



**BUSITEMA  
UNIVERSITY**  
*Pursuing excellence*

**E-BRIEF**



**MAY 2026**

# **RESEARCH & INNOVATIONS** *Brief*

To provide  
inclusive  
high standard  
Training,  
quality research  
and  
outreach for  
industrialization  
and  
sustainable  
development



As Deputy Vice Chancellor for Academic Affairs, I am pleased to present this edition of the Busitema University Research and Innovation Brief. This publication is a reflection of the remarkable strides the University continues to make in advancing research, graduate training, and innovation.

Busitema University has registered rapid growth in research, particularly through the expansion of graduate education. Currently, the

University runs 11 PhD programmes and over 20 Master's programmes, which continue to spur research productivity, knowledge generation, and innovation across our faculties. This steady growth is strengthening our academic environment and building the next generation of scholars, researchers, and innovators.

I am also pleased to note that the University has submitted a total of 15 trademarks for registration with the Uganda Registration Services Bureau, a clear sign of our growing commitment to protecting and commercializing innovation. In addition, a Graduate Research Management System (GRMS) has been developed to improve efficiency in tracking research progress and to accelerate the graduation of our research students.

Further, through the government-funded Busitema University Research and Innovation Fund (BURIF), postdoctoral research projects have been supported, providing an important platform for emerging scholars to contribute cutting-edge research and impactful solutions.

Assoc. Prof. Saphina Biira  
Deputy Vice Chancellor - Academic Affairs



As Director of Research and Innovation, I am pleased to introduce this edition of the Busitema University Research and Innovation Brief. This publication reflects our strong commitment to generating knowledge, promoting creativity, and delivering practical solutions that address community and national needs.

At Busitema University, research and innovation remain central to our mission. Our staff and students continue to make meaningful contributions in areas such as

agriculture, engineering, health sciences, education, animal sciences, management, environmental sciences and technology. These efforts are helping to strengthen industry, improve livelihoods, and support Uganda's development agenda.

I am proud to note that Busitema University has been ranked 4th in research excellence among universities in Uganda, out of more than 60 universities and other degree-awarding institutions in the country. This achievement is a clear testimony to the dedication, resilience, and quality of our researchers, innovators, and partners.

I sincerely thank our faculty, students, collaborators, and stakeholders for their continued support and commitment to building a vibrant research culture. As you read this research and innovation brief, I invite you to reflect on the progress we have made and the great potential that lies ahead.

Together, let us continue to advance research, inspire innovation, and transform society for the better.

For God and My Country

Assoc. Prof. Samson Rwahwire  
Director - Graduate Studies, Research and Innovations

# TAZCOV Syrup



TAZCOV is a natural remedy formulated from Ugandan medicinal plants for symptomatic management of acute respiratory infections (ARIs) like COVID-19, common Cold, influenza (flu), sore throat, Parainfluenza, Respiratory syncytial virus infection, rhinitis, pharyngitis, bronchitis, pneumonia and bronchiolitis.

It has scientifically proven antiviral, anti-inflammatory, antioxidant, and immunomodulation properties. These pharmacological activities are due to abundant skimmianine, berberine, apigenin,

luteolin, quercetin, ascorbic acid and betulinic acid.

TAZCOV successfully underwent a rigorous scientific process of preclinical evaluation and was notified by the National Drug Authority (THA1087) and was supported by the Government of Uganda through the Secretariat of Science, Technology and Innovation.



## TEAM LEADER

### Dr. Samuel Baker Obakiro

(BSc.Chem & Bot; MSc. Pharm; PGDE; PhD)  
Snr. Lecturer & Head of Department, Pharmacology & Therapeutics  
Centre Leader, Natural Products Research and Innovation Centre



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## HERiCOP Herbal Soap



The HERiCOP product addresses the high burden of skin diseases in Uganda by producing pharmaceutically effective herbal products. Leveraging Uganda's rich biodiversity and traditional medicine knowledge, the project has developed HERiCOP Soap, a prototype with scientifically proven antibacterial, antifungal, anti-inflammatory, and wound-healing properties. This innovation offers a natural, affordable alternative to synthetic antiseptic soaps, tackling multi-drug resistant microbes and neglected tropical diseases (NTDs).



### TEAM LEADER

**Dr. Owor Richard Oriko**

Snr. Lecturer & Deputy Dean, Faculty of Science and Education  
Researcher, Natural Products Research and Innovation Centre



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# GLUCOTAK



TAZCOV is a natural remedy formulated from Ugandan medicinal plants for symptomatic management of acute respiratory infections (ARIs) like COVID-19, common Cold, influenza (flu), sore throat, Parainfluenza, Respiratory syncytial virus infection, rhinitis, pharyngitis, bronchitis, pneumonia and bronchiolitis.

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## TEAM LEADER

### Dr. Samuel Baker Obakiro

(BSc.Chem & Bot; MSc. Pharm; PGDE; PhD)  
Snr. Lecturer & Head of Department, Pharmacology & Therapeutics  
Centre Leader, Natural Products Research and Innovation Centre



# CARIENIL Herbal Toothpaste



Many people are losing their teeth through extraction yet medicinal plants can be used to treat them. CARIENIL™ HERBAL TOOTH-PASTE is awaiting notification by the National Drugs Authority. The project was directed towards the realization of the National development plan (NDP4), Vision 2040 and NRM manifesto. Development of this over the shelf cheap, safe and yet effective dental herbal remedy opens up a number of opportunities such as; reducing the country's health expenditure on treatment of oral diseases and increasing government revenue through sale of the herbal toothpaste...



## TEAM LEADER

**Assoc. Prof. GAVAMUKULYA Yahaya**

(BSc.Chem & Bot; MSc (Molecular Bio. & Biotech.); PhD)  
Faculty of Health Sciences  
Deputy Centre Leader, Natural Products Research and Innovation Centre



# TRICHOS BIOFERTILIZER



Sustainable agriculture depends on innovative bio-inputs that stimulate plant growth, suppress pests and diseases, and restore soil health. TRICHOS is a Trichoderma-based bio-product developed to address these needs through three versatile formulations: foliar spray, soil amendment, and seed coating.

TRICHOS is designed to enhance crop performance, reduce pest and disease pressure, and improve the soil microbiome

for long-term agricultural productivity. The product has already undergone a one-season multi-location field trial, where individual and combined applications of TRICHOS were evaluated against conventional fertilization and untreated controls.



## TEAM LEADER

### Dr. Moses Andima

(BSc.Chem & Bot; MSc (Molecular Bio. & Biotech.); PhD)  
Faculty of Science and Education  
Researcher, Natural Products Research and Innovation  
Centre



# WHITEMAN FILTER PAPER



Our eco-friendly filter paper is proudly manufactured at Busitema University's Faculty of Science and Education Campus, Nagongera, using sustainably sourced agricultural crop residues such as citronella, corn stalks, rice straw, and rice husks, reinforced with recycled pulp from waste paper. This innovative product transforms locally available biomass and paper waste into high-quality, fully branded filter paper packs, offering a practical and environmentally responsible alternative to conventional products. With its strong sustainability value, waste-to-resource approach, and market-ready branding, the product presents significant potential for commercialization. The next strategic step is to scale up the technology from pilot production to full industrial manufacturing in order to meet growing market demand and maximize economic and environmental impact.



## TEAM LEADER

### **Dr. Umar Kamoga Lwako**

(BSc. Indust. Chem; MSc (Chem); PhD Mech. Eng.)  
Faculty of Science and Education



# PRIVIRID HIV FORMULATION



HIV/AIDS remains a major public health challenge in sub-Saharan Africa. Although Highly Active Antiretroviral Therapy (HAART) has significantly improved the quality of life and extended the life expectancy of people living with HIV/AIDS, the disease still has no definitive cure and an effective vaccine remains unavailable.

One promising area of research is the use of Latency Reversing Agents (LRAs), which are designed to target hidden viral reservoirs. Prostratin, a naturally occurring compound, is one such LRA and has previously

been isolated from plants found in the temperate regions of the Western world. In response to the need for locally relevant therapeutic innovations, PROVIRID has been developed as a herbal remedy derived from indigenous medicinal plants of Eastern Uganda.



## TEAM LEADER

### Dr. Joseph Hokello

(BSc. Educ - Bio; MSc (Molecular Bio. & Biotech.); PhD)  
Faculty of Science and Education  
Researcher, Natural Products Research and Innovation  
Centre



## PLASTIC WASTE REINFORCED ROADS



SIMPLAB Plasphalt is an innovative road construction solution that utilizes recycled plastic waste to enhance asphalt performance and promote sustainable infrastructure development. Developed as a waste-to-value technology, Plasphalt offers a practical approach to reducing plastic pollution while improving road durability, strength, and resilience. SIMPLAB Plasphalt supports cleaner communities, circular economy practices, and cost-effective infrastructure innovation. First constructed at Busitema University, currently the technology is being rolled out at Nabwojjo road, Namugongo B Division, Kira Municipality



### TEAM LEADER

#### **Assoc. Prof. Samson Rwahwire**

(BSc. Mech Eng., MSc. Aerospace Eng., MSc. Eng. Mgt.;  
PhD Materials Eng.)

Faculty of Engineering and Technology

Center Leader, Materials and Nanotechnology Center



## BLACK SOLDIER FLY - From Waste to Livestock Feed



This innovative initiative, led by the Faculty of Agriculture and Animal Sciences together with the Faculty of Science and Education, is advancing sustainable agriculture through the commercialization of Black Soldier Fly (BSF) farming for livestock feed production and organic waste recycling.

289 farmers from 54 districts, with 4 farmers already adopting BSF farming technologies.



### TEAM LEADER



**Assoc. Prof. James Egonyu**

(BSc. MSc., PhD)

Faculty of Agriculture and Animal Sciences



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# Research and Innovation Outreach

## ENGINE POWERED GROUNDNUT SHELLER



The engine-powered groundnut sheller has been successfully tested in the community and is already transforming lives. By improving the speed and efficiency of shelling, the machine reduces labor, saves time, and increases productivity for farmers and processors. Its adoption is helping communities improve post-harvest handling, reduce losses, and create greater economic value from groundnut production. This innovation stands as a practical solution for enhancing livelihoods and promoting agricultural mechanization at the local level.



### TEAM LEADER



#### **Mr. Lawrence Grism Obeti**

(BSc. Agric Mech. & Irrigation Eng.; MSc. Agric Eng.,  
PhD candidate)

Faculty of Engineering and Technology

## ANIMAL FOLIAGE CUTTER



The engine-powered Animal Foliage Cutter is a practical, time-saving solution designed to help farmers quickly chop grass, maize stalks, and other forage materials for silage making and daily livestock feeding. Built for efficiency and ease of use, the machine reduces the heavy labor of manual cutting, improves feed preparation, and helps farmers preserve quality fodder for cows and other animals throughout the year. Its strong engine performance makes it suitable for both smallholder and growing commercial farms, while its field testing in various communities across Eastern Uganda has shown that it

is reliable, farmer-friendly, and well suited to local conditions. This is a smart innovation for boosting livestock productivity, reducing feed waste, and supporting modern, profitable farming.



### TEAM LEADER



#### Mr. David Kisambira

(BSc. Mech. & Manufacturing Eng.; MSc. Materials Eng. candidate)

Faculty of Engineering and Technology

## FOOD INCUBATION CENTER



The Food Incubation Center at Busitema University is a practical innovation and value-addition hub established to support food processing, product development, skills training, and community engagement. The center plays an important role in transforming agricultural produce into market-ready products, while also promoting entrepreneurship, research, and industrial application of university knowledge. By linking academia with community needs, the center provides a platform where innovation moves beyond theory into real production and service.

Currently, the center is producing juice and yogurt, which are sold to surrounding communities. This not only provides consumers with accessible, locally processed food products, but also demonstrates the university's commitment to supporting food security, nutrition, and local enterprise development. The production of these products reflects the center's growing capacity in food processing, quality improvement, packaging, and commercialization.



**Fabrication of lithium-ion rechargeable batteries for electric vehicles and other applications using locally available materials in Uganda**

**Dr Dr Kigozi Mose** Busitema University

**Email: [Mkigozisc@busitemacug](mailto:Mkigozisc@busitemacug) +256772609744**





## CALL FOR APPLICATIONS TO PROGRAMMES AT BUSITEMA UNIVERSITY AND ITS AFFILIATED INSTITUTIONS FOR 2026/2027 ACADEMIC YEAR

### MASTERS & POSTGRADUATE DIPLOMA PROGRAMMES

Code	Programme	Duration (Yrs)
CPS	Master of Science in Cyber Physical Systems Engineering	2
EDM	Master of Educational Leadership and Management	2
IDE	Master of Science in Infectious Diseases Field Epidemiology	2
MAI	Master of Science in Artificial Intelligence	2
MBA	Master of Business Administration	2
MCC	Master of Science in Climate Change and Disaster Management	2
MCF	Master of Computer Forensics	2
MCH	Master of Science in Chemistry	2
MEE	Master of Science in Environmental Economics	2
MEP	Masters in Educational Psychology	2
MGA	Master of Science in Global Change and Sustainable Agriculture	2
MID	Master of Science in Irrigation and Drainage Engineering	2
MIM	Master of Science in Industrial Mathematics	2
MME	Master of Science in Materials Engineering	2
MMM	Master of Medicine, Internal Medicine	3
MOG	Master of Medicine in Obstetrics and Gynecology	3
MPA	Masters in Public Administration	2
MPB	Master of Science in Plant Breeding	2
MPC	Master of Medicine in Pediatrics and Child Health	3
MPH	Master of Public Health	2
MPM	Master of Science in Pharmacology (Drug Discovery)	2
MSE	Master of Science in Sustainable Energy Engineering	2
MSP	Master of Science in Physics	2
GDP	Post Graduate Diploma in Public Administration	1
GDE	Post Graduate Diploma in Higher Education Pedagogy	1

### APPLICATION PROCEDURE

All candidates must apply online using the ACMIS system. The **DEADLINE** for application is **Friday, 8th May, 2026**; **EXCEPT** applicants for programs (MED, PHA, BNA, BNS, BNC, BME & NCS) that require sitting the **SPECIAL ENTRY EXAMINATIONS** whose application **DEADLINE** is **Friday, 27th March 2026**.

For any general inquiries visit:  
www.busitema.ac.ug or call Tel no:  
+256 393 001 033 / +256 772 675 823

For Non-Ugandan applicants contact:  
The Principal Institutional Advancement Officer,  
On +256 772 569 055  
Email: hnabirye22@gmail.com / ipo@busitema.ac.ug



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# CALL FOR APPLICATIONS TO PROGRAMMES AT BUSITEMA UNIVERSITY

FOR 2026/2027 ACADEMIC YEAR

## PHD PROGRAMMES

CODE	PROGRAMME	DURATION (YRS)
PAM	PhD in Business Administration and Management	3
PBC	PhD in Biodiversity Conservation and Management	3
PCH	PhD in Chemistry	3
PCP	PhD in Cyber Systems	3
PEE	PhD in Energy Engineering	3
PEL	PhD in Education Leadership & Management	3
PEP	PhD in Education Psychology	3
PES	PhD in Natural Resource and Environmental Sciences	3
PGA	PhD of Science in Global Change and Sustainable Agriculture	3
PME	PhD in Materials Engineering	3
PSP	PhD in Physics	3



### APPLICATION PROCEDURE

To apply, please visit:

<https://apply.busitema.ac.ug>



### APPLICATION TO PHD PROGRAMMES

Application to PhD programs  
is open throughout the year.

#### FOR ANY GENERAL INQUIRIES VISIT:

www.busitema.ac.ug or call Tel no:  
+256 393 001 033 / +256 772 675 823 /  
+256 704 563 191

#### FOR NON-UGANDAN APPLICANTS CONTACT:

The Principal Institutional Advancement Officer,  
On +256 772 569 055  
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Busitema University



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# THE 4<sup>TH</sup> BUSITEMA UNIVERSITY SCIENCE, TECHNOLOGY AND INNOVATION SYMPOSIUM

**Transformative and Coordinated Science,  
Technology, and Innovation for  
Sustainable Socio-economic Transformation**



**SEPTEMBER 2026**



**SOROTI CITY**



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