



### Heroes Day : MUST, The Beacon of Hope in Communities



The Chairman **Dr Warren Naamara** and the entire MUST Council congratulates the President and entire NRM infrastructure on Heroes Day. For any system to grow from strength to strength, self-quality control and keeping focused on a strategic objective, leadership is irreplaceably paramount! There is no system

in the multicellular animal kingdom that operates efficiently and successfully without leadership! Uganda and by inference MUST have benefitted boundlessly from President Museveni's heroic leadership! Important to note is that one leads a willing population without which you can't lead! Existing heroic centers complete the total picture of an accomplished and decorated Hero! Therefore, to all you great Heroes and Heroines, kudos and alluta continua! To our leader, President Museveni, you are the pinnacle on the Heroes and Heroines triangle, an indelible pace setter in the modern socio-political economies and transformation.

On the same note, Prof Celestino Obua the Vice Chancellor (MUST) says that MUST stands out from other MDAs due to the foresight of **President YTK Museveni**, the strong leadership of the Ministry of Education and Sports under the

able stewardship of **Hon Janet K Museveni**. The support the University gets from the MoES guarantees stability and growth at MUST and this is leveraged on by the teamwork exhibited within the staff and student community. Prof Obua commended the tremendous work of the founder staff and students did to establish MUST, a legacy which has been carried forwards in the MUST motto - "Succeed we MUST!"

"Internally at MUST everybody is a hero!" **Prof Obua said**, thus making it hard to choose from among the many who work hard to build the image of the institution while continuing to serve the community around the country and globally. For this year we will celebrate a few of MUST staff who have been impactful to the community served by this University:



**Dr. Dorah Nampijja** from the Department of Pediatrics, Faculty of Medicine, is currently the only pediatric cardiologist in Southwestern Uganda. She heads the pediatric cardiology unit at MUST and Mbarara regional Referral Hospital. Besides treating children with heart conditions, training undergraduate and

postgraduate students at MUST, she has conducted research in congenital heart disease and rheumatic heart disease in children, all these leading to improving care and services to the community. Her aspiration is to see many more women develop interest in this field so that the community can be better served.



**Dr. Fred Kaggwa** is a lecturer and specialist in cyber security, from the Faculty of Computing and Informatics. Dr. Kaggwa trains both undergraduates and postgraduates in Systems Security and Computer Network Security. “His services are highly needed in the country today especially with the increasing ICT usage that has also brought to the fore issues to do with cyber security” said prof Obua.

**Dr. Ronald Twongyirwe** is a lecturer in the Faculty of Interdisciplinary Studies. Besides teaching he is an accomplished researcher currently leading a team of researchers on a project that is investigating low-cost technologies for determining soil quality to support farmers in crop production in Southwestern Uganda using a mixture of proximal and remote sensing techniques. The project is being conducted in collaboration with Makerere University with funding from the Government of Uganda through Makerere University’s Research Innovation Fund (RIF). The President has re-echoed the importance of agriculture and committed to its commercialization as one of the means of lifting every Ugandan out of poverty and into the money economy. MUST through this collaboration

will be contributing to the development of sustainable commercial agriculture in the country.



**Assoc. Prof. Edward Jurua** from the Faculty of Science has been the lead person in the establishment and development of space science and astrophysics at MUST and in Uganda as a whole. He is one of the pioneer Ugandans to obtain a PhD in Astronomy from the University of Free State in South Africa. Since then, he has worked tirelessly to promote astronomy in Uganda and East Africa through training of several master’s and PhD graduates

with support and funding from the International Science Programme funded by the Swedish International Development Agency (SIDA). While many Ugandans may not appreciate the role of space science and astrophysics in our day-to-day life, this field of science is an integral part of IT communication and climate studies which have become a real threat to our world.

**Mr Behayo Paddy** is the Chief Technician in the Department of Pathology and one of the pioneer members of staff at MUST. Paddy is well known for his calmness, humility and long record of service to MUST. Mr. Behayo has held various leadership positions within and outside MUST including as Founder National Union of Educational Institutions (NUEI)

Branch Secretary, Vice National Chairman of NUEI, as well as the National Chairman of NUEI. He was also a member of MUST Appointments Board, and presently is a member of MUST Staff Tribunal. We thank you Mr. Behayo Paddy for your distinguished and long service to MUST.







**Ms. Wendo Mlahagwa** from the Faculty of Interdisciplinary Studies is a lecturer and the course leader for the Political Economy courses undertaken by all our undergraduate students. The courses were

the brainchild of H.E. The President at the establishment of MUST and are meant to equip our students with the understanding of the interaction between science and communities with the intention of driving socio-economic transformation. The reason MUST graduates are sought after by employers is partly due to the real-life knowledge and skills they acquire through this cross-

cutting course. Ms. Mlahagwa's passion for and experience working with youths has morphed her into a counselor to her students. Her personality draws many of her students towards her and she has offered counsel and helped many build esteem and confidence. We applaud Ms Wendo Mlahagwa and all those who teach on this course. You are our heroes.



**Prof David Kitya** is another of MUST's long-serving lecturers. He is a general surgeon with super-specialization in neurosurgery, treating complex conditions such as congenital anomalies, trauma, tumors, vascular disorder,

infections of the brain & spine, stroke, degenerative diseases of the spine, etc. Prof Kitya and his team handle hundreds of neuro-related accident cases per year of which a majority are traumatic brain injury cases often resulting from road traffic accident involving boda bodas. Without intervention of surgeons like Prof Kitya, many of these accident victims wouldn't live to continue contributing to the nation. We applaud your dedication and service to our community



**Mr. Silagi Wanambwa** is a lecturer in the Faculty of Applied Sciences and Technology and currently heads the Department of Energy, Mineral and Petroleum Studies. He has led his team to review the Undergraduate Curriculum of the Bachelor of Petroleum Engineering and Environmental Management, drafting the Proposed Master's

and PhD in Petroleum Engineering Programs as well as drafting the Proposed Department Research Agenda. He has always led a team of students to different industries in Mbarara to find solutions to waste challenges and recommend the best waste management practices hence safeguarding the environment for future generations. His research

interests in geological carbon capture, utilization and storage will help to reduce the negative effects of greenhouse gas emissions in Mbarara and beyond. His routine field trips to Semliki Basin in the Albertine Graben has enabled students to sensitize the community members in this area about oil and gas.

## MUST Stars: June's Brightest

**Man of the month: Associate Professor Patrick E. Ogwang, A paragon of Innovation**



Based on an initial assessment, published literature, and safety tests undertaken by the innovator, the **National Drug Authority NDA** approved the use of **Covidex**, a locally-made herbal medicine, as a supportive treatment for Covid-19 and other viral infections on **June 30, 2021**. The product is made from herbal plants that have traditionally been used to treat the symptoms of various ail-

ments.

The approval was granted on the condition that the manufacturers conduct random controlled clinical trials, which are the highest level of evidence to ascertain any claims of treatment, and that the public only takes the medication under the supervision of a health professional and report any side effects,

as the NDA monitors its safety through its post-market surveillance activities, and we're happy that not incident has been reported. Associate Professor Patrick Engeu Ogwang., who is the Head of the Pharmacy Department and Deputy Team Leader at MUST's World Bank-sponsored PHARMBIOTRAC project, was recently acknowledged by **H.E. Yoweri Kaguta Museveni** for this incredible innovation which is saving Ugandans and the world in general. In the same vein, the President also committed to back him as well as other Ugandan scientific innovators in their efforts to innovate.



In response Associate Professor Ogwang appreciated and acknowledged the MUST research team, notably PHARMBIOTRAC, and thank the government for its support. More government agencies have recognized his work on Covidex and offered assistance, including the Uganda Investment Authority, which recently provided him with five acres of land in Soroti Industrial Park where the plant will be housed, granted him a 10-year tax holiday to allow him to grow his business in the early stages, and an investment license.

Other companies that have sponsored the distribution of the herbal remedy to the general public include Rocket Health, Eco Pharmacy, and Joint Medical Stores.

As MUST, we revel in this achievement and are proud that our very own Associate Professor Ogwang has epitomized the mission of MUST through an innovation towards saving lives in a time of dilemma. We also congratulate MUST PHARMBIOTRAC Team and Ugandans in general for developing and supporting an indigenous innovative solution to address the pandemic, and we hope that the **Covidex** clinical trials are successfully completed to make this not only a supportive treatment but even a cure. Congratulations Associate Professor Ogwang, Congratulations MUST.



## International Awards:

**Edith receives an achievement award**



On June 29th, 2021, **Dr. Edith Wakida** was nominated and received the 2021 Alumni Achievement Award from the School of Public Administration, University of Central Florida, USA where she received the Mater of Research Administration degree. While handing over the award, **Angela White Jones** said “we are proud of all that you have continued to accomplish post-graduation and are honored to recognize your commitment to the community”.

Congratulations Dr. Wakida, the sky is no longer the limit!

**Peter shines in China**



June 25th, 2021, **Mr. Kisembo Peter** our Alumnus of MLS class of 2008 was awarded a master's degree in clinical laboratory science from **Wuhan University in China**. Mr Kisembo was sponsored by the Chinese government scholarship awarded under the Ministry of Education and Sports. As the MUST fraternity we jubilate with you and wish you well. Congratulations and, Succeed we MUST



## Nassali Shamim New physiologist for the Rugby cranes



Ms. Shamim Nassali, MUST alumnus from the 2015, physiotherapy class is the **new physiotherapist for the National Rugby Team**. In the picture, Shamim was handling one of the rugby players during the African cup games held June 10, 2021. As a University, we are proud of you Shamim. Thank you for enabling the Rugby Cranes shine and increasing the MUST visibility.



# June Research Publications

## Interfaculty Collaboration

The Faculty of Science together with the Faculty of Interdisciplinary Studies have contributed to the joint peer-reviewed journal paper titled The Potential of Citizen Driven Monitoring of Freshwater Snails in Schistosomiasis Research.



JULIUS TUMUSIIME



VIOLA NYAKATO



GRACE KAGORO-RUGUNDA



CASIM UMBA TOLO

The paper is part of the ongoing collaborative research on Action Towards Reducing Aquatic Snail-borne Parasitic diseases that involves teams from MUST, University of Antwerp, KU Leuven, University of Kinshasa and Royal

Museum for Central Africa funded by Belgium Development Cooperation through Royal Museum for Central Africa

### Abstract

Schistosomiasis is a tropical parasitic disease affecting more than 200

million people worldwide, predominantly in Africa. The World Health Organization recently highlighted the importance of targeted control of the freshwater snails acting as intermediate hosts for the parasites causing schistosomiasis.

Five months after the operationalization of the citizen science network, a total of 570 reports were submitted and personalized feedback was given, resulting in lasting improvements in subsequent reporting and snail genus identification. There is possibility of citizen science to independently obtain reliable data on the presence of schistosome snail hosts. We therefore argue that

citizen-driven monitoring on a high spatiotemporal resolution could help to generate the much-needed data to support local targeted snail control measures in remote and/or resource-limited environments. Reference: Brees, Jef, Tine Huysse, Julius Tumusiime, Grace Kagoro-Rugunda, Daisy Namirembe, Faith Mugabi, Viola Nyakato, Maxson Kenneth Anyolitho, Casim Umba

Tolo, and Liesbet Jacobs. "The Potential of Citizen-Driven Monitoring of Freshwater Snails in Schistosomiasis Research." *Citizen Science: Theory and Practice* 6, no. 1 (2021). This goes well with the saying by Helen Keller that "Alone we can do so little; together we can do so much". Congratulations to the team and we are hopeful that this study will impact our community.

## Dr. Ronald Twongyirwe at the front line of sustainable development



**Dr. Ronald Twongyirwe** from the Faculty of Interdisciplinary Studies co-authored an article on: Spatial patterns of urbanization in Sub-Saharan Africa: A case study of Uganda, *Development Southern Africa* published by Routledge, Taylor and Francis group, ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/cdsa20> Spatial patterns of urbanization in Sub-Saharan Africa: A case study of Uganda

### Abstract

Sub-Saharan Africa is rapidly urbanizing. This urbanization may contribute to socio-economic development as more people participate in the urban economy. Nevertheless, rapid urbanization is not always sustainable. Primary cities often

grow fast, leaving secondary towns lagging with weaker economies. Viable strategies for sustainable urbanization may, therefore, also need to focus on developing secondary towns. Nevertheless, very few studies, hitherto, have assessed the (relative) importance of secondary towns in urbanization process in Sub-Saharan Africa. We aim to address this gap by studying the patterns and explanatory factors of urban population growth in Uganda. Based on a longitudinal analysis of population ranksize distribution, we show that the population distribution gap between secondary towns and the primary city is widening. Nevertheless, statistical analyses further indicate that secondary towns with above 50 000 inhabitants have the highest population growth rates. This indicates that future investments should aim at upgrading socio-economic infrastructures in secondary towns.

**Reference:** Samuel Tumwesigye, Matthias Vanmaercke, Lisa-Marie Hemerijckx, Alfonse Opio, Jean Poesen, Ronald Twongyirwe & Anton Van Rompaey (2021). Spatial patterns of urbanization in Sub-Saharan Africa: A case study of Uganda, *Development Southern Africa* published by Routledge, Taylor and Francis group, ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/cdsa20>

Dr. Ronald Twongyirwe also co-authored another paper on Transforming matters: sustaining gold lifeways in artisanal and small-scale mining published by *Current Opinion in Environmental Sustainability* 2021, 49:190–200 [www.sciencedirect.com](http://www.sciencedirect.com). The same publication is available online at [www.sciencedirect.com](http://www.sciencedirect.com) ScienceDirect



## Abstract

Growth strategies in mining regions promote gold extraction based on industrial mining, associating Artisanal and Small-scale Gold Mining (ASGM) with persistent informality. Against this background, we consider how to approach transformations to sustainability in ASGM. Acknowledging how problematic this topic is for sustainability debates, given how ASGM is associated with a host of environmental and social problems, we argue that a justice lens demands we confront such challenges within the global politics of sustainability. This leads us to review advances in the study of ASGM, linked to debates on extractivism, resource materialities, and informality. We use the notion of gold lifeways to capture how the matter of mining shapes different worlds of extraction. We argue that consideration of

the potential for transformations to sustainability needs to be grounded within the realities of ASGM. This necessitates giving value to miners' knowledge(s), perspectives and interests, while recognizing the plurality of mining futures. Nevertheless, we conclude that between the immediacy of precarious work and the structural barriers to change in ASGM, the challenges for transformation cannot be underestimated  
**Reference:** Eleanor Fisher, Sabine Luning, Lorenzo D'Angelo, Carlos HX Araujo, Luigi Arnaldi de Balme, Jorge Calvimontes, Esther van de Camp, Lucia da Costa Ferreira, Cristiano Lanzano, Luciana Mas-saro, Alize` ta Oue'draogo, Januaria Pereira Mello, Robert J Pijpers, Nii Obodai Provencal, Raissa Resende de Moraes, Christophe Sawadogo, Marjo de Theije, Giorgio de Tomi, Margaret Tuhumwire and Ronald

Twongyirwe. Transforming matters: sustaining gold lifeways in artisanal and small-scale mining published by Current Opinion in Environmental Sustainability 2021, 49:190–200 [www.sciencedirect.com](http://www.sciencedirect.com).

Congratulations **Dr. Ronald Twongyirwe** your works go well with the quotation from Neil Armstrong that states "Research is creating new knowledge." We wish you well in this journey



## Dr. Musa Kayondo an icon in reducing maternal Death



**Dr. Kayondo Musa** has successfully published his research work in BMC Women's Health. The paper is titled: **Impact of surgery on quality of life of Ugandan women with symptomatic pelvic organ prolapse: a prospective cohort study** Musa Kayondo<sup>1,2\*</sup>, Dan Kabonge Kaye<sup>3</sup>, Richard Migisha<sup>4</sup>, Rodgers Tugume<sup>1,2</sup>, Paul Kalyebara Kato<sup>1,2</sup>, Henry Mark Lugobe<sup>1,2</sup> and Verena Geissbuehler. <https://doi.org/10.1186/s12905-021-01397-z>  
Abstract  
Background: Pelvic organ prolapse (POP)

is a significant public health issue that negatively affects the Quality of Life (QOL) of women in both low and high-income countries. About 20% of women will undergo surgery for POP over their lifetime. However, there is a paucity of information on the effect of surgery on QOL especially in resource-limited settings. We therefore assessed the QOL among women with symptomatic POP living in rural southwestern Uganda and the impact of surgery on their quality of life.

**Methods:** We conducted a prospective cohort study among 120 women with symptomatic POP scheduled for surgery at the urogynecology unit of Mbarara Regional Referral Hospital. The QOL at baseline and at 1 year after surgery in the domains of physical performance, social interaction, emotional state, sexual life, sleep quality, personal hygiene and urinary bladder function was determined using a King's Quality of Life questionnaire. A paired t-test was used to compare the difference in mean scores at baseline and at 1-year post-surgery.

**Results:** Of the 120 participants that were enrolled at baseline, 117(98%) completed the follow-up period of 1 year. The baseline QOL was poor. The domains with the poorest QOL were physical, social, sexual, emotional and sleep quality. The mean QOL scores in all the domains and the overall QOL significantly improved 1 year after surgery ( $p < 0.001$ ). The overall QOL improved by 38.9% after surgery ( $p < 0.001$ ).

**Conclusions:** The QOL was poor among women with symptomatic POP and surgery improved the QOL in all the domains of life. We recommend that surgery as an option for treatment of symptomatic POP should be scaled up to improve on the QOL of these women. This academic work is one of the scholarly papers constituting Dr. Kayondo Musa's PhD award publication package. Congratulations Dr. Kayondo, we are awed by your enviable skills and knowledge that have

contributed to saving women with pelvic floor disorders. We wish you all the very best in your academic Journey and look forward to your defense and eventual graduation soon.



## EDITORIAL TEAM



Ms. Maureen Kahima



Mr. Solomon Agum