Technology (UNCST)</b>
Account Numbers:	<b>8705611811400 (US Dollar account) 0105610632101 (Uganda shillings account) use the prevailing bank rate</b>
Swift Code:	<b>SCBLUGKA</b>

# Contents

01

FACTS AND FIGURES

03

FOREWORD FROM THE CHAIRPERSON

04

PROFILE OF THE GOVERNING COUNCIL

10

MESSAGE FROM THE EXECUTIVE SECRETARY

11

SENIOR MANAGEMENT

12

THE JOURNEY

15

THE EXECUTIVE SECRETARIES

17

RESEARCH MANAGEMENT

19

EXIT INTERVIEW

21

MAJOR ACHIEVEMENTS

30

INTERVIEW WITH THE FIRST EXECUTIVE SECRETARY

34

UNCST CURRENT PROGRAMMES

52

THROUGH THE MEMORY OF THE LONGEST-SERVING EMPLOYEES



## PUBLISHER

This is a publication of:  
Uganda National Council for Science  
and Technology,  
Plot 6, Kimera Road, Ntinda,  
P.O. Box 6884, Kampala – Uganda.

**Tel:** +256 414 705 500

**E-mail:** info@uncst.go.ug

**Facebook:** UNCST

**Twitter:** UNCST\_Uganda

### EDITORIAL TEAM

1. Mr. Edward Tujunirwe
2. Ms. Deborah Kasule
3. Ms. Loi Namugenyi
4. Mr. Collins Tumusiime
5. Mr. Karl Raymond Kaddu

### CONTRIBUTORS

1. Mr. Karl Raymond Kaddu
2. Ms. Linda Amanyi
3. Ms. Prospero Grace Lonyo Ocheng

### LAYOUT & DESIGN

Icon D Studios

### IMAGES

Internet(unsplash.com) & courtsey.

## FROM THE EDITOR



We are delighted to present to you our souvenir magazine - "UNCST at 30".

The 30 years have been an incredible journey of feats and challenges, it is, therefore, gratifying to observe the Council grow from a department in the Office of the President in 1970, later moving to the Ministry of Planning, to an authority it is today on matters of science and technology. In this magazine, we take you down memory lane with a historical account leading to where we are today. Why the Council exists, and the achievements attained over the years and what we are working on.

The Governing Council Chairperson and the Executive Secretary give highlights of strategies the Council is to work on during the next five years. Get to know the leadership of UNCST.

Find exciting interviews with the first substantive Executive Secretary – Prof. Dr. Zerubabel M. Nyiira and an exit interview with immediate Executive Secretary – Dr. Peter Ndemere. The longest-serving employees also have some tales to tell.

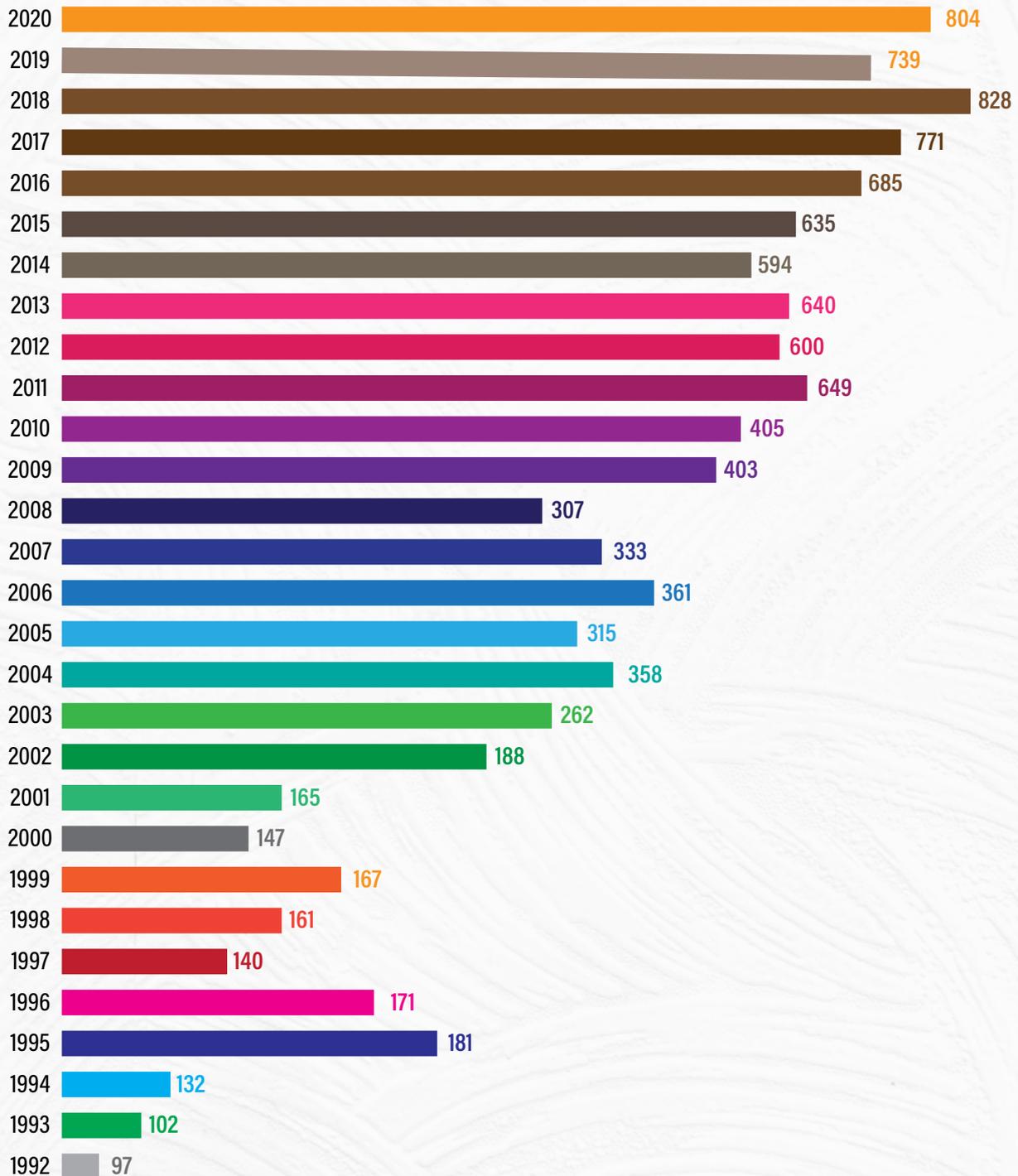
UNCST has registered milestones in the last 30 years but not without challenges. Our flagship service – Research clearance and registration has undergone a complete overhaul and had the entire process digitized in the last five years. This has improved turnaround time and continues to attract more investment in research. You will discover interesting trends.

Over the last three decades, UNCST has been at the forefront of supporting innovation through different programmes. Get the highlights of the beneficiaries. We are greatly indebted to our partners and stakeholders with whom we have made this 30-years journey. We look forward to healthier partnerships.

**Karl Raymond Kaddu**  
Science Officer (Communications)

# Facts and Figures

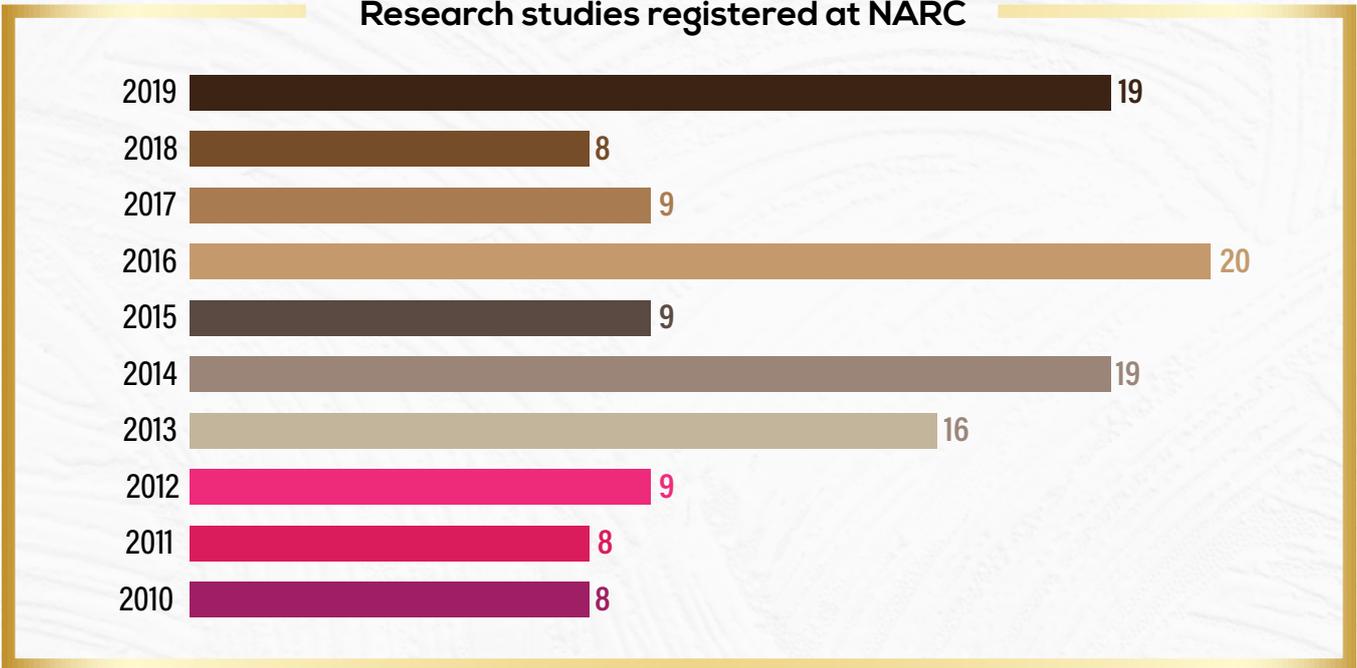
Trends in issuance of Research Permits by UNCST 1992 to 2020



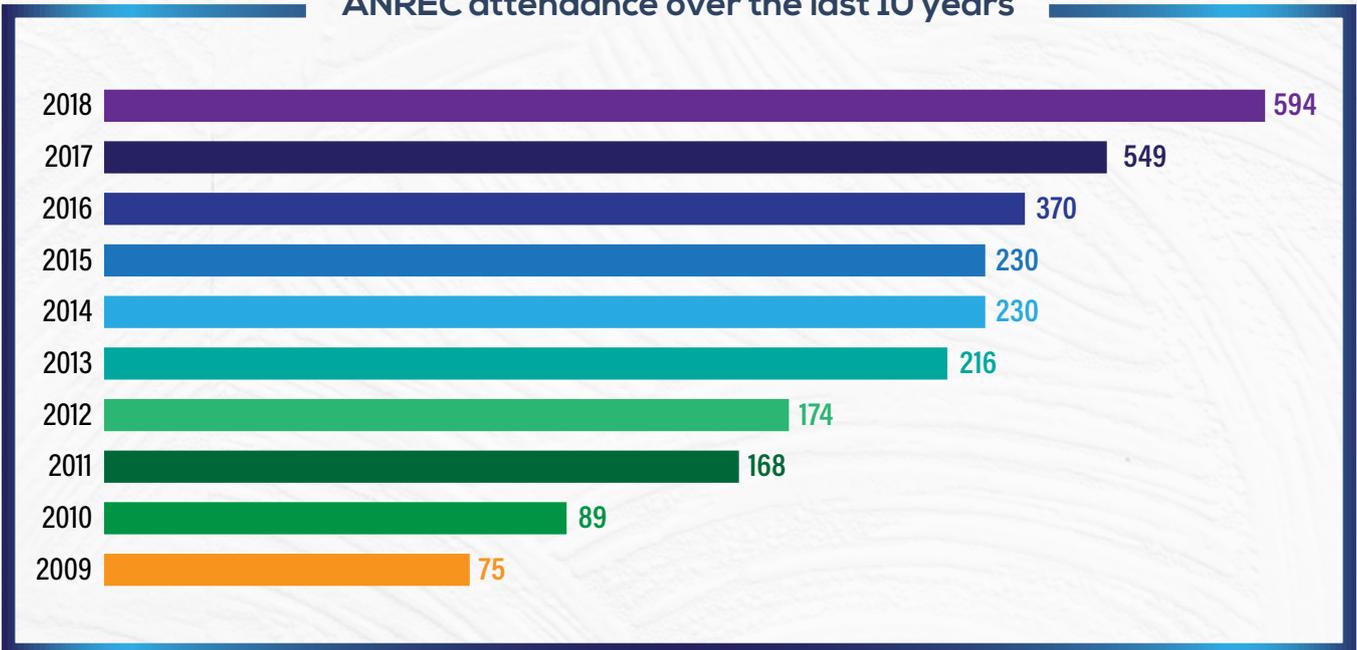


Annually, more than 500 foreign nationals come to Uganda to do research, bringing with them average research investments of approximately USD 12 million. This contributes to infrastructure development, human resource capacity building, and an estimated 50,000 research-related jobs every year.

**Research studies registered at NARC**



**ANREC attendance over the last 10 years**





# Foreword from the Chairperson

I congratulate the management, staff, and all stakeholders upon accomplishing 30 of incorporating science and technology in the national development process.

The Council marks the pearl anniversary on a strong foundation upon which more robust institutional programmes are to be built and make headway in transforming Uganda into a prosperous science and technology-led society in line with the National Strategic Plan III and Vision 2040.

On behalf of the Governing Council, I extended sincere appreciation to Management, present and past staff, the Government of the Republic of Uganda, and numerous stakeholders for the relentless commitment and support to the Council over the years.

For the last many years, the Council has positioned itself as a regional centre of excellence and has been at the frontline of galvanizing science and technology innovation through several programmes, for instance, the Presidential Support to Scientists, Millennium Science Initiative, National Science, Technology, and Innovation Programme, etc. Although we have attained milestones, along the way the journey has been one with many challenges. Going forward, therefore, as bask in the 30-years celebrations, we are cognizant of the fact that we can do better.

The Governing Council is committed to diligently perform her oversight role and provide strategic guidance on strategy. Accordingly, the Council has mapped out a medium-term strategic direction for the Uganda National Council for Science and Technology. The 2020/2021 – 2024/2025 strategic interventions will bolster the Council's position as an authority on science and technology in Uganda.

Building on the achievements and challenges the Council has identified nine priority areas to include support to technology management in Uganda, establishing STI infrastructure that supports national development and undertake scientific and developmental research on new and emerging technologies, etc.

The Council is to continue providing innovative programmes that resonate needs of our time as espoused in our mandate.

The Governing Council is committed to initiating and strengthen partnerships with all stakeholders including employees, Ministries Departments and Agencies, regional, and continental, and international organizations.

For God and My Country.

**Dr. Sengooba Theresa**  
*Governing Council Chairperson*  
*Uganda National Council for Science and Technology*

# Governing Council Chairpersons

1990



To Date

01



**Professor Herbert S. Kanabi Nsubuga (RIP),** Chairperson, First Governing Council

02



**Professor John P. M. L. Ssebuwufu –** Chairperson, Second and Third Governing Councils

03



**Dr. Theresa Sengooba –** Chairperson, Forth Governing Council



# Profile of the Governing Council

The Governing Council (Council) is the top-most decision-making organ of the Uganda National Council for Science and Technology. The Council oversees UNCST Secretariat, provides over direction on UNCST's strategic matter, evaluates and approves senior management decisions. Guided by the first schedule of the UNCST ACT, members of the Council are drawn from diverse backgrounds in academia, research, industry, and policy. Here is a nine-member team.

01



**Dr. Theresa Sengooba**  
CHAIRPERSON

Dr. Theresa Sengooba is a veteran agricultural scientist with a wealth of experience in research and administration. Until recently she was the Coordinator of the Program for Biosafety System for Uganda and East Africa (PBS). PBS supports partner countries in Africa and Asia in the responsible development and use of biotechnology.

She previously worked at the National Agricultural Research as a Research Scientist/Plant Pathologist and served as NARO's Deputy Director-General. She has also served as a Member of the Board of Trustees for the International Plant Genetic Resources Institute (IPGRI).

Dr. Sengooba was also the Chairperson of the Technical Committee of the Uganda Millennium Science Initiative, one of the biggest science, technology, and innovation (STI) capacity improvement initiatives in Uganda's history.

Dr. Theresa Sengooba holds a Ph.D. in Plant Virology from SUA University, United Republic of Tanzania; and Master of Science Degree in Plant Pathology and a Bachelor of Science in Botany and Zoology from Makerere University.

02



**Prof. George William  
Byarugaba Bazirake**  
DEPUTY CHAIRPERSON

Professor George Bazirake is a distinguished academic and entrepreneur. He is the current Dean, Faculty of Science, Senior Lecturer in Food Technology at Kyambogo University

He was awarded Patent for Technology of Enzymatic Inactivation /Vacuum Sealing Fresh Bananas. He currently exports freshly peeled bananas to the United States of America.

Prof. Bazirake wields over 20 years of experience in teaching, research, and mentoring youths at various levels, having taught at St Mary's College, Kisubi; Uganda Polytechnic Kyambogo, and Kyambogo University.

Prof. Bazirake holds a Ph.D. in Food Biotechnology from Stellenbosch University, South Africa; MSc in Food Technology from Kuban State University, Russia.

03



**Mr. Daniel Musiitwa Ssubi**  
EX-OFFICIO MEMBER

Mr. Daniel Musiitwa was the National Chairman of Uganda Small Scale Industries Association (USSIA). USSIA is a registered membership organization with the major purpose of enhancing the industrial development of small-scale industries in Uganda.

and chemistry at various secondary schools in Uganda; he was also a technical/ Vocational Instructor at Uganda Technical College Bushenyi. He has also worked as a Production Technician at Uganda Cement Industries Hima. He has also participated in salt exploration, mining, marketing, and identification of salt processing technologies in Uganda. Mr. Musiitwa has also served as the President of the Rotary Club of Iganga District 9200 Rotary International.

Mr. Musiitwa's expertise includes managing successful organizations in the promotion and development of micro, small, and medium-scale value addition industries, and supportive service enterprises as the engine of growth.

Mr. Musiitwa holds a Diploma in Industrial Ceramics from Uganda Polytechnic, Kyambogo and he is a Registered Engineering Technician (United Kingdom).

Mr. Musiitwa is the proprietor of Kaliro Ceramics Works Company Limited. He has previously taught physics

04



**Professor Samuel Baker  
Kucel**  
EX-OFFICIO MEMBER

Professor Samuel Baker Kucel is the First Deputy Vice Chancellor for Academic Affairs and Research at Busitema University. He holds a Ph.D. in Mechanical Engineering (Energetics) from the University of Udine (2002, Italy), a Master of Engineering Science degree in Mechanical Engineering from the University of New South Wales, Australia, and a Bachelor's degree (1st Class Honours) in Mechanical Engineering from Makerere University, Uganda.

Professor Kucel has strong Industrial and Consulting experience, especially in the areas of Mechanical Systems Conceptualization, Design, Manufacture, Operation, and Maintenance. He has also been involved with various Energy Efficiency Projects, Environmental and Social Impact Assessments, and Clean Development Mechanism (CDM) consultancies and assignments both in Uganda and abroad.

He has vast experience in University Lecturing/ Teaching, mentoring, and coaching at both graduate and undergraduate levels, research, administration, Outreach, and Writing/ Formulating new Academic Programmes.

05



**Prof. Joseph Y. T. Mugisha**

Prof. Joseph Y. T. Mugisha is a seasoned academician and administrator with over 30 years of experience. He is the Principal of the College of Natural Sciences (CoNAS), a constituent college of Makerere University. A position he was appointed to in 2013. He holds a Ph.D. in Biomathematics from Makerere University.

Before he was appointed Principal of the College, he was the Dean – Faculty of Science from 2009 to 2010, in which position he led the process of conversion of the faculty to a college.

He held the principal post initially in acting capacity (2010 to 2012) before substantive appointment in 2013. He has also served as the Acting Deputy Vice-Chancellor [Academic Affairs] at Makerere University.

Professor Mugisha joined Makerere University as a Teaching Assistant in 1987 rising through the ranks to Professorship in 2008.

Professor Mugisha is a widely published author with over 50 research papers/articles in international peer-reviewed journals. His major research interest is in the application of mathematics in biological and biomedical processes with a special emphasis on epidemiological and ecological modelling.

He is a founder member and current President of the African Society for Biomathematics since 2009.



06



**Dr. James Asile Droti**  
EX-OFFICIO MEMBER

Dr. James Asile Droti is a senior consultant at the National Curriculum Development Centre, Uganda's center of excellence in producing relevant curricular for national development. He is a teacher by profession and has previously worked as a Lecturer of Chemistry at various universities including Busitema University and Kyambogo University.

He has extensive experience in providing technical assistance and facilitation in the implementation

of science/mathematics integrated with technology to improve teaching and learning and effectively transfer classroom knowledge into viable value-added products and services at both local and national levels.

Dr. Droti holds a Ph.D. and MSc. in Chemistry from Makerere University; BSc in Biology and Chemistry Education; and Diploma in Secondary Education with a specialization in Biology and Chemistry from Makerere University and he is pursuing his.

07



**Eng. Alphonse Candia**  
MEMBER

Engineer Alphonse Candia is a Senior Research Officer at the National Agricultural Research Organisation's National Agricultural Research Laboratories. Engineer Candia has over 20 years of extensive research in bio-systems and agricultural engineering and mechanization. Some of his outstanding technologies developed at the Agricultural Engineering and Appropriate Technology Research Centre include a hand-cranked maize sheller; motorized maize sheller; hold-on-and release rice sheller; Rice fissure analyser; fixed knife forage chopper for smallholder dairy farmers; and improved groundnut decorticator.

Eng. Candia significantly contributed to the development of the Rice Post-harvest Technology Development and Training Centre. He has won numerous awards including grants and recognition from the Korean International Cooperation Agency; Market Place, Embrapa, Brazil; Japan International and Cooperation Agency.

He holds a Ph.D. in Agricultural Engineering (Agro-processing Engineering) from Makerere University and an MSc in Agricultural Engineering from Makerere University.

08



**Ms. Betty Kasimbazi**  
EX-OFFICIO MEMBER

Until recently Ms. Betty Kasimbazi was the current Undersecretary and Accounting Officer of the Ministry of Finance, Planning and Economic Development. She represents the Ministry of Finance Planning Economic Development.

She is a seasoned public servant with over 30 years of experience in the public service system.

09



**Dr. Martin Patrick Ongol**  
EX-OFFICIO MEMBER

Dr. Martin Patrick Ongol is the Acting Executive Secretary of the (UNCST) and is responsible for the overall supervision of management and administrative functions of the UNCST. He provides effective and innovative leadership in the development, promotion, and application of Science and Technology and its integration in sustainable national development.

Dr. Ongol holds a Ph.D. in Applied Biosciences from Hakkaido University, Japan. He boasts of over 20 years of experience in academia and administration.

Previously he was an advisor with UK Department for

International Development. He further served as the Director of Research, Innovation, and Postgraduate Studies at the University of Rwanda. He has also served on several regional and continental bodies including the East African Research and Innovation Managers Association.

His repertoire of successful grants includes The World Academy of Sciences, the International Foundation of Science, and the International Centre for Tropical Agriculture.



# Message from the Executive Secretary

The Uganda National Council for Science and Technology (UNCST) is proud to celebrate 30 years of exceptional service.

On June 1, 2020, UNCST marked 30 years. It is important that we reflect on the milestones attained and reflect on the future.

During the last three decades, we witnessed exceptional growth through several strategic programmes. Reflecting on the long history, UNCST was established to lead the incorporation of science and technology in the national development process. This feat has been attained through several strategic programmes like the National Science, Technology and Innovation Programme, Millennium Science Initiative, Science Granting Councils Initiative, and at present, the Nation Science, Technology, Engineering and Skills Enhancement Project.

UNCST was also able to acquire a permanent home. All these achievements in the last 30 years came with great effort, dedication and direction. I thank, therefore, thank the Governing Council for the strategic direction provided to senior management. To all staff and stakeholders, I thank you immensely.

Upon these milestones and challenges, we commit to continue delivering on our mandate and as such, we have designed a five-year strategic plan (2020/2021-2024-2025) through which our programmes will be more impactful as they are aligned with set national objectives in NDP III and agenda 2040. These include Strengthen the Research Quality Assurance system in scientific institutions, centres, and other enterprises and on the potential application of their results; Undertake and enhance capacity building for scientific research and technology development, and Institutional Strengthening.

We are prepared to make UNCST stronger and resilient through the next 30 years.  
Happy 30 Years!

**Dr. Martin Patrick Ongol**  
*Ag. Executive Secretary*  
*Uganda National Council for Science and Technology*

# Senior Management



**Dr. MARTIN PATRICK ONGOL**  
Ag. Executive Secretary



**Mr. RONALD JJAGWE**  
Head, Science, Technology,  
Innovation, Research and  
Development



**Ms. HELLEN NALUYIMA OPOLOT**  
Head, Research Development and  
Technology Management



**MS. MYLIA RUBANZANA**  
Head, Finance and Administration



**Mr. ISMAIL BARUGAHARA**  
Head Policy Coordination



**Mr. EDWARD TUJUNIRWE**  
Corporate Affairs and International  
Collaborations



**MR. TOM BYARUHANGA**  
Internal Auditor

# The Journey

In 1970, the Government of Uganda headed by H.E. Apollo Milton Obote with a view of organising research in the country established the National Research Council (NRC) in the Office of the President. The sole purpose of this newly created department was to advise the government on matters about how research can be utilised in designing government programmes. NRC evaluated and determined research priorities in the country.

In 1980, NRC was moved from the Office of the President to the Ministry of Planning. NRC was moved to the planning sector because the research was crucial to the planning purposes.

In 1990, through an Act of Parliament CAP. 209, NRC was elevated to a subvention under the Ministry of Planning. It was renamed Uganda National Council for Science and Technology (UNCST) and given a wider mandate. The UNCST mandate was expounded on to be an advisory arm of government on all matters related to science and technology through strategic policies and strategies for integrating science and technology into the national development process. The Act was assented to by H.E. Yoweri Kaguta Museveni on January 31, 1990, and inaugurated on June 1, 1990, by Hon. Mathew Rukikaire, the Minister for Planning.

## The Structure

UNCST was built on a four-tier structure with the Governing Council (GC) of 31 (Executive Secretary Inclusive) members at the helm, followed by Specialised Committees, the Executive Committee, and the Secretariat. Fondly known as the Council, the GC is head by the Chairperson and the Deputy Chairperson. The Council would then reconstitute itself into categories of committees – the six Specialised Committees as state Second schedule of the Act. The day-to-day functions of the Council are implemented by a lean secretariat headed by the Executive Secretary/Chief Executive Officer.

## The first Council:

The Governing Council is comprised of 22 Ex-officio members, 8 specialised members, and the Executive Secretary. All members of the GC were drawn from institutions and fields of science and technology as provided for in the First and Second Schedules of the UNCST Act.

## The eight fields of science and technology include:

1. Agriculture and allied sciences
2. Computer science, electronics, and informatics
3. Energy
4. Industry science (engineering and technology)
5. Medical science (human and veterinary medicine)
6. Natural science (bio – and geo-sciences)
7. Physical science
8. Social science and humanities



### First Specialised Six Committees of the Council:

1. Medical Sciences Committee
2. Physical Sciences Committee
3. Social Sciences and Humanities Committee
4. Natural Sciences Committee
5. Agriculture and Allied Sciences Committee
6. Industrial and Engineering Sciences Committee

### Governing Council Chairpersons

1. Professor Herbert S. Kanabi Nsubuga (RIP) – Chairperson, First Governing Council
2. Professor John P. M. L. Ssebuwufu – Chairperson, Second and Third Governing Councils
3. Dr. Theresa Sengooba – Chairperson, Forth Governing Council

### Journey to Science and Technology House

Over the years UNCST sojourned at various locations in Kampala City, from Superior Complex at the intersection between Ben Kiwanuka and Johnston streets, to the current FAO Offices in Wandegeya, Uganda House along Kampala Road, National Computer Services next to Conrad Plaza on Nasser Road, and permanently occupied the Science and Technology House on Plot 6, Kimera Road, Ntinda.

1990

2016



*Superior Complex at the intersection between Ben Kiwanuka and Johnston streets.*



*FAO Offices in Wandegeya*



*Uganda House along Kampala Road*



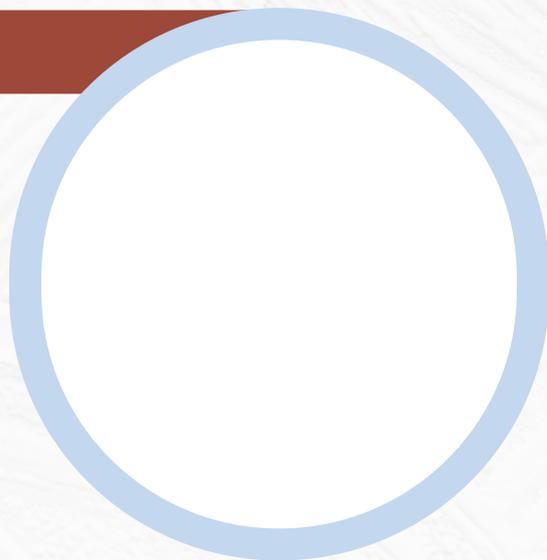
*National Computer Services next to Conrad Plaza on Nasser Road*



*Science and Technology House on Plot 6, Kimera Road, Ntinda*

# The Executive Secretaries

01



## Mr. Xavier K. Ovon (1990-1992)

Mr. Ovon was the Chief Research Coordinator and Head of the NRC. When UNCST was established in 1990 to replace NRC, Ovon was tasked with overseeing the transition. NRC staff were mainstream public service employees, however, the creation of UNCST came with a semi-autonomy status, meaning the Council had leeway to recruit her employees with terms and conditions independent of the public service structure. Consequently, majority of the NRC staff opted to revert to public service for redeployment. After a rigorous recruitment process, Dr. Nyiira was selected as the first sustentative Executive secretary of UNCST. Mr. Ovon returned to the Ministry of Public Service for redeployment.

02



## Prof. Dr. Zerubabel Mijumbi Nyiira (1992-2005)

Before his appointment Executive Secretary, Prof. Nyiira's long public service career can be traced back to 1972 when he was appointed to head of entomology and nematology at present-day Kawanda Agriculture Research Institute under the Ministry of Agriculture, Animal Industry and Fisheries. He later joined international research bodies like the International Food Policy Research Institute (IFPRI) and the International Centre of Insect Physiology and Ecology (ICIPE) where he served as a senior principal research scientist and Director for International Cooperation & Training respectively.

He returned to Uganda in 1990 in time to apply for the Executive Secretary position for a newly created institution.

Prof. Nyiira is largely credited for setting up a strong foundation upon which UNCST thrives today. He resigned in 2005 to join the United Nations as an advisor on science.

03



**Dr. Peter Ndemere (Ph.D.)  
(2005-2020)**

In 2005 Dr. Ndemere took over the mantle as the Executive Secretary for 16 years.

His tenure is accentuated by various programmes he introduced to support innovation in Uganda. These include the Presidential support to scientists and the National Science, technology and innovation programme. He was a strong advocate of a stand-alone ministry of science and technology to oversee the science and technology sector. This wish was granted in 2016 when the Ministry of science, technology, and innovation was instituted. The ministry was hosted by UNCST for a year before it was fully staffed.

Dr. Ndemere retired in 2020.

04



**Dr. Martin Patrick Ongol (Ph.D.)  
(2021 – to date) Ag. E.S.**

Dr. Ongol is the Ag. Executive Secretary. He joined UNCST in August 2020 as the Deputy Executive Secretary. Five months later he was appointed Acting Executive Secretary upon retiring of Dr. Peter Ndemere. He holds a Ph.D. in Applied Biosciences from Hakkaido University, Japan.

Dr. Ongol is a seasoned researcher with a wealth of experience as a dynamic leader. Before joining UNCST, he was the Director of Research, Innovation and Postgraduate Studies at the University of Rwanda – College of Agriculture, Animal Sciences.

# Research Management

Research management is a flagship regulatory service of the Uganda National Council for Science and Technology (UNCST) and it is one of the core her functions. Function (d) of the UNCST Act empowers the Council "... to act as a clearinghouse for information on research and experimental development taking place in scientific institutions, centres, and other enterprises and on the application of their results."

While our journey began on June 1, 1990, operationalisation of the research management function began in 1992 upon the recruitment of the first Executive Secretary - Prof. Dr. Zerubabel Mijumbi Nyiira.

In 1992, ninety-seven (97) studies were registered and issued with research permits. This trend has grown steadily upwards to hit the 800-mark in 2020. With the increased investment in digitisation and automation, the annual number of registered studies is projected to grow three-fold, as the turnaround time will equate to reduced delays, improved efficiency, and stakeholder confidence in the Council.

## Benefits of research management:

This function goes beyond applying for and receiving a research permit. It is a critical role in entrenching the UNCST mandate as an advisory arm of government on matters concerning science and technology. Research management provides crucial insights on what developments are emerging in the different fields of science and technology and further informs the kind of interventions to be provided by the government. Other benefits include:

- Protecting citizens, animals, and our environment from harmful studies (helps in identifying genuine, from unauthentic studies),
- Provide insights in the fields of research attracting more attention, where the research is being done, and inform integration research findings in the national planning process,
- Streamlining the sector by detecting and eliminating duplication in research, and
- And contribute revenue to the national coffers.

## The Process

Research registration is an inter-agency process determined by the nature of research one is undertaking. Routinely, UNCST works with research ethics committees (RECs), Uganda National Health Research Organisation, National Drug Authority, Uganda Wildlife Authority, National Forestry Authority, and Office of the President, among others.

Research involving humans will require prior approval from an accredited REC. RECs are accredited by UNCST and published on the website. Studies involving humans and experimental drugs clearance from a REC and NDA will be required. Research involving wild animals requires prior approval from Uganda Wildlife Authority. While research involving natural resources like forests authorisation must be sought from National Forestry Authority.

Once approvals are obtained as explained above, one proceeds to submit their application to UNCST. All submissions are subjected to two reviews: First, an administrative review will be conducted to ensure all the application is complete with all the necessary documentation.

The application is then scheduled for review by an expert panel. The panel will either approve, request for further information, or decline a study for a research permit.

The entire process as explained above is condensed into a simple web portal that can be accessed from the comfort of one's home, office or any internet-enabled gadget (<https://research.uncst.go.ug/>).

### Accredited Research Ethics Committees

Prospective researchers can utilise the expertise of any of the following accredited research ethics committees listed below. All accredited RECs can review protocols from any field of study. As of May 31, 2021, UNCST had twenty-six (26) accredited research ethics committees as listed below.

1.	National HIV/AIDS Research Committee
2.	Uganda Virus Research Institute
3.	Joint Clinical Research Centre
4.	Mbarara University of Science and Technology REC
5.	Makerere School of Medicine REC
6.	Makerere School of Biomedical Sciences REC
7.	TASO REC
8.	Makerere School of Health Sciences REC
9.	Mengo Hospital REC
10.	Mbale Regional Referral Hospital REC
11.	Mild May Uganda Research & Ethics Committee (MUREC)
12.	Mulago Hospital Research & Ethics Committee (MHREC)
13.	Clarke International University REC
14.	Hospice Africa Uganda REC
15.	Gulu University REC
16.	Vector Control Division REC
17.	Uganda Cancer Institute REC
18.	St Francis Hospital Nsambya REC
19.	Kampala International University REC
20.	Makerere University School of Social Sciences REC
21.	Makerere School of Public Health REC
22.	CURE Uganda REC (CUREC)
23.	Uganda National Health Laboratory Services REC
24.	Uganda Christian University REC
25.	Lacor Hospital REC
26.	Infectious Diseases Institute REC

# Exit Interview



“  
**The biggest misconception about S&T is that it is too complicated for developing countries to comprehend and deploy for their societal advancement!**

”  
 Dr. Peter Ndemere

Dr. Peter Ndemere is the immediate former Executive Secretary. In the interview, he chats about his time at UNCST and what the future holds

## **What led you to originally accept the position of Chief Executive at the organization?**

I was confident that I would do the job given my academic credentials and previous leadership experience, knowledge, and skills gained from work as a faculty postgraduate tutor at Makerere University; and Assistant ES and Deputy ES at UNCST.

## **What was the biggest change UNCST went through while you were the Executive Secretary?**

Institutional growth such as the establishment of physical science development infrastructure and staff capacity to deliver UNCST mandate and functions.

## **What will you miss most about the job?**

I will mostly miss UNCST stakeholders including the management team, staff, donors, and Governing Council colleagues whom I have worked with over the years.

## **What is the biggest challenge(s) UNCST faced and how did you address these challenge(s)?**

Work schedule overloading due to small budget for recruiting new permanent staff. On several occasions, I had to hire temporary staff on short-term contracts.

There was also the issue of lack of local counterpart funding for development partner support which we addressed through intensified resource mobilization from the government.

**What is the biggest misconception people have about Science and Technology?**

The biggest misconception about S&T is that it is too complicated for developing countries to comprehend and deploy for their societal advancement!

**What was the hardest part of your job over the years?**

Managing the functional transition arising from the creation of the new Ministry of Science, Technology, and Innovation. The transition took some of UNCST functions.

**What stands out as your biggest accomplishment in the 11 years with UNCST?**

Building capacity and confidence at UNCST to manage big-budget projects, including Government of Uganda programmes as well as development partner supported ones. For example, the National Science technology and innovation programme, Presidential Support to Scientists, and the Science Granting Council Initiative.

**Looking back at your career, knowing what you know now, is there anything that you would do differently?**

Being more assertive in dealing with human resource issues, including cases of indiscipline and unsatisfactory performance.

**What advice do you have for the incoming Executive Secretary?**

To adopt a stepwise approach to management "hurrying slowly " by balancing between top-down and consensus-based styles of management.

**Who are the key stakeholders that the incoming chief executive should reach out to first?**

Government policymakers (including UNCST Board), UNCST staff, local and international partners.

**What are your plans for retirement?**

Science policy and research management consultancy as well as enterprise development and execution.



# Major Achievements

01

## Creating an enabling S&T policy environment

One of the key functions of UNCST is policy advice on all matters of S&T. UNCST began a consultative process to develop a national science and technology policy in 1993. This policy was eventually approved by Cabinet in 2009, thereby providing an overarching policy framework for investment in science, technology, and innovation (STI). Because of this policy, and the one on biotechnology and biosafety in 2008, it was possible, for the first time, to have a separate chapter on S&T in both the first and second national development plans: 2010-2015 and 2015-2020 as well as in Uganda's Vision 2040. This is vital in that it provides the investment framework for STI in national social and economic transformation.

02

## Promoting, sound, safe, and ethical science and Technology

UNCST is the national clearinghouse for information on research and experimental development taking place in scientific institutions, centers, and other enterprises and on the potential applications of their results. This mandate under Section 4d of the Act is interpreted as an oversight function, which UNCST has traditionally undertaken since the 1970s through the former National Research Council. Under this framework, researchers are facilitated to carry out research that is sound, safe, and ethical. UNCST has since 1990, established a research

oversight system that is of international repute, ensuring that individuals and communities in Uganda are neither harmed by research nor their rights, interest and values compromised when volunteering to be research participants.

This system includes human research protections, involving more than 20 research ethics committees (RECs) accredited by UNCST. To support this, UNCST has developed a training programme in research ethics, which has benefited more than 1500 individuals since 2009.

Some of the breakthrough research conducted in Uganda include early studies that investigated an antiretroviral drug, Nevirapine to prevent transmission of HIV from mother to child. Subsequently, newer, safer, and more efficacious regimens aimed at total elimination of mother-to-child transmission of HIV/AIDS have been developed and rolled out in health care facilities in Uganda.



03

### Strengthening partnerships for scientific and technological progress

Regional and international collaborations in S&T are crucial for Uganda. UNCST has built partnerships with several regional, continental, and international scientific and technological entities, making it a de facto focal point for international scientific activities.

Partnerships have strengthened scientific and technological cooperation between state agencies for mutual advantage; furthermore, have improved friendly relations with other countries through support to education, research, and development. Key partners include the East African Science and Technology Commission (EASTECO), National Research Foundation of South Africa (NRF), Science Granting Councils Initiative, and NAM S&T Centre.

04

### Keeping Ugandans informed about scientific and technological developments.

UNCST has established a robust S&T outreach initiative since 2007, which is aimed at enhancing public appreciation, awareness as well as application of S&T to improve the daily lives and incomes of the people of Uganda. This outreach programme specifically helps Ugandan youth to view science positively and as an essential requirement to help this country transform from a peasant to modern society. The NSW since 2007 enabled the growth of vibrant science clubs evolving from the traditional wildlife, environmental conservation, biology, maths club, etc.

UNCST supported innovations can be categorized into three broader themes – **Agriculture, Health, and Industry**. Below are the major innovative projects supported by UNCST.





# Agriculture

## EVALUATING UTILITY OF SERICULTURE TECHNOLOGIES AND SILK-BASED TEXTILES AS TOOLS FOR RAISING HOUSE-HOLD INCOMES, EMPLOYMENT AND WEALTH CREATION

**PI:** Mr. Clet Wandui Masiga, Tropical Institute of Development Innovations (TRIDI)

**Issue/Opportunity:** There is high global demand for silk yet China the leading producers (US\$2-2.5Bn annual turnover) experiences steady decline since 2006. Uganda should exploit opportunity because of low labor costs and availability of farmland. Sericulture is an agro-based industry with potential to create wealth among the rural poor in Uganda. An acre of land can provide at least 6 job opportunities, namely: mulberry cultivation, silk rearing, cocoon technology, making silk fabric and marketing silk fabric. The average income of UGX3,600,000. Higher up the value chain each kg of silk yarn produces 9.3million worth of pure silk estimated at US\$10-20. A rural farmer who does their own weaving of cloth can earn up to US\$16,470, approximately UGX62.7M per acre.

**Impact:** Production technologies for entire silk production value-chain were rolled out to support commercial production among various communities across the country at 25 stations in 18 districts namely: Buikwe, Bukedea, Bulambuli, Busia, Iganga, Kamuli, Kayunga, Kiruhura, Kween, Luweero, Mbarara, Mubende, Mukono, Nakaseke, Nwoya, Pallisa, Sheema, Zombo on 627.9 acres with plans to expand to 50 districts in total.

---

## UPSCALING PRODUCTION AND COMMERCIALIZATION OF MAKAPADS

**PI:** Dr. Moses Kizza Musaazi (RIP), Makerere University

**Issue:** provision of affordable, biodegradable, locally made sanitary towels to disadvantaged school girls.

**Impact:** The small factory established in earlier the phase of project is employing over 30 vulnerable women and youth in Kawempe division. Access to the Makapads helped reduce absenteeism and early dropout from schools in resource constrained communities and refugee camps. Global level standard pads were developed, and commercial production commenced. Makapads<sup>TM</sup> was registered with the Uganda Registration Services Bureau (URSB). The factory has potential for expansion.



## Health

### MALARIA PREVENTION AT HOUSE-HOLD LEVEL USING ARTEMISIA ANNUA BEVERAGE – ARTAVOL

**PI:** Dr. Patrick Engeu Ogwang, Mbarara University of Science and Technology (MUST)

**Issue:** over 1 million Ugandans, especially children die annually from malaria-related complications. Despite decades of research and other interventions disease continues to ravage.

**Impact:** ARTAVOL® is prophylactic medicine, which is effective in preventing malaria. ARTAVOL® hit the shelves of pharmacies in Uganda in 2013 after successful laboratory studies, animal studies and community trials funded by UNCT. ARTAVOL® renders a person immune against malaria, if taken regularly for one year. It is packed as granules and sold in tins of 100 grams. It can be consumed as a beverage or as functional food for the prevention of malaria, frequent fevers, worm infestation and is also a good antioxidant. The product was licensed by the National Drug Authority (NDA), Reg. No. THA137. The recent support from government is building production capacity from 3,000 -300,000 unit per annum. The intervention has created employment for youth and farmers providing avocado, Artemisia

---

### DEVELOPING INDIGENOUS MICROBIAL MOSQUITO LARVAL PATHOGENS FOR MALARIA VECTOR CONTROL

**PI:** Dr. Louis Mukwaya, Uganda Virus Research Institute (UVRI)

**Issue:** Malaria, a vector-borne disease is still a challenge for Uganda's population regardless of several drug and vaccine interventions and the associated potential risks of developing resistance to drugs and insecticides. This calls for a holistic approach to control of the disease. This intervention entailed development of indigenous larvicides to control mosquitoes, which are Malaria vectors.

**Impact:** The potential of pathogens to advance to larvicides was evaluated and a summarized protocol of active toxin purification based on molecular biology techniques were developed. Staff employed on the project were skilled in molecular phylogenetics, microbiology and biotechnology.

### PRODUCTION AND INDUSTRIAL APPLICATION OF PHYTOLACCA DODECANDRA (PD) TO CONTROL VECTOR-BORNE DISEASES.

**PI:** Prof. Nozmo Mukiibi, Mbarara University of Science and Technology.

**Issue:** Liver-fluke disease causes losses of upto US\$51,000 at Lira Abattoir alone, without considering the impact on the animal's productivity and costs for treatment incurred by farmer. Snailtox an organic powder made from of Phytolacca dodecandra (PD) with potential to prevent the spread of Bilharzia in humans and liver-fluke in animals was developed in the earlier research. The growing livestock market at regional level drives this innovation as an inexpensive option for control of the disease.

**Impact:** the process of patenting Snailtox is in progress, while the team is working with Uganda National Bureau of Standards (UNBS) to develop standards for the product. Over 20 youth in Sanga, Kiruhura district, derive their livelihood from this project.

---

### OLUWOKO AGAINST MALARIA PROJECT

**PI:** Dr. Miph Musoke, Nkumba University

**Issue:** in light of the burden of Malaria, the intervention focuses on a holistic approach to control of the disease. The Oluwoko product is active against the Malaria-hosting mosquito larvae.

**Impact:** the process for developing Oluwoko was documented for purposes of intellectual property protection. 10 research assistants were skilled in preparing Oluwoko.



## Industry

### FRESH VACUUM-SEALED MATOOKE (FREVASEMA)

**PI:** Dr. David Niwagaba, Kyambogo University

**Issue:** Despite being a leading global producer of cooking bananas (matooke), Uganda lags in banana trade at that level. FREVASEMA - Fresh Vacuum Sealed Matooke. It is a brand name for value-added bananas, which remain fresh for up to six months in a frozen state. UNCST supported development of the technology and product, which is now trademarked as FREVASEMA®.

**Impact:** the innovation is patented and commercialized through the resultant enterprise - Afribanana (U) Ltd. Two tonnes of the FREVASEMA® per week are exported to the United Kingdom, Dubai, USA, and Australia. The product is also available on the shelves of major supermarkets in Uganda. Afribanana (U) Ltd also processes matooke by-products into various products like bio-degradable bags, textile materials, briquettes, wine, enriched animal feeds, and vinegar. A banana value chain consortium that has since emerged from this initiative has trained over 400 Ugandan scientists and created over 250 jobs, and benefits over 3500 farmers. The product was certified by the Uganda National Bureau of Standards (UNBS), permit No. P1452019 as well as Uganda Export Promotion Board (UEPB) export certificate, No.U/EX/1390

---

### INTEGRATED BANANA JUICE (ESHANDE) FACTORY

**PI:** Prof. William Kyamuhangire, Makerere University

**Issue:** Banana farmers have for long not earned effectively from their produce – Banana juice and market penetration remains low because of the laborious, unhygienic and inefficient methods of extraction of banana juice, despite its nutritious and commercial value.

**Impact:** 7 acres of land for pilot plant were acquired in Buloba and machinery for commercial production was purchased. Over 50 Farmers in Luwero, Mpigi and Nakaseke districts have opportunity to supply Kayinja/Mbidde bananas, while several youth are employed at the processing plant.



### COMMERCIALIZATION OF LOCAL BANANA JUICE (ESHANDY) PRODUCTION TO ANSWER INDUSTRIAL RAW MATERIAL DEMAND

**PI:** Mr. Winington Najjuka Kano, Forest Fruit Foods Limited, Bushenyi

**Issue:** Banana growers are satisfied with subsistence production and pay little attention to value addition and expanding their markets. There is need to transform local juice processing and marketing to the highest good manufacturing practices (GMPs).

**Impact:** 136 farmers at 60 extraction sites in Bushenyi, Sheema, Rubirizi and Mitooma were skilled in banana juice production. The support helped in increasing production process efficiency and volumes produced and the Eshandy juice was commercialized, and the community is exploring markets in Turkey and Yemen.

---

### PRODUCTION OF TROPICAL FRUIT WINES FOR IMPROVED HOUSEHOLD INCOMES AND REDUCED POST-HARVEST LOSS OF FRUITS

**PI:** Mr. Paul Serumaga, Maritas Wines

**Issue:** Pineapples are grown on large-scale in Kayunga and Luwero districts. Farmers face the challenge of post-harvest losses. Maritas wines works with pineapple farmers to produce assorted wines, which contributes to household incomes, curbs post-harvest losses and promotes import substitution.

**Impact:** the project disseminated wine processing technologies to youth and women groups and registered the product with Uganda Registration Services Bureau (URSB), expanded consumption of local farmers' fruit produce. Over 90 farmers and youth are employed in production of pineapples (Kayunga and Luwero) and Bweyogerere at the production plant.



## Industry

### UPSCALING PRODUCTION AND DISTRIBUTION OF BUGARAMA SUPER BANANA WINE.

PI: Ms. Tracie Namanya, Bugarama Super Banana Wine, Sheema District.

**Issue:** Uganda is a major global banana producer but is not significantly benefiting from its commercial exploitation. The availability of bananas in Masheruka, Sheema district presents an opportunity to produce over 48,000 liters of high-quality wine annually.

**Impact:** Bugarama Super Banana Wine was commercialized and they were facilitated to obtain a UNBS QMark for the Wine. The intervention from government further helped increase production from 20,000-40,000 liters/month. 5 individuals are directly employed by Winery, while 15 farmers partnered with the project to supply quality produce. The community members were also skilled in banana wine production. The project is therefore contributing to value addition and improved livelihoods.

---

### PRODUCTION OF NUTRIENT-DENSE COMPOSITE FLOURS FOR COMPLEMENTARY FEEDING SOLUTIONS TO FIGHT INFANT MALNUTRITION IN UGANDA.

PI: Dr. Evyline Isingoma, Kyambogo University

**Issue:** 29% of children under 5 in Uganda are stunted, 11% are underweight, 4% wasted and 53% are anaemic. The high level of malnutrition in Uganda is attributed to lack of affordable weaning food and ignorance among the population about child nutrition. The intervention focused on formulating nutritiously optimized weaning foods from locally available foods, namely: millet, pumpkin and moringa.

**Impact:** the nutritious composite weaning food is now available on the local market in form of fermented flours optimized with: iron, vitamin A and zinc that also have the capacity to reduce incidences of diarrhea among children. In this, the intervention contributes to import-substitution and provision of markets for local farmers' products. The product was recently used in a Mwanamugimu campaign by Mulago Hospital.



### IMPROVING LIVELIHOODS OF RURAL COMMUNITIES THROUGH CASSAVA PROCESSING AND VALUE ADDITION.

**PI:** Mr. Ivan Okori (RIP), Winwood Millers, Lira District

**Issue:** Northern Uganda is the biggest cassava producer (approx. 983,124 Tons per annum) according to Uganda Bureau of Statistics (UBOS, 2014). The region continues to face poor post-harvest handling that may result in contamination with microbes, high cyanide content among others.

**Impact:** Winwood Millers developed processing technologies for producing sweet high quality cassava flour (HQCF) with low cyanide content. They also developed applications aimed at exploiting opportunities in the cassava value chain by using improved processing technologies.

The flour was commercialized and Winwood and they also developed manuals for cassava producing value-added products. The product obtained UNBS certification. Incomes for communities in Lira, especially women and youth have been enhanced through the employment opportunities that were created.

---

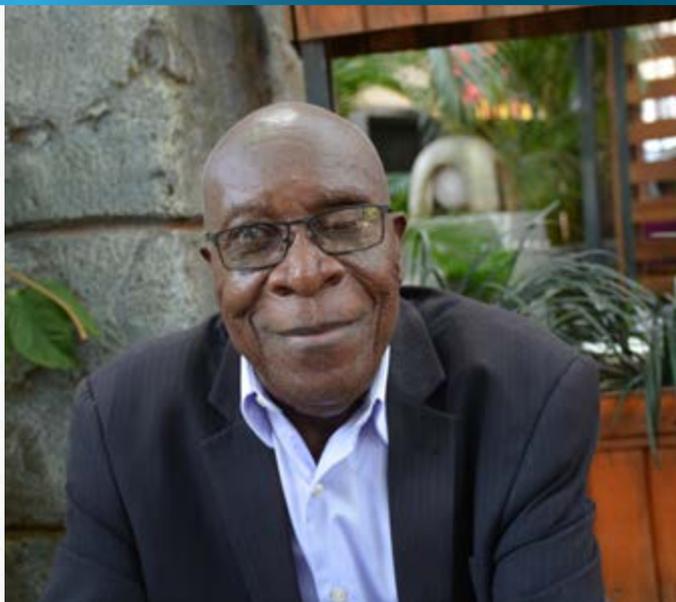
### TEARGAS PRODUCT DEVELOPMENT AND PROTOTYPE STANDARDIZATION

**PI:** Mr. Samuel Mugarura, Non-lethal Technologies

**Issue:** Government of Uganda spends UGX15.8Bn on teargas and equipment for keeping public order (Ministry of Internal Affairs, 2014). The intervention aims to produce a biodegradable lachrymator from locally sourced materials.

**Outputs:** a utility model for teargas canister was registered and the pepper spray was standardized on completion of the formulae. Commercial production of the two products is in the pipeline.

# Interview with the first ES



Prof. Dr. Zerubabel Mijumbi Nyiira

In 1992, Prof. Dr. Zerubabel Mijumbi Nyiira, took over the mantle as first UNCST substantive Executive Secretary. He took over from the caretaker management led by Mr. Xavier K. Ovon. He resigned in 2005 after 13 years of dedicated service. In an Interview, Prof. Nyiira recounts the good old days at the helm of UNCST.

**This year we celebrate UNCST'S 30<sup>TH</sup> anniversary. What thoughts or emotions come to mind?**

Pride! When I decided to hire highly educated, preferably young, competent, and capable people, the strategy was to empower young people to take over when I eventually left. I am proud to see the young group I left behind was able to assimilate the vision, strategy, and objectives I left. This created continuity of purpose and sustainability of the institution.

**You have had a remarkable career in public service. What would you say inspired you to join UNCST?**

Passion and Curiosity. I had just returned from exile and was determined to settle down. No

sooner had I returned than the advertisement ran. Incidentally, at that time the Ministry of Agriculture advertised for a Director Agriculture position. I applied for both, and I received offers for both. UNCST and the Executive Secretary position were both new, and the mandate did not seem clear then. Having worked with the Ministry of Agriculture years earlier, I had an idea of what was expected of the successful candidate.

UNCST had no money, in fact my salary then was USD 23 (about UGX 22,500), this was way lower than what the other ministry position was offering – it was not an attractive package, but curiosity drove me to it. I felt I could best deliver in this position.

**What did you envision in 1992 and how did you meet them or even exceed them?**

In 1993, I was able to develop two important documents – the science and technology policy and the UNCST strategic plan. These two documents transformed the Council. In there, I elucidate the role of science and technology in the economic development of the country. Science and Technology (S&T) are a resource whose application leads to the production of goods and services. The integration of S&T in the national development process was thus crucial. In the strategic plan, I indicated to the Governing Council that for a successful transformation to occur all former employees of the National Research Council had to return to Public Service and give room for UNCST to recruit young,

highly educated, competent, and productive people who could be mentored to perform. It is from here that UNCST started to take shape eventually becoming an institution of repute many years later.

### **In what different ways did you grow UNCST during your 13-year tenure?**

I built a strong, competent workforce, many of whom are still with UNCST to this date. That young team understood and interpreted the vision. In the 13 years I was at UNCST I was able to attract funding from development partners like the International Development Research Centre of Canada and the World Bank. Perhaps the Millennium Science Initiative is the most popular of all. While I wasn't part of the implementing team, I wrote and secured funding for the MSI project from the World Bank.

### **What would you say were your biggest accomplishments during your leadership?**

My greatest achievement was to be able to conceive, design, and develop a long-term strategy growing out of the vision that science and technology can play in the development of the economy. The strategy was to be developed against the background that there must be a clear direction of integrating science and technology in various sectors of national development, following a national development plan to facilitate the growth and development of the

national economy while looking at science and technology as a resource and driver of the vision.

### **When you reflect a bit on your professional experience, what is the hardest decision you ever took?**

Getting rid of unproductive human resources. It was not a popular decision because it affected families, but a decision had to be made.

### **What was your favourite part of the Job and what used to excite you the most?**

Working with a curious young team. They were learning very fast and the prospects for the institution were bright. Working with such a zealous young team was always exciting.

### **Science and technology are ever-evolving. The demand and anticipation in homegrown interventions in growing too. How should UNCST position herself?**

There is a need to have a new normal at UNCST. It is one thing to run an institution because it exists, and it is another to develop it. The new normal should not be at maintaining the institution as it has always been but give it an upper altitude so that it relates with current needs. For example, the fourth industrial revolution should be the new normal for UNCST to hold on to. UNCST should be at the centre of S&T knowledge management and get Uganda to favorably compete with the rest of the world.

### **What is the best piece of leadership advice you have received? What message do you have for the current management?**

The best advice I have ever received is encapsulated in one sentence – Save when you are young, spend when you are old. It should not be understood in the interest of material things, it is not money. But it also applies to money. When you speak of saving the first impulse is money, but you can save knowledge, understanding, learning, obedience, and many others. This taught me to listen, learn, it helped me identify mentors from destroyers. The methods they use to fail or build you and for what purpose – so at that time I was saving. When it came to spending, I used the same methods to build others and whenever there were positive results, I was spending well in my old age. I am sure as you interview me you are also enjoying my expenditure.



UGANDA NATIONAL COUNCIL  
FOR SCIENCE & TECHNOLOGY

# National Biosafety Committee

*NBC*



## About NBC

The National Biosafety Committee (NBC) was established under section 5 (e) of the UNCST ACT (Cap 209) as an independent multidisciplinary committee to review applications related to the development of potentially useful genetically engineered organisms among other functions.

NBC's main function is to ensure that research, product development, general release of genetically engineered organisms is done in a manner that is safe for humans and the environment. It serves to protect individuals, the community and the environment from potential risks of genetic engineering, while at the same time, facilitate the beneficial utilization of the technology.

## *NBC specifically:*

- Conducts initial and continuing review of applications for projects involving genetically engineered organisms or intended for research, product development or general release.
- Carries out inspections on projects involving genetically engineered organisms.
- Educates the public on biosafety procedures.
- Liaises with biosafety regulatory bodies of other countries in matters of trans-boundary movement of genetically engineered organisms and their associated products.
- Advises UNCST on any other matters including public comments on specific biotechnology products.

NBC secretariat is located at UNCST.

## *NBC review Fees*

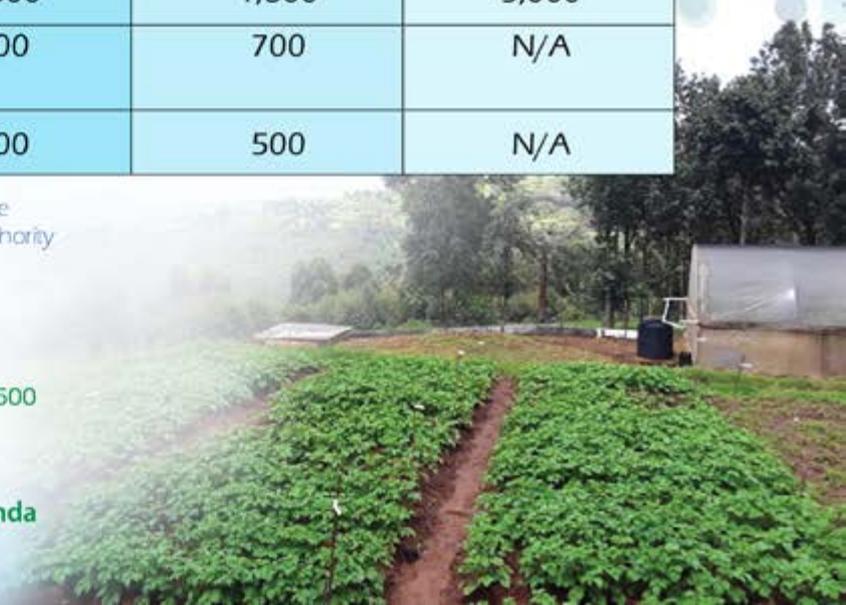
Nature/Category of review	Fees in USD		
	Laboratory Experiments*	Field Trials	General Release
Initial Review	1,300	1,800	5,000
Continuing review/Annual renewal	400	700	N/A
Amendment	300	500	N/A

\*Laboratory experiments eligible for payment of fees shall be determined on a case-by-case basis by the Competent Authority

Plot 6 Kimera Road, Ntinda +256 (0) 414 705 500

P.O. Box 6884 Kampala, Uganda. info@uncst.go.ug

UNCST www.uncst.go.ug @UNCST\_Uganda





# NSTEI-SEP

National Science, Technology, Engineering  
and Innovation Skills Enhancement Project

[www.uncst.go.ug](http://www.uncst.go.ug)

The National Science, Technology, Engineering, and Innovation Skills Enhancement Project (NSTEI-SEP) will support Ugandans to design, Implement and manage key infrastructural projects and create globally competitive businesses.

Particularly the project is:

- Establishing the NIT and TBIC to enhance STEI skills development and promote STEI based enterprise development among graduate students, craftsmen, technicians, and engineers as well as other scientists and innovators.
- To re-tool graduate, craftsmen, technician, and engineers equip them to undertake various infrastructural works to promote local content, generate employment and create wealth.
- To establish technology, innovation and business incubation facilities including workspaces and common -user facilities for scientists and innovators to help them further develop their technologies and business models.

## OUTCOMES

The project will:

- Increase active participation of Ugandan in national infrastructure development projects. Over 1500 youth, craftsmen and technicians will be annually re-tooled.
- Enhance the emergence of technology-oriented business start-ups
- Increase competitiveness of Uganda's micro, small and medium scale enterprises through import substitution and export diversification
- Increase demand for locally manufactured tools and designs
- Enhance revenue generation and job creation from evolving science and technology hubs.

### National Institute of Technopreneurship (NIT) at Rwebitete -Kiruhura District

to enhance the technological and innovative base of Ugandans through a Flexible Factory Learning and Infrastructure Model.

### Technology Innovation and Business Incubation Centre (TIBIC)

at Kampala Industrial Business  
Park, Namanve - Mukono District

that will act as platform for technology development via the Process Industry Learning Factory Model, including common user facilities and shared workspaces for scientists and innovators.

### NSTEI Technical Service Company

to provide the services strategic to the country's development agenda, including, equipment leasing and machinery rentals for infrastructural projects, contract engineering, maintenance of engineering machinery and equipment, and provision of technical services for companies implementing various infrastructure projects in the country.

# UNCST Current programmes

## 01

### SCIENCE GRANTING COUNCILS' INITIATIVE (SGCI)

*By Linda Amanya*

The Uganda National Council for Science and Technology (UNCST) is mandated to support and regulate scientific research, technological innovation, and product commercialization for socio-economic transformation.

For the past three decades, the UNCST has implemented several granting schemes aimed at strengthening the capacity of Uganda's researchers and innovators in solving the nation's development challenges. Some of the Research and Development programmes previously supported by the UNCST include the East African Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development (Bio-EARN); the Millennium Science Initiative (MSI); the National Science, Technology and Innovation Programme (NSTIP) and the National Innovation Fund (NIF).

In 2015 UNCST joined a coalition of fourteen science and technology councils south of the Sahara formed with a view of research and evidence-based policies to contribute to Africa's social and economic transformation. Implemented in a phased manner, the Science Granting Councils' Initiative (SGCI) is currently in the second implementation phase (SGCI II) in which UNCST is gladly administering.

SGCI is a multi-funder programme supported by the Swedish International Development Cooperation Agency (SIDA), the United

Kingdom's Department for International Development (DFID), Canada's International Development Research Centre (IDRC), and South Africa's National Research Foundation (NRF).

The objectives of the initiative are to strengthen the ability of Science Granting Councils to (i) manage research; (ii) design and monitor research programmes based on the use of robust science, technology, and innovation (STI) indicators; (iii) support knowledge exchange with the private sector; and (iv) establish partnerships between Science Granting Councils and other science system actors.

Under phase I of the Science Granting Councils' Initiative (SGCI I), UNCST successfully implemented seven (7) bilateral, multilateral and national research projects. Some of the key achievements under SGCI I include:

1. the development of up to 5 prototypes of Roof Park Greenhouses (RPGs) for locust mass rearing, potentially to boost the utilization of locusts in the food and feeds industry in East Africa,
2. the development of a mobile phone application for monitoring the rice blast pathogen in rice fields,
3. designing of a time-saving cocoa fermentation box to boost economic returns from cocoa production,
4. development of food supplements and beverage products from bee venom and propolis to facilitate product diversification in the apiary.

## UNCST @ 30years

Phase II of the initiative (SGCI II) builds on the foundation established by SGCI I (2015-2020) to further improve science granting councils' abilities to manage practices of research calls and grants, from the design of a call for research proposals through to the monitoring, evaluation and off funded research projects. UNCST is currently implementing a second phase titled: 'Strengthening Public-Private Partnerships in Research and Innovation in the Manufacturing Sector in Uganda'.

Following a rigorous review and evaluation process, 5 projects were selected. This phase seeks to foster inter-sectoral linkages between the public and private sector, in manufacturing subsectors including agro-processing and niche pharmaceuticals. UNCST is confident the SGCI II will strengthen the capacity of these grantees in addressing the barriers to innovation, product development, and commercialization in Uganda's manufacturing sector.



## 02 NATIONAL HIV/AIDS RESEARCH COMMITTEE (NARC)

The National HIV/AIDS Research Committee (NARC) is one of the pioneering research ethics committees (RECs) in Uganda. NARC is one of the 26 accredited RECs in Uganda.

NARC strives to set up a scientific and ethical framework for the review of HIV/AIDS-related research in Uganda and to disseminate information appropriately to assist in the national and global response to the HIV/AIDS epidemic.

To deliver on the above objective NARC reviews and approves the initiation of and conducts a continuing review of HIV/AIDS and other related research protocols before clearance of the same by UNCST and the Office of the President to assure the protection of the rights and welfare of human participants involved in research. Specifically, NARC:

- Maintains ethical standard of practice in research,
- Protects research participants and investigators from harm or exploitation,
- Preserves the research participant's rights and welfare,
- Provides reassurance to society that the rights of research participants are being respected and protected.

NARC is comprised of a multidisciplinary team of qualified and experienced persons in science and ethics. Members are appointed on individual merit by UNCST, and each member serves on the committee for a period of three years and is eligible for reappointment.

Review of research protocols is done once a month (every last Friday of the Month) and communicates the outcome of the review within 14 days from the date of the review.

### Monitoring of research projects

The NARC conducts site visits to approved research projects to:

- Monitor progress of research activities at the site,
- Verify the information in the study application,
- Ensure that the research projects are adhering to national research ethics guidelines,
- Assess issues related to the protection of the welfare of human research participants.

### Trends in protocols registered.

The figure below gives an overview of the type of studies they have handled over the last decade. Most of the studies are in Health Sciences (80.8%) while the rest are in the field of Humanities and Social Sciences (19.2%) as shown in the figure below.

**NARC Members**

Name	Qualification	Designation
1. Dr. Edward Katongole Mbidde	MMed, MBChB, Physician/Scientist	Chairman
2. Prof. Joseph Ochieng	MBChB, Msc, MHsc, Ethicist	Vice-Chairman
3. Ms. Winfred Badanga Nazziwa	MHSR, Behavioral Scientist/Regulatory Analyst	Secretary
4. Prof. Florence Mirembe	PhD, MMed, MBChB, Physician-Obstetrician and Gynecologist	Member
5. Dr. Fred Nakwagala	MMed, MBChB, Physician; Ethicist	Member
6. Prof. Stella Neema	PhD, Sociologist/Behavioral scientist	Member
7. Prof. Frederick Makumbi	PhD, Biostatistician and Epidemiologist	Member
8. Dr. Irene Lubega	MMed, MBChB, Pediatrician	Member
9. Mr. Tom Kasenge	MEduc MUK, B.Educ (Hons) MUK, Dip. Educ ITEK	Community Representative
10. Ms. Joanita Kawalya	Dip. Educ ITEK	Community Representative
11. Ms. Eva Sendagala	Dip Secretarial Studies, Kampala Business Institute	Community Representative

**03 NATIONAL BIOSAFETY COMMITTEE**

The process of modernising agriculture or improving health and preserving the environment inevitably involves the application of novel biotechnologies including genetic engineering of crops to increase yield and enhance their nutritional qualities, developing new biopharmaceuticals, and pollution-sensitive green technologies. The generation, development, and application of these biotechnologies have biosafety implications, which must be carefully managed to ensure that the process and final products are safe for human consumption and the environment.

It is for this reason and purpose that the National Biosafety Committee (NBC) was established in 1996.

The NBC is an independent technical committee established under Section 5 (e) of the Uganda National Council for Science and Technology Act (Cap 209). It is one of several biosafety mechanisms that the government has put in place to facilitate the testing and development of potentially useful genetically engineered organisms.

UNCST through the National Biosafety Committee (NBC) registers and permits confined field studies and ensures adherence to the guidelines and safety to humans and the environment.



NBC serves the individuals, the community, and the environment from potential risks of genetic engineering, while at the same time, facilitate the beneficial utilization of the technology.

NBC work is supported by a stand-alone secretariat based with UNCST. NBC further works closely with institutional biosafety committees.



To improve stakeholder engagement on biosafety and biotechnology, NBC established the Annual Biosafety Forum in 2016.

The Committee has since 2017 supervised the compulsory assessment of possible risks to human health or the environment that this GM potato could present.

The membership composition of NBC is drawn from diverse fields of science and technology from universities, government agencies, the private sector, and civil society. The diverse fields include science, engineering, agriculture, medicine, environment, industry, trade, law, and social science.

Confined fields were established and initial trials were completed near Fort Portal (Rwebitaba), Mbale (Buginyanya), and Kabale (Kachwekano). The improved Victoria potato if released will greatly benefit smallholder families through better harvests and lower production costs, without the health and environmental risks that fungicides pose.

## 04 ANNUAL NATIONAL RESEARCH ETHICS CONFERENCE | 2009 to Date

The Uganda National Council for Science and Technology (UNCST) adopted the concept of the annual research ethics conference to provide a forum for sharing experiences, building capacities, sensitising the public, and identifying options for addressing ethical dilemmas experienced in the conduct of research in Uganda.

Research ethics is rapidly evolving in Uganda, with some considerable progress made in terms of policy reforms and establishment of the requisite institutional and regulatory mechanisms, at the national level, to ensure that the rights and welfare of human research participants are protected in the conduct of research. This among other interventions seeks to contribute towards: improving the efficiency in research protocol review; developing research policies; building research ethics capacities of investigators and ethics

committees; and sensitization of the public and resolving ethical dilemmas that may arise during the conduct of research in Uganda. Since 2009, UNCST has organised the Annual National Research Ethics Conference (ANREC) every July, as a platform for interaction among the various actors in the research enterprise. ANREC brings together researchers, regulators, policymakers, members of research ethics committees, civil society, and research communities, to share experiences and discuss contemporary issues relevant for human subject's research in Uganda and the region.

To date, ten annual meetings have been successfully held, and considerable progress in research ethics has been made in terms of policy reforms and the establishment of the requisite institutional and regulatory mechanisms, at the national level.



ANREC seeks to:

- Improve the efficiency in research protocol review,
- Sensitise the public on how to ethical dilemmas that may arise during the conduct of research in Uganda,
- Build research ethics capacities of investigators and ethics committees,
- Discuss topical and emerging bioethical issues,
- Develop research policies,
- Integrate ethical considerations in the design and implementation of research projects,
- Discuss how research institutions and universities can build credible, reliable, and predictable systems for scientific and ethical review of research projects,
- Engage Communities in research in a manner that does not compromise the rights and welfare of the research participants,
- Improve institutional policies and guidelines responsiveness cultural norms and social practices that influence research in Uganda,
- Enhance researchers' understanding of research ethics in cross-cultural settings and improve their practices and attitudes,
- Provide a platform for deliberating on Uganda's effectiveness in applying research ethics principles during research conduct,
- Make researchers, research ethics committees (RECs), policymakers, and communities more proactive in adhering to the principles of research ethics in their work and communities.



## UNCST @ 30years

### The Process

A team of experts including ethicists, researchers, REC members, and staff of the UNCST carefully select the conference theme and sub-themes addressing both emerging and topical issues about research ethics. They also identify participants and facilitators for the conference.

### Participation and funding

Over the years the Conference has managed to bring together over 1000 participants, these include members of Research Ethics Committees, principal investigators from academic and research institutions in Uganda, representatives of regulatory bodies, media practitioners, as well as experts in bioethics and health research.

The Conference has mainly been sponsored by the Government of Uganda through Uganda National Council for Science and Technology (UNCST). Other partners in the past years have been European and Developing Countries Clinical Trials Partnership (EDCTP); National Drug Authority; Johns Hopkins University; in partnership with the Global Advocacy for HIV Prevention (AVAC); Uganda National Health Research Organization (UNHRO) and World Health Organization (WHO).



## 05

**CONSORTIUM FOR CLINICAL RESEARCH REGULATION & ETHICS CAPACITY IN THE EASTERN AFRICA REGION (CCRREEA)***Improving Clinical Research Oversight*

Clinical research in Sub-Saharan Africa (SSA), where high burdens of disease exist, is of particular importance for developing new medicines, advancing our knowledge of disease, improving disease management, as well as product license extensions for existing therapies. As per the clinical trials registries (Pan-African Clinical Trials Registry (PACTR) and ClinicalTrials.gov) there has been a dramatic increase in the number of registered clinical trials over the past decade in the region. National Regulatory Agencies (NRAs) and Institutional Review Boards/ Research Ethics Committees (IRB/RECs) oversee and regulate the conduct of clinical research to minimize risk to participants and ensure respect for the research participant's rights, values and interests (Ezekiel et al. 2000; CIOMS and WHO 2002).

The increased number of clinical research taking place in Africa as well as the complexity of clinical research designs require that the local RECs/IRBs, and NRAs can efficiently and effectively review the research protocols. This ensures that trials are approved promptly, conducted to the highest ethical standards and in compliance with existing laws and guidelines, hence protection of safety, rights, and welfare of the individual participants and research community at large.

However, researching Eastern Africa region has challenges concerning; quality of review of clinical research protocols, regulatory burdens imposed by multiple time-consuming layers of clinical research approvals, and differing regulatory laws and guidelines as well as lack of clear ethics and regulatory frameworks.

Also, inefficiencies relating to administrative matters, the sequential processing of ethics and regulatory approvals and the inflexibilities of regulatory frameworks are equally important factors contributing to the overall problem. Capacity building for the RECs/IRBs, NECs and NRAs is key in addressing such challenges. In addition, promoting changes designed to improve quality of review, timeliness, transparency and predictability of reviews, are all essential elements of good regulatory and good ethical review practices.

Despite effort made in the past years to build coherent frameworks for ethics and clinical research regulation in some of the East African countries, some of the countries in the region are still lagging thus hindering conduct of clinical research and efforts of harmonization. With the CCRREEA project, countries with clear ethics and regulatory frameworks will share experiences, build capacity and work with the weak countries in the region to establish and strengthen clinical research regulatory and ethics frameworks in the respective countries.

**Project Objectives**

The major objective of the CCRREEA project is to strengthen clinical research regulation and ethics capacity in the Eastern Africa Region with specific aims; (i) Develop and integrate online research information management system for the partner countries, (ii) Strengthen the capacity of the National Regulatory Agencies (NRAs), National Ethics Committees (NECs), Research Ethics Committees (RECs) in the Eastern Africa region towards better quality outputs and improved timelines, (iii) Strengthen the oversight role of NECs and NRAs in clinical

## UNCST @ 30years

research through regional harmonisation initiatives, such as integrating principles, tools and guidelines issued by AVAREF and WHO.

### Guiding principles

The CCRREEA project is guided by synergies and networks such as the AVAREF created under the World Health Organization (WHO) that provides an informal capacity-building platform for NRAs and NECs aimed at improving the regulatory oversight of interventional clinical trials being conducted in Africa through strengthening regulatory and ethics reviews, promoting harmonized standards and approaches, and accelerating the review of vaccines of high public health value.

Our work is further directed by and placed within the framework of an inclusive but decentralised system of ethical review and regulation of clinical research, where RECs/IRBs play an important role. With such a system, RECs/IRBs have a strong institutional base that empowers them to function independently and in a professional and efficient manner. Establishment and or strengthening national REC/IRB accreditation systems to ensure that RECs/IRBs operate and function at acceptable standards. Concerning clinical research involving drugs and biologics, strong drug regulatory regimes are essential to support the work of the NEC and the RECs/IRBs.

We expect that proposed activities in the CCRREEA project will improve the overall efficiency of the review and authorization processes for clinical research in the region, ensure high-quality review by RECs/IRBs, NRAs and improve clinical research approval turnaround time not exceeding 60 working days as required by AVAREF-WHO.

### Methods

This project is coordinated by the Uganda National Council for Science and Technology - Uganda and conducted jointly by consortium partners, National Drug Authority- Uganda, Mathari National Teaching and Referral Hospital-Kenya, National Institute for Medical Research and Muhimbili University of Health and Allied Sciences in Tanzania, University of Malawi College of Medicine -Malawi and University of Kigali Rwanda. The countries have networks through the EAHRC and AVAREF that have created joint efforts in capacity building thus will utilise the synergies established to implement the CCRREEA project.

### Project Sponsor

CCRREEA project is sponsored by European and Developing Countries Clinical Trials Partnership (EDCTP)

### Project Duration

CCRREEA project is to be implemented in 36 months starting January 2021.



## 06

**UGANDA BIOTECHNOLOGY & BIOSAFETY CONSORTIUM***"For safe sustainable use of Biotechnology"**By Prospero Grace Lonyo Ocheng***Supporting the Progression of Biotechnology Over the Years.**

The Uganda Biotechnology and Biosafety Consortium (UBBC) is a coalition of different stakeholders with a common cause of the safe advancement of biotechnology. The role over the years has been supporting the progression of the National Biotechnology and Biosafety Bill. UBBC operates under the auspices of the Uganda National Council for Science and Technology (UNCST). It is fully registered as a non-governmental organisation. UBBC is guided or run by a ten-member Executive Committee and supported by a Coordinator. Eminent persons of the UBBC include Mr. Erostat Nsubuga, Dr Theresa Sengooba, Dr Barabara Zawedde, and an Honorary Member, Dr. Margaret Kigozi, and these are the "guiders" of the Consortium. UBBC was born out of a Strong need to form a multi-sectoral, multi-stakeholder and a multi-competent organization to bring together stakeholders around a common cause of biotech science advancement. It is a mirror reflection of how the science of biotechnology, like ICT applies and/or of relevance to different sectors from health, agriculture, environment, trade and industry to social justice among others. The Biotechnology and Biosafety stakeholders in Uganda noted the need for concerted effort in advancing the use of biotechnology in national development and to ensure safety of the products and processes involved in biotechnology research and development, up to and including human health and the environment sanitation, health and conservation. They recognized that Uganda is signatory to international protocols and agreements in the field of biotechnology and biosafety. As such, there was need for

legal instruments to facilitate biotechnology research and development as it had been a long and inconclusive effort.

The main function of UBBC is to act as a unified body of stakeholders to support the safe and sustainable utilization of biotechnology for national development and socio-economic transformation.

UBBC is composed of members from both private and Government Sectors; Scientists, Policy Makers, Academia, Private Business, Students, Media, and membership can be by individuals or Institutions.

The specific duty of each UBBC Member is to jointly promote safe and sustainable use of biotechnology.

**Achievements**

With the guidance and support of the Uganda National Council for Science and Technology, (UNCST), since its inception on the April 11, 2011, the UBBC has been active in the progression of biotechnology and biosafety in Uganda and it has many achievements some of which are highlighted below:

- UBBC has evolved into a multi-sectoral organization recognized by Government as a platform for scientists,
- It has played a key role in increased public awareness of biotechnology and its benefits through shows and exhibitions with outreach partners including NARO,
- The UBBC outreach and sensitization programs have led to the members of the public and policy makers to understand the science of biotechnology for informed decision making,



- The activities of the UBBC have led to the creation of a critical mass of biotechnology advocates among stakeholders, farmers, processors, policymakers in MDAs,
- The UBBC has also played a great role in advancing the Biotechnology & Biosafety Bill in Uganda, which is now on the floor of Parliament as the Genetic Engineering Regulatory Act 2018,
- Globally and regionally, UBBC has also played a big role in advancing the Biotechnology & Biosafety cause in Africa. A case in point: it was the initiator and host of the regional East African Biotechnology & Biosafety Alliance (EABBA), and additionally, it facilitated the replication of the UBBC model by other African countries including Ghana, Nigeria and Malawi for progression of the science in their countries,
- UBBC has been one of the first entities to recognize and appreciate scientist in the field of biotechnology for their innovations and contributions to the body of science through an annual Biotechnology Awards ceremony.

### Challenges

Like many donor-dependent organizations, the biggest challenge faced by the UBBC is funding which is dwindling as a result of change in donor policies over the years. Local sources of revenue mainly include membership fees. This is a trickle in the ocean and is usually used for a few office consumables. We also work collaboratively with government and other agencies hence benefit from their funding. Low-income streams have led failure to implement our objectives fully.

Additionally, many people are yet to appreciate the value of biotechnology, and that many processes and products currently on the market are products of biotechnology.

Hence there is resistance to adoption of biotechnology solutions posing a challenge especially in agriculture.

### Future Projections

UBBC looks forward to developing a biotechnology center where several biotechnology products and processes can be showcased for uptake by individuals or organizations. This facility will also be a training center for student interns during their graduate studies.

UBBC will continue to support outreach partners through public sensitization on matters related to biotechnology and popularizing the science.



## 07

## GENDER EQUITY IN RESEARCH ALLIANCE



The Uganda National Council for Science and Technology (UNCST) in partnership with the International Network for Advancing Science and Policy (INASP) is implementing the Gender Equity in Research Alliance (GERA) programme.

Conceived in 2018 during the National Dialogue on Research Systems, GERA is a network of researchers, research institutions, government agencies, and members of the public committed to working collaboratively to advance the vision and practice of gender-equitable research system in Uganda's higher education and research institutes ecosystem. GERA envisions a gender-equitable research system that supports national development.

While its being hosted at UNCST, GERA growing and morphing into an independent organization with strong grassroots structures. The governing structure is composed of four steering committees based on regions – Central, Eastern, Northern and Western. These regional committees represent the unique needs of their respective localities and together they constitute a national body.

Broadly, GERA seeks to advocate for a gender equitable research system, promote networking among higher education institutions and research institutions, promote collaborative research among stakeholder, support resource mobilization for gender equitable research and further promote capacity building and learning among stakeholders.

*For further details visit <https://uga.ug/>*



Other programmes jointly implemented with INASP include tailor made Massive Open Online Courses (MOOCs) led by AuthorAid. Journal publishing practices and standards and Moodle learning commons.



## 08

## NATIONAL SCIENCE, TECHNOLOGY, ENGINEERING, AND INNOVATION SKILLS ENHANCEMENT PROJECT

The Uganda National Council for Science and Technology (UNCST) is an Agency of the Government of Uganda with a mandate to support and regulate scientific research, technological innovations, and product commercialization for socio-economic transformation. UNCST supports the growth and enhancement of Uganda's economy through strategic deployment of scientific knowledge and technological innovations following the country's development aspirations - NRM Manifesto, National Development Plan (NDP III), & Vision 2040.

The government of Uganda recognizes the role science, technology, and innovation (STI) play in generating new knowledge and the requisite skillsets for increased productivity and competitiveness. Uganda's aspiration of transforming from a peasant to a modern and prosperous country by 2040 is however constrained by critical inherent problems including i) inadequate human resources in science and technology (HRST), ii) low industrialization and value addition, iii) youth unemployment, iv) inadequate S&T infrastructure, v) low competitiveness, vi) inadequate local capacity/low level of local content, and vii) inadequate academia-industry linkages.

Subsequently, the Government of Uganda through the Uganda National Council for Science and Technology and with support from the People's Republic of China (PRC) is implementing the National Science, Technology, Engineering, and Innovation Skills Enhancement Project (NSTEI-SEP) to enhance the technological and skill base of Ugandans to participate in strategic national infrastructural projects and manufacturing industries.

To enhance the technological and skill base of Ugandans graduates, craftsmen, technicians, and engineers to participate technician and engineer to participate in strategic national infrastructural projects and manufacturing industries, the project is establishing the:

***National Institute of Technopreneurship (NIT)*** at Rwebitete – Kiruhura District to enhance the technological and innovative base of Ugandans.

***Technology Innovation and Business Incubation Centre (TIBIC)*** at Kampala Industrial Business PARK, Namanve -Mukono District. This will be a platform for technology development, with common user facilities and shared workspaces for scientists and innovators.

***Technical Service Company*** to provide service strategic to the country's development agenda, including equipment leasing and machinery rentals for infrastructural projects and provision of technical services for companies implementing various infrastructure projects in the country.

### Goal and Objectives

The goal of the Project is to ensure Ugandans design, implement and manage key infrastructural projects and create globally competitive businesses.

The project will:

- Establish the National Institute of Technopreneurs (NIT) and Technology Innovation and Business Incubation Centre (TIBIC) to enhance STEI Skills development and promote STEI based enterprise development among graduates, craftsmen, technicians, engineers as well as other scientists and innovators
- Retool graduates, craftsmen, technicians, and engineers and equip them to undertake various infrastructural works (electricity distribution, water drilling and

distribution, road construction, building construction, pipeline construction, light railway construction, etc.) to promote local content, generate employment and create wealth.

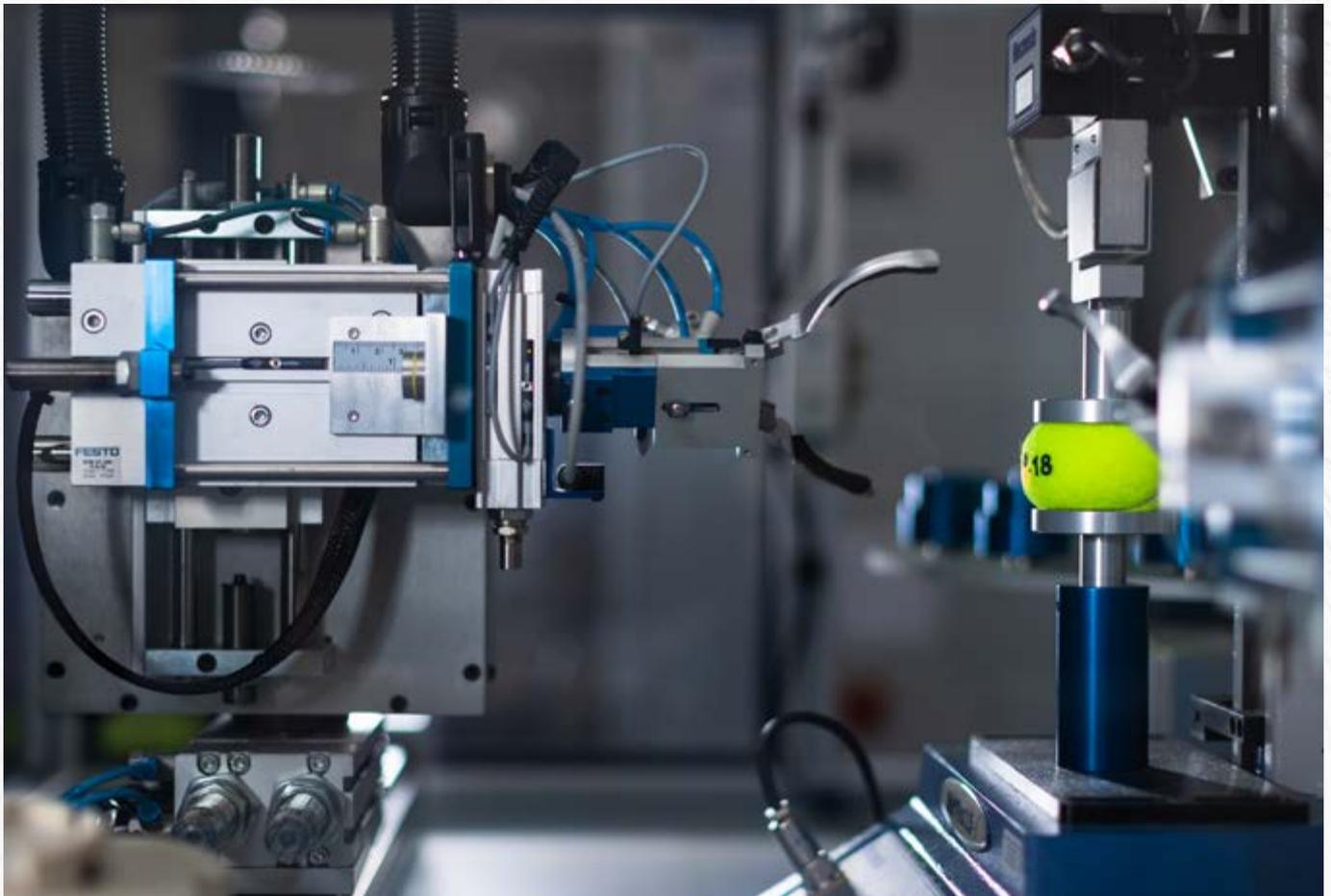
- Establish technology, innovation and business incubation facilities including workspaces
- and common-user facilities for scientists and innovators to help them further develop their technologies and business models.

### Expected Outcomes

The Project addresses a pressing need to help build Uganda's S&T human capital needed to foster its socioeconomic development and poverty reduction agenda. The project will ultimately empower Ugandans with the capacity to design, implement and manage national infrastructure projects while at the same time supporting Ugandan scientists and

innovators to commercialize viable research and development outputs. In terms of feasible outcomes, the project will:

- Increase active participation of the Ugandans in national infrastructure development projects. Annually, the centers are expected to retool over 1,500 Ugandans specially the youth, craftsmen, and technicians,
- Enhance the emergence of technology-oriented business start-ups,
- Increase competitiveness of Uganda's micro, small and medium scale enterprises (MSME) sector through import substitution and export diversification, Spur locally manufactured tools designs; and
- Enhance revenue generation and job creation from evolving science and technology
- Hubs. The project is expected to create over 12,000 direct and indirect jobs.





# Gender Equity in Research Alliance – GERA –

Gender Equity and Research Alliance (GERA) is a network of multi-disciplinary researchers from across the country. We all share a passion for seeing gender equity demonstrated at the heart of our research, our institutional policies, and our institutional practices. The alliance was conceived in 2018 at the Uganda National Dialogue on Equitable Research Systems at which a range of national and regional bodies were represented to deliberate on how to enable such an equitable research system in Uganda.

Membership of GERA is open to any university or research institution in Uganda, individual researchers, and others with an interest in gender equity in research. Presently GERA has representation four regions across the country – Central, Western, Eastern and Northern.;

## Vision

A gender equitable research system that supports national development

## Mission

To promote a research system that recognizes and addressed gender barriers and is responsive to specific needs of both women and men in Uganda.

[www.uga.ug](http://www.uga.ug)

GERA Secretariat  
Uganda National Council  
for Science and Technology  
Plot 6, Kimera Road, Ntinda  
P.O. Box 6884, Kampala – Ug.  
E-mail: [info@uncst.go.ug](mailto:info@uncst.go.ug)  
Tel: +256 414 705500

# Through the Memory of the Longest-serving Employees

Aisha Namutebi, Emmanuel Kakande, and Jane Francis Katushabe have worked with the Uganda National Council for Science and Technology (UNCST) since 1990. With 30 years of service, the trio is the longest-serving staff at the Council. In the individual discussions, they reveal how the Council has evolved over the years.

## **Ms. AISHA NAMUTEBI – Office Messenger**



*Ms. Aisha Namutebi in the pantry from where her daily routine revolves.*

On August 17, 1983, Aisha joined the Manpower Department, specifically on the Census project, under the Ministry of Planning as a cleaner. National Research Council (NRC) which was another department under the same ministry shared the same build with NRC just a floor above. Manpower and NRC staff could regularly interact.

Coincidentally, when the Census Project ended in the late 80's there was an opening at NRC. She applied and weeks later was hired.

When NRC was evolved into UNCST, Aisha was one of the few staff that were retained, and she closely worked with the transition team under the stewardship of Mr. X.K. Ovon.

In 1992, the incoming Executive Secretary, Dr. Nyiira advised to her return to school and acquire some literacy skills. She subsequently joined an adult literacy programme.

Fondly known as Mukyala Namutebi, Aisha, now 67, is a proud mother of six children and several grandchildren.

With her savings, she has been able to keep all her children in school and build a house in Kamwokya a Kampala suburb.

On what has kept going for this long, Aisha says her trust in God, punctuality, and developing a cordial working relationship with colleagues form the recipe for her success.

## **Mr. EMMANUEL KAKANDE – Driver/ Messenger**

If you ever strike a conversation about cars with Emmanuel, expect candid and passionate revelations. He is so experienced that he will easily "diagnose" a faulty vehicle from you ignite it to when the rubber grinds the tarmac.

Emmanuel joined NRC as a driver in the mid-'80s on the Ecrاف project specifically attached to Mrs. Joyce Muwanga the project principal investigator. When the project ended, and NRC morphed in UNCST Emmanuel was among the retained staff.

Doubling as an office messenger he has been a crucial figure in the successful implementation of the UNCST mandate.

During the last 30 years, he has chauffeured Council employees across Uganda from Council (Board) members to Senior managers and officers.

Emmanuel, 63, is fondly referred to as Mzee is considered a father figure at UNCST



*Behind the wheel: Mr. Emmanuel Kankande ever smiling behind the wheels*

As a senior driver, he says it is through the driver position that he has been able to keep his children in school through university. Further, with his savings and support from UNCST he was able to construct a house from where he raised his family.

He credits his long career on loyalty and a friendly working relationship with his supervisors.

### **Ms. JANE FRANCIS KATUSHABE – Registry/Records Officer**

If determination, resilience, and hope were a person-it should be Jane. It is a story that many would describe as a "grass to grace" narrative. Jane is the Registry/Records Centre in charge at UNCST. Her rise to the current position is a journey of twists and intriguing anecdotes.

Jane's story begins in Luwero where she lived with her father. During the turmoil years of the early '80s farming which was a primary source of income disrupted forcing her to drop out of school – she was in Senior two. With reality fast sinking in, Jane trekked from the thickets of Luwero to Kampala in search for work. After months of searching luck smiled at her with a cleaner position at NRC.

Just like Aisha and Emmanuel, Jane was also retained when NRC transformed into UNCST.

Back then Office messengers/ cleaners were only working half-day. Upon the urging of Dr. Nyiira, Jane enrolled for a typist course at a training institute in Katwe. She undertook classes every afternoon.

Before long, Jane joined the secretarial pool – Back in the day, all typists occupied the same space where documents from various offices would be sent to them to type-set on manual typewriters. Later electric typewriters were introduced, these came with soft keys, therefore, not as noisy as their predecessors. After years of hard work, Dr. Nyiira promoted her as Personal Assistant to the Executive Secretary.

Now married with children, she enrolled in an adult education programme where she resumed her studies and completed both her O and A levels. Juggling work, family and school took a toll on her sanity that a support system she started to question her decisions. But the Little Jane back in Luwero had a dream – to finish school. She was made a promise to herself and against all odds, she soldiered on.

She enrolled for a certificate and later a diploma in records management at Makerere University Business School.

Under the leadership of Dr. Peter Ndemere Jane was promoted as the pioneer Administrative Assistant (Records) at UNCST. She still holds this position. In 2016, Jane graduated with a bachelor's degree in Archives and Records Management from Nkumba University.



*Walking institutional memory: Ms. Jane Katushabe retrieving a record from the high-density shelves.*

Jane, 58, is a proud mother of four children. She has educated all of them and set up family home in Nsambya.

She ascribes her success to being patient and the supportive work environment.



# National HIV/AIDS Research Committee

(NARC)

"Promoting Ethical Research"

The National HIV/AIDS Research Committee (NARC) was established in 1986, later in '90s NARC became a joint entity of the Uganda AIDS Commission, Ministry of Health and Uganda National Council for Science and Technology (UNCST) as a one stop centre for review of HIV/AIDS research. Under section 5 of the UNCST Act (CAP 209) NARC institutionalised within UNCST. NARC is an institutional Research Committee of UNCST with a nation-wide portfolio for review of HIV/AIDS and other related research.

## Objective of NARC

To have in place a scientific and ethical framework for review of HIV/AIDS research in Uganda, and to disseminate information appropriately to assist in the national and global response the HIV/AIDS epidemic.

## Functions of NARC

The main function is to review and approve the initiation of and to conduct continuing review of HIV/AIDS and other related research protocols prior to clearance of the protocols by UNCST and the Office of the President, to provide assurance of the protection of the rights and welfare of human participants involved in research.

### Specifically, NARC:

- Maintains ethical standard of practice in research.
- Protects research participants and investigators from harm or exploitation.
- Preserves the rights and welfare of researcher participants.
- Provides reassurance to society that the rights of research participants are being respected and protected.

NARC secretariat is located at UNCST.







**UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY**

 Plot 6 Kimera Road, Ntinda.  P.O. Box 6884 Kampala, Uganda.

 [info@uncst.go.ug](mailto:info@uncst.go.ug)  +256 414 705 500

---

 [UNCST](#)  [@UNCST\\_Uganda](#)  [www.uncst.go.ug](http://www.uncst.go.ug)