Mbarara University of Science and Technology

Succeed We MUST

21st Annual Research Dissemination Conference

Book of Abstracts



Conference theme

Science, Technology, Artificial Intelligence and Innovation for Inclusive and Sustainable Societal Transformation

20 November 2026

Las Vegas Garden Hotel, Mbarara, Uganda

CONFERENCE PROGRAMME

Friday, 20 November 2026 · Las Vegas Garden Hotel, Mbarara

Programme at a glance

113	70	43	16	8
abstracts accepted	oral presentations	posters	parallel sessions in 4 rooms	sub-themes

Time	Activity	Venue
07:30 – 08:30	Arrival, registration, poster mounting and exhibition set-up	Registration desk / Exhibition hall
08:30 – 09:30	**Parallel oral sessions 1A–1D**	Rooms 1–4
09:30 – 10:30	**Parallel oral sessions 2A–2D (2A, 2B and 2D run to 10:45)**	Rooms 1–4
10:30 – 11:00	Tea break · poster viewing	Dining area / Exhibition hall
11:00 – 11:30	**Innovation exhibition**	Exhibition hall
11:30 – 13:30	**Plenary: remarks, keynote, MUST launches and Chief Guest**	Main hall
13:30 – 14:30	**Lunch break**	Dining area
14:30 – 15:00	**Poster viewing session (presenters at boards; judging)**	Exhibition hall
15:00 – 16:15	**Parallel oral sessions 3A–3D**	Rooms 1–4
16:15 – 17:30	**Parallel oral sessions 4A–4D**	Rooms 1–4
17:35 – 18:30	**Closing plenary session: remarks, awards and closing by the DVC (AA)**	Main hall
18:30 – late	**Cocktail**	Las Vegas Garden Hotel

Innovation exhibition and plenary session (11:00 – 13:30) · Main hall

Masters of ceremonies: Ms Angella Nakato and Mr John Baptist Mujuni

Time	Activity	Person in charge
11:00 – 11:30	**Innovation exhibition**	Dr Jimmy Nabende Wanzala and CITT
11:30 – 11:35	Anthems	Ms Angella Nakato
11:35 – 11:40	Welcoming remarks from the Chair, ARDC Organising Committee	Dr Julius Tumusiime
11:40 – 11:45	Remarks from the Dean, Faculty of Science	Dr Eunice Apio Olet
11:45 – 11:55	**MUST PEDC presentation:** *"From Data Access to Transformation: The MUST PEDC Model as a Technology-Driven Solution to Parish Development Model Implementation Challenges"*	Dr Musiita Benjamin
11:55 – 12:15	**Keynote speech:** *"Science, Technology, Artificial Intelligence and Innovation for Inclusive and Sustainable Societal Transformation: Through the Lens of HIV PrEP"*	Prof. Lynn T. Matthews
12:15 – 12:25	**Communication from the Vice Chancellor**	Prof. Pauline Byakika-Kibwika
12:25 – 12:45	**Launch of the MUST Strategic Plan and Infrastructure Projects**	Assoc. Prof. Robert Bitariho, DVC (F&A)
12:45 – 13:20	**Communication from the Chief Guest**	Rt. Hon. Jacob Marksons Oboth
13:20 – 13:30	Gifting and group photo	Ms Angella Nakato and Mr John Baptist Mujuni
13:30 – 14:30	**Lunch break**	Secretariat

Closing plenary session (17:35 – 18:30) · Main hall

All delegates proceed to the main hall at 17:30; the closing plenary session starts at 17:35 and the cocktail follows at 18:30. Masters of ceremonies: Ms Angella Nakato and Mr John Baptist Mujuni

Time	Activity	Person in charge
17:35 – 17:45	Remarks from the Chief, MUST Research Institute	Assoc. Prof. Angella Musiimenta
17:45 – 17:50	Highlights about the MUST Journal	Chief Editor
17:50 – 18:10	Presentation of awards	Dr Raphael Wangalwa
18:10 – 18:15	Remarks from the Deputy Dean, Faculty of Science	Dr Ronald Mwesigwa
18:15 – 18:20	Remarks from the Director, Directorate of Research and Graduate Training	Assoc. Prof. Vincent Batwala
18:20 – 18:30	Closing remarks from the Deputy Vice Chancellor (AA)	Prof. Joseph Ngonzi
18:30 – late	**Cocktail**	Organising Committee

Parallel oral sessions at a glance

Time	Room 1 Public Health I: Infectious Diseases, Clinical Sciences and Ageing	Room 2 Public Health II: Maternal, Child and Adolescent Health, Health Systems and Policy	Room 3 AI, Data Science, Engineering and Pharmaceutical Innovation	Room 4 Environment, Agriculture and Education
08:30 – 09:30	**Session 1A** (4 talks) **Infectious diseases and antimicrobial resistance** Chair: Prof Joel Bazira Rapporteur: Ms Kate Namajja	**Session 1B** (4 talks) **Maternal and newborn health** Chair: Dr Brian Turigye Rapporteur: Dr Miriam Tugiramasiko	**Session 1C** (4 talks) **Artificial intelligence in health** Chair: Dr Simon Kawuma Rapporteur: Ms Christine Mukiza	**Session 1D** (4 talks) **Biodiversity and ecosystem change** Chair: Prof Grace Kagoro Rapporteur: Ms Enid Koburunga
09:30 – 10:30	**Session 2A** (5 talks) **TB, HIV and alcohol use** Chair: Dr Elias Kumbakumba Rapporteur: Ms Janifer Twebaze	**Session 2B** (5 talks) **Adolescent sexual and reproductive health and the family** Chair: Dr Prudence Kemigisha Rapporteur: Ms Winnie Twikirize	**Session 2C** (4 talks) **Data science, modelling and physical sciences** Chair: Dr Jeninah Atwebembeire Rapporteur: Ms Janet Ninsiima	**Session 2D** (5 talks) **Climate, water, land use and waste valorisation** Chair: Assoc Prof Ronald Twongyirwe Rapporteur: Ms Phobith Kukunda
10:30 Tea break (2A, 2B and 2D to 10:45) · 11:00 Innovation exhibition · 11:30 – 13:30 Plenary session · 13:30 Lunch break · 14:30 – 15:00 Poster viewing session				
15:00 – 16:15	**Session 3A** (5 talks) **Clinical sciences and diagnostics** Chair: Dr John Bosco Nkurununngi Rapporteur: Ms Crispus Nasiima	**Session 3B** (5 talks) **Child health, health systems and regulation** Chair: Assoc Prof Vincent Batwala Rapporteur: Dr Miriam Tugiramasiko	**Session 3C** (4 talks) **Engineering and diagnostic innovation** Chair: Assoc. Prof. Edward Jurua Rapporteur: Ms Christine Mukiza	**Session 3D** (4 talks) **Education and transformative learning I** Chair: Dr Charles Magoba Muwonge Rapporteur: Ms Enid Koburunga
16:15 – 17:30	**Session 4A** (4 talks) **Ageing, brain health and environmental health** Chair: Dr Christopher Adaku Rapporteur: Ms Kate Namajja	**Session 4B** (4 talks) **Policy, governance and socio-economic transformation** Chair: Dr Wilbroad Aryatwijuka Rapporteur: Ms Winnie Twikirize	**Session 4C** (4 talks) **Natural products, pharmaceutical and green innovation** Chair: Dr Oloro Joseph Rapporteur: Ms Janet Ninsiima	**Session 4D** (5 talks) **Education, agribusiness and smallholder farming** Chair: Dr John Baguma Kule Rapporteur: Ms Phobith Kukunda

Slots are 15 minutes (10 minutes of presentation, 5 minutes of questions); all sessions use 15-minute slots. Sessions 2A, 2B and 2D run to 10:45; afternoon sessions run 75 minutes, with general discussion where a session has four talks. Six presentations are virtual: Room 1 needs a hybrid link from 15:00 and Rooms 2–4 from 16:15. **Head Rapporteur: Dr Specioza Twinamasitko. Assistant Head Rapporteur: Ms Immaculate Nantaba.**

Judges and assessors

Name of assessor	Assessing
Dr. John Emenyu	**Oral presentations (coordinator)**
Dr. Jackline Kampire	Oral presentations
Dr. Micheal Marembo	Oral presentations
Dr. Richard Kimera	Oral presentations
Dr. Asaph Katarangi Kaburura	Oral presentations
Dr. Pricilla Muheki	Oral presentations
Dr. Rodgers Mwavu	Oral presentations
Dr. Sudi Balimutajjo	Oral presentations
Dr. Moreen Kabarungi	Oral presentations
Dr. David Okot	Oral presentations
Assoc. Prof. Julius Lejju	Oral presentations
Dr. Paul Mukasa	Oral presentations
Dr. Barbra Tuhamize	Oral presentations
Dr. Valence Habyarimana	**Poster presentations (coordinator)**
Dr. Caroline Kiwanuka Nakiguli	Poster presentations
Dr. Hannington Gumisiriza	Poster presentations
Dr. Murembe Neema	Poster presentations
Dr. Kizito Mohammed	Poster presentations
Dr. Kennedy Kassaza	Poster presentations

Morning parallel oral sessions (08:30 – 10:45)

Eight sessions in four rooms (35 presentations). Sessions 2A, 2B and 2D have five talks and run to 10:45. Tea break follows at 10:30 – 11:00, with posters on display.

Session 1A · Room 1 · 08:30–09:30 Infectious diseases and antimicrobial resistance

Chair: **Prof Joel Bazira** Rapporteur: **Ms Kate Namajja**

Time	Title	Presenter	Abstract
08:30	Neonatal sepsis: Etiology and Antimicrobial susceptibility in a Refugee setting, southWestern, Uganda	Mr Lucas Ampaire	O-1A-1
08:45	Molecular Characterization and Antimicrobial Resistance Profiling of Vibrio Cholerae Isolates from Patients in Selected Sites in Uganda	Mr Ongole Francis	O-1A-2
09:00	Genomic Characterization of Selected ESKAPEEE Clinical Isolates From Mbarara Regional Referral Hospital, Southwestern Uganda: Resistome, Multilocus Sequence Typing, Mobilome, and Virulome	Dr Judith Owokuhaisa	O-1A-3
09:15	Comparison of cholera rapid diagnostic test and culture results during a cholera outbreak response in Moyo district in West Nile, Uganda, June - July 2025	Mr Patrick Pithua	O-1A-4

Session 1B · Room 2 · 08:30–09:30 Maternal and newborn health

Chair: **Dr Brian Turigye** Rapporteur: **Dr Miriam Tugiramasiko**

Time	Title	Presenter	Abstract
08:30	Validating the Edinburgh Postnatal Depression Scale against the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition for use in Uganda	Dr Catherine Atuhaire	O-1B-1
08:45	Effect of a Point of Care Intervention on Immediate Postpartum Contraceptive Uptake among Women Delivering by Cesarean Section at Mbarara Regional Referral Hospital	Dr Brenda Ainomugisha	O-1B-2
09:00	Puerperal Sepsis Discharge Education After Caesarean Section: Facilitators and Barriers	Ms Rachel Luwaga	O-1B-3
09:15	Diagnostic Performance of MEOWS for Identifying Severe Maternal Conditions at a Referral Hospital in Southwestern Uganda	Mr Henry Ochola	O-1B-4

Session 1C · Room 3 · 08:30–09:30 Artificial intelligence in health

Chair: **Dr Simon Kawuma** Rapporteur: **Ms Christine Mukiza**

Time	Title	Presenter	Abstract
08:30	Application of artificial intelligence to ultrasonographic images to aid clinical care of pregnant women with pre-eclampsia in Uganda	Assoc Prof Mugyenyi R Godfrey	O-1C-1
08:45	AI-TB-ZN: An Annotated Ziehl–Neelsen Sputum Smear Image Dataset for Artificial Intelligence-Based Tuberculosis Detection	Dr Tumwesigye Habert	O-1C-2
09:00	Seizure prediction anxiety and depression monitoring system for epilepsy at Kabale Regional Referral Hospital	Mr Oyo Jude	O-1C-3
09:15	Sustainable Medical Device Management in African Healthcare Facilities: Integrating Predictive Maintenance, Asset Tracking and Energy Efficiency	Dr Awafung Emmanuel Adie	O-1C-4

Session 1D · Room 4 · 08:30–09:30 Biodiversity and ecosystem change

Chair: **Prof Grace Kagoro** Rapporteur: **Ms Enid Koburunga**

Time	Title	Presenter	Abstract
08:30	Forest Regeneration in the Formerly Encroached Areas of Nkuringo Buffer Zone, Bwindi Impenetrable National Park, South Western Uganda	Mr Atukunda Boris	O-1D-1
08:45	Monitoring the Spatio-Temporal Patterns of Forest Gaps and Health in the Rwenzori Mountains National Park, Western Uganda	Mr Nuwagira Upton	O-1D-2
09:00	Ten Year Giraffes' Existence and Its Influence on Acacia Species Regeneration in LMNP: Implications for Mammalian Grazers' Distribution	Mr Philip Brendon Barigye	O-1D-3
09:15	Biodiversity Composition of Tropical Crater Lakes in Western Uganda along a Human Disturbance Gradient: Evidence from Environmental DNA	Ms Komuhangi Felesta	O-1D-4

Session 2A · Room 1 · 09:30–10:45 TB, HIV and alcohol use

Chair: **Dr Elias Kumbakumba** Rapporteur: **Ms Janifer Twebaze**

Time	Title	Presenter	Abstract
09:30	Immediate or high-dose antituberculosis therapy for HIV-related sepsis in Tanzania and Uganda (ATLAS): a phase 3, open-label, randomised, controlled trial	Dr Conrad Muzoora	O-2A-1
09:45	Social norms and future HIV vaccine acceptance: whole population, sociocentric network study in rural Uganda	Dr Scholastic Ashaba	O-2A-2
10:00	Association between hazardous alcohol use and post-tuberculosis lung disease among people with HIV in Mbarara, Uganda	Ms Lydia Carlson	O-2A-3
10:15	Preliminary studies of methods of delivering alcohol biomarker phosphatidylethanol results to people living with HIV in Uganda	Prof Winnie R Muyindike	O-2A-4
10:30	Examine the association between bar attendance, drinking companions and high-risk alcohol use among people with HIV (PWH)	Ms Asiimwe Caroline	O-2A-5

Session 2B · Room 2 · 09:30–10:45 Adolescent sexual and reproductive health and the family

Chair: **Dr Prudence Kemigisha** Rapporteur: **Ms Winnie Twikirize**

Time	Title	Presenter	Abstract
09:30	Present but Socially Bounded: Reframing Fathers as Adolescent SRH Communicators in Nakivale Refugee Settlement, Uganda	Ms Vivienne Kirabo	O-2B-1
09:45	Sexual and Reproductive Health (SRH) outcomes, and parent-adolescent SRH communication in refugee and host communities in Africa: a scoping review	Ms Munguciada Esther Faith	O-2B-2
10:00	The nature of Caregiver-Adolescent communication in Refugee and Host Communities in North-western and South-western Uganda	Dr Viola Nilah Nyakato	O-2B-3
10:15	Developing the 3Rs Gender Analytical Framework for Caregiver–Adolescent Sexual and Reproductive Health Communication in Refugee and Host Communities in Uganda	Dr Viola Nilah Nyakato	O-2B-4
10:30	Effect of a maternal mHealth social support intervention on postpartum depression in rural southwestern Uganda: Findings from the SUPPORT-MOMS randomized controlled trial	Mr Julius Kyomya	O-2B-5

Session 2C · Room 3 · 09:30–10:30 Data science, modelling and physical sciences

Chair: **Dr Jeninah Atwebembeire** Rapporteur: **Ms Janet Ninsiima**

Time	Title	Presenter	Abstract
09:30	Financial Fraud Event Detection Using a Hybrid Deep Stacking Ensemble Optimized via Reinforcement Learning: Kaggle Credit Card Fraud Evidence	Mr Ronald Kato	O-2C-1
09:45	A Hybrid Generalized Alpha-Power Log-Normal-G Family of Distributions with Applications	Prof Usman Shehu Gulumbe	O-2C-2
10:00	Modeling the Impact of Biomedical Prevention on HIV/AIDS Transmission Dynamics	Dr Michael Byamukama	O-2C-3
10:15	Comparative analysis of the response of the ionosphere to the severe geomagnetic storms of May and October 2024 over the African Sector	Dr Sharon Aol	O-2C-4

Session 2D · Room 4 · 09:30–10:45 Climate, water, land use and waste valorisation

Chair: **Assoc Prof Ronald Twongyirwe** Rapporteur: **Ms Phobith Kukunda**

Time	Title	Presenter	Abstract
09:30	Long-Term Drought Variability in Southwestern Uganda: A Comparative Analysis of Ground and Satellite Rainfall Data for Mbarara	Dr Mutabazi Tom	O-2D-1
09:45	Chemical Footprint of Fresh water sources in Mbarara: Pollution Dynamics of Trace Metals and Organic Pollutants Across Surface and Groundwater Matrices	Dr Grace Birungi	O-2D-2
10:00	Wetland-use and wetland-cover change and ecological integrity of wetlands around Kibale National Park, Kamwenge District, Western Uganda	Mr Francis Ayebazibwe	O-2D-3
10:15	From Human Waste Valorization to Trophic Structuring: Black Soldier Fly-Bioconverted Fecal Sludge Shapes the Maize Agroecosystem	Mr Jonath Manirakiza	O-2D-4
10:30	Optimization of Yeast-Bacteria Microbial Fuel Cell for Simultaneous Bioelectricity Generation and Soil Amendment from Kitchen Waste	Ms Elizabeth Wambua	O-2D-5

Poster viewing session (14:30 – 15:00)

Forty-three posters are on display all day from 08:30 in the exhibition hall; presenters stand at their boards during the poster viewing session (14:30 – 15:00), led by the Scientific Committee, while judges visit. Innovation exhibitors (student and staff innovations, start-ups, sponsors and partners) display alongside the posters.

Poster coordinator: Dr. Valence Habyarimana Judges: Dr. Caroline Kiwanuka Nakiguli, Dr. Hannington Gumisiriza, Dr. Murembe Neema, Dr. Kizito Mohammed, Dr. Kennedy Kassaza

Board	Sub-theme	Title	Presenter
P01	Public Health	A Comparison of Self-Reported Smoking with Biomarker-Detected Tobacco Use Among People Living with HIV on Antiretroviral Therapy in Uganda	Ms Adah Tumwegamire
P02	Public Health	From Disclosure to Help: Pathways to Protection through Caregiver–Adolescent Sexual and Reproductive Health Communication in Refugee and Host Communities in Uganda	Ms Declan Martha Nakitende
P03	Public Health	Bridging Healthcare Gaps through Donor-Supported Community Medical Insurance: Implications for Family Health Improvement in Ibanda District, Uganda	Mr Kenneth Mugaiga
P04	Public Health	Depressive symptoms and factors associated among perimenopausal and early postmenopausal women in Mbarara City, Uganda: A community-based cross-sectional study	Dr Scholastic Ashaba
P05	Public Health	Patterns of alcohol expenditure among People Living with HIV in Southwestern Uganda	Mr Nicholas Mugisha
P06	Public Health	Long-term Retention and Associated Factors among Volunteer Community Health Workers in Southwestern Uganda: A 17–21-Year Retrospective Cohort Study	Mr Edison Byamugisha
P07	Public Health	Gross Fecal Coliform Contamination of Locally-Prepared Soft Beverages Vended in Kampala, Uganda	Mr Lucas Ampaire

Board	Sub-theme	Title	Presenter
P08	Public Health	Serum cortisol levels and the association with Postpartum depression among mothers in Mbarara district, rural south western Uganda	Dr Catherine Atuhaire
P09	Public Health	Factors Associated With Musculoskeletal Disorders among Employees of Humanitarian Organisations in Imvepi Refugee Settlement, Terego District	Mr Henry Gabigogo
P10	Public Health	Intention to do clinical practice among medical doctors who are 1-3 years post-internship in Uganda. A cross-sectional study	Dr Ayesiga Innocent
P11	Public Health	Antibiotic Resistance Dynamics and Presence of Antimicrobial Resistance Genes in Selected Bacteria Found in Urine of Healthy Female Youth	Ms Nakalema Fridaus
P12	Public Health	Exploring Adolescent Autonomy in HIV Research Participation: Perceptions, Barriers and Recruitment strategies in Kalungu District	Ms Beatrice Kimono Washi
P13	Public Health	From Community Diagnosis to Action: Student-Led Community-Based Education Research and Services (COBERS) Initiative to Address Teenage Pregnancy in Rural Uganda	Mr Amanya Elvis
P14	Public Health	Feasibility and Implementation of an Alzheimer's Disease and Related Dementias Study in Uganda	Ms Edna Tindimwebwa
P15	Public Health	The Role of Traditional Healers During the Ebola Outbreak in Southwestern Uganda	Ms Natukunda Sylvia
P16	Public Health	Supported Parental Centrality in Caregiver–Adolescent Sexual and Reproductive Health Communication: Contextual Evidence from Formative Stakeholder Engagements in Refugee and Host Communities in Uganda	Dr Viola Nilah Nyakato
P17	Public Health	Impact of Slide Load and Bench Lifespan on Integrity of Hematoxylin and Eosin Staining Reagents at Mbarara University Histopathology Laboratory	Ms Anyait Concy
P18	Public Health	When mistrust stands in the way of antenatal care: a cross-sectional analysis of data from pregnant women enrolled in the SUPPORT-MOMS trial in rural southwestern Uganda	Dr Fredrick Atwiine
P19	Public Health	Lung Function Testing among young and older adults in Uganda	Mr Kamugisha Brian
P20	Public Health	Air Pollution Knowledge Among Adolescents and Adults in Uganda: The AWARE Study	Ms Tushemereirwe Patricia
P21	Public Health	Open Defecation Free Community: a Multidisciplinary Student Project to Improve Health in Kyondo Village, Kasese District, Southwestern Uganda	Ms Nakawungu Shamirah
P22	AI & Digital	Geospatial Approaches to Urban Farming Planning in Mbarara City, Uganda	Mr Atuheire Izaara Ambrose
P23	AI & Digital	A Dual-Tiered Offline Edge AI Architecture for Localized Malaria Outbreak Prediction and Patient Follow-Up Stratification – A Case of Low Resource Settings	Mr Aggrey Obbo
P24	AI & Digital	A Trust-Aware and Bias-Resistant Artificial Intelligence Framework for Secure and Equitable Proctored Online Examinations	Mr Mark Aine
P25	AI & Digital	The readiness for Mbarara University of Science and Technology (MUST) to develop a Research Data Management Framework for Social Development and Innovation: Preliminary findings	Dr Robert Stalone Buwule
P26	AI & Digital	Explainable Machine Learning for Identifying At-risk Households and Optimizing Targeted Social Protection: Evidence from the Uganda National Panel Survey 2019/20	Mr Nabulongo Ali
P27	Environment	Formulation of Eco-Friendly Bioplastic Film from Banana Pseudostems, Potato Peels, and Water Hyacinth in Mbarara City, Uganda	Ms Siwema Shikumbule Lucas
P28	Environment	A GIS-Based Agro-ecological SWOT Analysis for Sustainable Agronomy in Chiredzi District, Zimbabwe	Ms Tsitsi Prudence Humanikwa
P29	Environment	Wetland Degradation on Sediment Dynamics in Middle Rwizi Catchment, South Western Uganda	Ms Patience Ayesiga

Board	Sub-theme	Title	Presenter
P30	Science & Engineering	Production of Bioflocculant from Waste Fruit Juice Using Bacillus spp	Dr Mohammed Jibrin Ndejiko
P31	Science & Engineering	Advances in Low- and Ultra-Low-Field MRI Technology From System Development to Accessible Imaging	Dr Johnes Obungoloch
P32	Science & Engineering	Designing Solar-Assisted Charging Hubs to Overcome Grid Unreliability for Kampala's Electric Bus Network	Ms Laura Ejang
P33	Science & Engineering	A resource-to-demand framework for selecting indoor solar cooking technologies in southwestern Uganda	Eng Godfrey Ssajja Ssali
P34	Education	Attitudes of Nomads towards Western Education in Nigerian Communities: The Way Forward	Dr Kolo Alfa Idris
P35	Education	Stakeholder Engagement and Entrepreneurship Education among Business Graduates of Chartered Universities in Western Uganda	Ms Sarah Akampurira
P36	Natural Products	Ethnobotanical Assessment of Medicinal Flora Used for Cutaneous Wound Healing in Gulu District, Uganda	Mr Ivan Kahwa
P37	Natural Products	Gastrizol™: A Multivalent Mucoadhesive Nano-emulsion for Molecular Neutralisation of Helicobacter pylori Virulence and IL-10 Mediated Mucosal Regeneration	Mr Aronda Isaac
P38	Natural Products	Effectiveness of Jena DM® Herbal Formulation as Complementary Therapy to Conventional Oral Hypoglycemic Agents in Type-2 Diabetes Mellitus: A Quasi-Experimental Study	Dr Oliver Kushemererwa
P39	Natural Products	Antibacterial Activity of Newbouldia laevis Extracts against Selected Bacteria	Dr Muhammad Isah Legbo
P40	Natural Products	Formulation and Evaluation of a Polyherbal Cream Containing Cassia alata, Aloe vera and Lantana trifolia for the Management of Tinea Infection	Mr Okwany Jerome
P41	Policy & Governance	Beyond AI Adoption: An Artificial Intelligence Intellectual Property Readiness Index (AIRI) for Inclusive Innovation in Uganda	Ms Sarah Mumbi Bisamunyu
P42	Agriculture	Polyphenol profile and antioxidant potential of peels from Anna and Golden Dorsett apple varieties grown in Uganda	Mr Gerald Tumwine
P43	Agriculture	Design and Optimization of an Integrated Phase-Change Thermal Battery for Intermittent Operation of Agricultural Refrigeration Systems	Mr Ntulume Andrew Namutale

Afternoon parallel oral sessions (15:00 – 17:30)

Eight sessions in four rooms (35 presentations). Room 1 needs a hybrid link from 15:00 and Rooms 2–4 from 16:15.

Session 3A · Room 1 · 15:00–16:15 Clinical sciences and diagnostics

Chair: **Dr John Bosco Nkurunungi** Rapporteur: **Ms Crispus Nasiima**

Time	Title	Presenter	Abstract
15:00	Optimization of Preanalytical Laboratory Methods for HPV Detection in First Void Urine Specimens Relative to Cervical Brush Specimens	Dr Frank Ssedyabane	O-3A-1
15:15	Clinical Features and Risk Factors of Dermatitis Cruris Pustulosa et Atrophicans in Southwestern Uganda: A Cross-Sectional Study	Dr Grace Kitunzi Mulyowa	O-3A-2
15:30	Glomerular filtration rate and associated factors prior to anti-tuberculosis initiation among tuberculosis patients at Bale Zone Hospitals Southeast Ethiopia	Mr Habtamu Gezahegn Mulugeta (virtual)	O-3A-3
15:45	Mortality among Women with Cervical Cancer in Southwestern Uganda: A Prospective Cohort Study	Prof Rogers Kajabwangu	O-3A-4
16:00	Health-Related Quality of Life and Lived Experiences of Children with Hemophilia in Southwestern Uganda: A Descriptive Mixed-Methods Cross-Sectional Study	Dr Yesse Mutabazi	O-3A-5

Session 3B · Room 2 · 15:00–16:15 Child health, health systems and regulation

Chair: **Assoc Prof Vincent Batwala** Rapporteur: **Dr Miriam Tugiramasiko**

Time	Title	Presenter	Abstract
15:00	Helping Parents Lead: A Life-Course Guide to Strengthening Caregiver–Adolescent Sexual and Reproductive Health Communication in Uganda	Dr Viola Nilah Nyakato	O-3B-1
15:15	Second-dose measles-rubella vaccine uptake and associated factors among children aged 18–59 months in Kihembe Sub-county, Kanungu District, South Western Uganda	Dr Atuhaire Christopher	O-3B-2
15:30	Exploring the impact of United States funding cuts on HIV prevention for periconception, pregnant, and postpartum women in Uganda	Ms Celine Wang	O-3B-3
15:45	Implementation Realities of MPDSR in Uganda: A Political Economy Analysis of Actors, Incentives, and Power	Ms Najjingo Daurice Patricia	O-3B-4
16:00	Regulating Traditional Medicine in Uganda: A Legal Epidemiological Analysis of Governance and Health-System Integration	Mr Raphael Obura	O-3B-5

Session 3C · Room 3 · 15:00–16:15 Engineering and diagnostic innovation

Chair: **Assoc. Prof. Edward Jurua** Rapporteur: **Ms Christine Mukiza**

Time	Title	Presenter	Abstract
15:00	Electrochemical inactivation of free-swimming parasites: Free chlorine and electric field as potent disinfection agents for Schistosoma mansoni cercariae	Mr Godfrey Magyezi Begumisa	O-3C-1
15:15	MoleSC Dx: a proposed paper-based, ambient-temperature CRISPR-Cas12a test for point-of-care sickle cell genotyping from a dried blood spot	Mr Arinawe Brandon	O-3C-2
15:30	XRF–AAS Chemical Characterisation of Ugandan Silica Sands from Lwera and Nyihanga: Impurity Profiles and Beneficiation Priorities for High-Purity Silica	Mr Tumwesigye Brief	O-3C-3
15:45	Development and Validation of a Stability-Indicating LC-ESI-MS/MS Method for the Simultaneous Determination of Albendazole and Ivermectin in a Veterinary Oral Suspension	Ms Kyemanta Christah Kirabo Desire	O-3C-4

Session 3D · Room 4 · 15:00–16:15 Education and transformative learning I

Chair: **Dr Charles Magoba Muwonge** Rapporteur: **Ms Enid Koburunga**

Time	Title	Presenter	Abstract
15:00	Beyond Company Visits: Bringing Practitioners into Competence-Based Marketing Learning at MUST	Dr Sarah Nabachwa	O-3D-1
15:15	Community Placement of Clinical Postgraduate Trainees at Mbarara University of Science and Technology: Training Outcomes and Post-Training Career Trajectories	Dr Kawungezi Chris Peter	O-3D-2
15:30	Digital Inclusion of Girls in Technology-Enhanced Pedagogy: Transformative Learning, Kiswahili Attitudes and Educational Equity in Ugandan Secondary Schools	Dr Emilly Arishaba	O-3D-3
15:45	Design and Development of the Uganda MathToolkit as an Offline Digital Resource for Competency-Based Lower Secondary Mathematics Learning	Dr Issa Ndungo	O-3D-4

Session 4A · Room 1 · 16:15–17:30 Ageing, brain health and environmental health

Chair: **Dr Christopher Adaku** Rapporteur: **Ms Kate Namajja**

Time	Title	Presenter	Abstract
16:15	Impact of Literacy on Cognition, Biomarkers, and Brain Structure within the Uganda Aging Cohort Study	Ms Flavia Atwiine	O-4A-1
16:30	Known and Unique Modifiable Risk Factors of Brain Health and Dementia Biomarkers in an African Cohort	Dr Moses Muwanguzi	O-4A-2
16:45	Violence Against Older Adults With HIV and Tuberculosis in Uganda: A qualitative study of Patient and Provider Perspectives	Ms Naomi Sanyu	O-4A-3
17:00	Can Global Data Tell Us About Local Air Quality? Ambient PM2.5 in Southwestern Uganda Using Ground Measurements and Global Datasets	Dr Silver Onyango	O-4A-4

Session 4B · Room 2 · 16:15–17:30 Policy, governance and socio-economic transformation

Chair: **Dr Wilbroad Aryatwijuka** Rapporteur: **Ms Winnie Twikirize**

Time	Title	Presenter	Abstract
16:15	Analysis of the Role of Promotional Marketing Strategies on Community-Based Health Insurance Uptake at Kitojo Integrated Development Action	Dr Nimusima Pereez	O-4B-1
16:30	Empowerment and perceptions of women on health effects and adoption of clean cooking technologies in urban and peri-urban Southwestern Uganda	Mr Justus Asasira	O-4B-2
16:45	Burnout and Engagement of Administrative Staff in a Public University in Uganda: A Job Demands-Resources Model Perspective	Dr Martha Kyoshaba	O-4B-3
17:00	Perceived Effectiveness of Agricultural Cooperatives: The Role of Farmer Entrepreneurial Orientation and Participation in Uganda	Ms Ong'ayo Mercyline Jerusa (virtual)	O-4B-4

Session 4C · Room 3 · 16:15–17:30 Natural products, pharmaceutical and green innovation

Chair: **Dr Oloro Joseph** Rapporteur: **Ms Janet Ninsiima**

Time	Title	Presenter	Abstract
16:15	Phytochemical and In Silico Profiling of Markhamia lutea Stem Bark Identifies Verbascoside as a Potential Multi-Target Lead Compound for Benign Prostatic Hyperplasia	Mr Jonasi Munezero	O-4C-1
16:30	Development and Validation of HPLC and Polarimetric Methods for Quantification of L-3,4-Dihydroxyphenylalanine in Synthetic and Mucuna pruriens (L.)-Based Commercial Products	Mr Hassan Ssekalaala	O-4C-2
16:45	In silico evaluation of active compounds in Zanthoxylum leprieurii and Flourensia cernua against antimicrobial-resistant Mycobacterium tuberculosis	Mr Mukisa Joel (virtual)	O-4C-3
17:00	Waste-Derived Green Nano-Fertilizer for Sustainable Tomato and Bell Pepper Production under Greenhouse Conditions	Ms Nothando Clementine (virtual)	O-4C-4

Session 4D · Room 4 · 16:15–17:30 Education, agribusiness and smallholder farming

Chair: **Dr John Baguma Kule** Rapporteur: **Ms Phobith Kukunda**

Time	Title	Presenter	Abstract
16:15	Production systems, constraints and perceived sustainability of finger millet (Eleusine coracana) among smallholder farmers in southwestern Uganda	Ms Immaculate Nakazibwe	O-4D-1
16:30	Agripreneurial Competences, Value Addition Practices and Digital Inclusion among Smallholder Coffee Farmers' Market Integration in Western Uganda: The Moderating Role of Farm-Level Traceability	Mr Twinamasiko Dennis	O-4D-2
16:45	Pedigree and Research as a Driver of Human Capital Accumulation	Dr Eutychus Ngotho Gichuru	O-4D-3
17:00	Role of Teachers and Alumni as Academic Role Models on Learners' Career Aspirations Among Public Secondary Schools in Uganda	Ms Bwooki Katugano Moureenah (virtual)	O-4D-4
17:15	Relationship Between Teachers' Professional Conduct and Job Performance in Government-Aided Secondary Schools in Bushenyi District, Uganda	Dr Kanyesigye Stella Teddy (virtual)	O-4D-5

Notes for presenters and session chairs

- Presenters: each slot is 15 minutes (10 minutes of presentation and 5 minutes of questions); afternoon sessions run for 75 minutes, so sessions with four talks end with 15 minutes of general discussion. Load slides onto the room computer by 08:15 (morning) or 14:45 (afternoon), and arrive at the room 10 minutes before the session starts.
- Session chairs: keep strictly to time, introduce each presenter, moderate questions, and pass attendance and any changes to the rapporteur and award judges.
- Rapporteurs: submit a one-page summary of key findings and recommendations from each session to the Head Rapporteur by the end of the day. **Head Rapporteur: Dr Specioza Twinamasitko. Assistant Head Rapporteur: Ms Immaculate Nantaba.**
- Posters: mount posters at the assigned board number by 08:30 and remove them after 17:30. Presenters must be at their boards from 14:30 to 15:00.
- Virtual presenters (6): one in Session 3A (15:00) and five in Sessions 4B–4D (16:15–17:30). Each room needs a hybrid link and a technical assistant; virtual presenters should test the connection 30 minutes before their session.